Saint Mary's University

Academic Calendar
1980-81

The academic year to which this Academic Calendar refers begins on 3 September 1980. The University hereby gives notice that while the information contained in this Calendar is considered to be accurate at the time of its preparation, there may be changes made subsequent to publication without prior notice. Publication date: 31 January 1980.

Since not all courses listed in this Calendar are offered in 1980-81 students are advised to consult the academic timetable for those courses which are actually available and the times when they will be offered in the 1980-81 academic year.

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

Inquiries regarding academic matters should be directed to the Registrar.

Academic Calendar
of
Saint Mary's University

1980-1981

Board of Governors and Senate

Board of Governors

Chairperson
Reverend Monsignor Colin Campbell, V.G.

Vice-Chairperson
Mr. Ronald J. Downie, Q.C.

Members Ex-Officio
Chancellor
Most Reverend James M. Hayes, J.C.D., D.D.
Vice-Chancellor
Reverend Monsignor Colin Campbell, V.G.
President
Dr. Kenneth L. Ozmon
Academic Vice-President
Dr. William A. Stewart, S.J.

Members Appointed by the Roman Catholic Episcopal Corporation
Mr. Lorne MacDougall	to July 31, 1982
Reverend T. C. O'Toole	to July 31, 1980
Dr. Henry Reardon	to July 31, 1981

Members Elected by the Alumni Association
Mr. Kevin J. Cleary	to July 31, 1982
Dr. Michael Larsen	to July 31, 1981
Mr. J. Patrick O'Neil	to July 31, 1982
Mr. Joseph Power	to July 31, 1981
Dr. Robert Ruotolo	to July 31, 1980
Mr. Earl Walsh	to July 31, 1980

Members Elected by the Academic Staff
Dr. V. M. Catano	to July 31, 1982
Canon F. Melvin French	to July 31, 1981
Prof. D. W. MacInnes	to July 31, 1980
Dr. K. A. MacKinnon	to July 31, 1982
Dr. A. P. Monahan	to July 31, 1981
Mr. Perry Ronayne	to July 31, 1980

Members Elected by the Students
Mr. Paul Arsenault	to July 31, 1981
Mr. Eligio Gaudio	to July 31, 1981
Mr. Michael McNeil	to July 31, 1981
Ms. Janice Rooyakkers	to July 31, 1981

Member Appointed by the Upper Canada Province of the Society of Jesus
Rev. W. Lonc, S.J.	to July 31, 1982

Members Elected by the Board of Governors
Mr. L. F. Kirkpatrick	to July 31, 1982
Mr. Harry Paton, Q.C.	to July 31, 1982
Mr. David Thompson	to July 31, 1982

Members Appointed by the Lieutenant-Governor in Council
Mr. P. J. Connolly	to February 28, 1981
Mr. R. W. Ferguson	to February 28, 1981

Academic Senate

Chairperson
Dr. A. P. Monahan
Vice-Chairperson
Ronald A. Lewis
Secretary
Kevin J. Cleary

Members Ex-Officio
Dr. Kenneth L. Ozmon, President
Dr. William A. Stewart, S.J., Interim Academic Vice-President
Dr. Jack L. Ginsburg, Dean of Science
Dr. Samuel H. Jopling, Dean of Commerce
Dr. Thomas J. Musial, Dean of Arts
Dr. Michael R. MacMillan, Dean of Education
Mr. Ronald A. Lewis, Librarian
Mrs. Elizabeth A. Chard, Registrar
Mr. Robert Hayes, Director of Student Services

Members Elected

To June 1982	To June 1981
Dr. M. Chew	Dr. C. J. Byrne
Dr. K. MacKinnon	Dr. P. Fitzgerald
Dr. G. Mitchell	Prof. D. A. Hope
Prof. D. Mulrooney	Dr. A. P. Monahan
Dr. H. Veltmeyer	Dr. K. R. Tudor

To June 1980	Student Senators
Prof. J. Chamard	Mr. Paul Arsenault
Dr. G. Chauvin	Ms. Catherine Hanrahan
Dr. P. Connelly	Ms. Mary Martin
Dr. W. Grennan	Mr. Peter Murray
Prof. D. MacInnes	Ms. Janice Rooyakkers

Faculty

Deans and Faculty Emeriti

Beazley, Harold G., B.Comm., Hon. D. Litt. (Saint Mary's), Dean Emeritus in Commerce

Ryan, James L., B.Eng. (Nova Scotia Technical College), B.Sc. (Saint Mary's), Hon. D. Litt. (Saint Mary's), Dean Emeritus in Engineering

Swianiewiez, Stanislas, LL.B., Dr. Jur. (Vilna), Habilitation in Economics, Professor Emeritus in Economics

Faculty

Albuquerque, Carlos A. R. de, B.Geol. Sc. (Coimbra), Ph.D. (Cambridge), Associate Professor of Geology (on leave, 1980-81)

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

Armstrong, Stanley A., A.B. (Brown), B.D. (Harvard), M.A., Ph.D. (Yale), Associate Professor of Religious Studies

Badawi, Gamal A., B.Comm. (Ain Shams), M.B.A., Ph.D. (Indiana), Associate Professor of Management

Baker, Janet, B.A., M.A. (Queen's), Ph.D. (Dalhousie), Associate Professor of English

Baydar, Vedat, D.Econ. and Comm. Sc. (Istanbul), Associate Professor and Chairperson of the Department of Marketing

Bels, Richard H., B.A. (Western Ontario), M.A., Ph.D. (Notre Dame), Professor of Philosophy

Bernard, Paul R., B.A. (Providence College), M.A.T. (Assumption College), Ph.D. (Pennsylvania State), Assistant Professor of French

Bobr-Tylingo, Halina, Abs., Inz-rol (S.G.G.W., Warsaw), Dip. d'Etudes (Paris vi), Assistant Professor of Biology

Bobr-Tylingo, Stanislaw, L.ès L., D.ès L. (Paris), Professor of History

Bollini, Robert J., B.A. (Cornell), M.S. (Georgetown), Ph.D. (California, Berkeley), Associate Professor of History

Bourne, Frances Y., B.S. (California Polytechnic State), M.S. (California State), Ph.D. (Oklahoma State) Assistant Professor of Accounting

Bowlby, Paul W. R., B.A., M.A., Ph.D. (McMaster), Assistant Professor and Chairperson of the Department of Religious Studies, and Coordinator of Asian Studies

Boyd, Mary Catherine, B.A. (Saint Mary's), M.A. (London), Assistant Professor of Classics

Boyd, R. Gavin, B.A. (Melbourne), Professor of Political Science (on leave, 1980-81)

Boyle, W. Peter, B.Sc., Ph.D. (Queen's, Belfast), Associate Professor of Engineering

Bridgeo, William A., B.Sc. (St. Francis Xavier), Ph.D. (Ottawa), Professor of Chemistry

Byrne, Cyril J., B.A. (St. Dunstan's), M.A. (National University of Ireland), M.A. (Oxford), Ph.D. (Toronto), Associate Professor of English

Cameron, R. Hugh, B.A. (Toronto), Ph.D. (London), Associate Professor of History

Carrigan, D. Owen, B.A. (St. Francis Xavier), M.A. (Boston), Ph.D. (Maine), Professor of History

Catano, Victor M., B.S. (Drexel), M.S., Ph.D. (Lehigh), Associate Professor of Psychology

Chadwick-Jones, John K., B.A., M.A. (Oxford), Ph.D. (Wales), F.A.P.A., Professor of Psychology (on leave, 1980-81)

Chamard, John C., B.A. (Saskatchewan), M.B.A. (Harvard), Associate Professor of Management (on leave, 1980-81)

Chan, Anthony B., Ph.D. (York), Assistant Professor of History

Chan, Kenneth S., B.Sc. (Toronto), M.A., Ph.D. (Brown), Assistant Professor of Economics

Chang, Hsing-Wu, B.Chem.Eng. (Minnesota), M.S. (Tennessee), M.A. (Manitoba), Ph.D. (Toronto), Assistant Professor of Psychology

Chauvin, Guy, B.Comm. (McGill), M.A. (Dalhousie), Ph.D. (Trinity College, Dublin), Assistant Professor and Chairperson of the Department of Political Science

Chew, Milton, B.S. (Juniata College), M.S., Ph.D. (Carnegie Institute of Technology), Associate Professor and Chairperson of the Department of Finance/Management Science

Christiansen-Ruffman, Linda, B.A. (Smith College), Ph.D. (Columbia), Associate Professor of Sociology

Christie, Ross W., B.Comm., M.B.A. (Saint Mary's), Lecturer in Finance/Management

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

Connell, Ronald D., B.Sc. (Alberta), M.B.A. (Queen's), C.D., Associate Professor of Management

Connelly, Dennis E., B.Sc. (Alberta), M.Comm. (Toronto), Ph.D. (Illinois), Associate Professor of Finance/Management Science (on leave, 1980-81)

Connelly, Patricia, B.A. (Saint Mary's), Dip. Ed., M.A. (Dalhousie), Ph.D. (Toronto), Associate Professor of Sociology

Cosper, Ronald C., B.A. (Purdue), M.A. (Cornell), Ph.D. (Rutgers), Associate Professor of Sociology

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

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

Davies, Donald H., B.Sc. (Carleton), Ph.D. (Bristol), Professor of Chemistry

Davis, Bernard E., B.S., Ph.D. (Massachusetts Institute of Technology), Associate Professor of Education

Davis, Stephen A., B.A. (New Brunswick), M.A. (Memorial), Assistant Professor of Anthropology (on leave, 1980-81)

Day, E. E. Douglas, B.A., Dip. Ed. (Leicester), Ph.D. (Sheffield), Professor of Geography

Dixon, Paul S., B.A. (New Brunswick), M. Math., Ph.D. (Waterloo), Assistant Professor of Finance/Management Science

Doak, Ervin J., B.Comm. (Saint Mary's), M.A. (Dalhousie), Ph.D. (Toronto), Associate Professor of Economics

Dockrill, Frederick J., B.A., B.Ed., M.A. (Saint Mary's), Ph.D. (Dalhousie), Associate Professor of Education

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

Dougherty, Frank P., B.Comm. (Sir George Williams), M.Sc. (Clarkson College of Technology), Ph.D. (Pennsylvania State), C.A., Associate Professor of Accounting

Duffy, Corinne, B.A. (William Smith College), M.B.A. (State University of New York), Lecturer in Marketing

DuPuy, David L., A.B. (King's College, Tennessee), M.A. (Wesleyan), Ph.D. (Toronto), Associate Professor and Chairperson of the Department of Astronomy

Elkhazin, Izzy, B.Sc. (Khartoum), B.A. (Hons), M.B.A. (Western Ontario), Assistant Professor of Accounting (on leave, 1980-81)

Elson, Clive M., B.Sc. (Toronto), Ph.D. (Queen's), Associate Professor of Chemistry (on leave, 1980-81)

Emerson, H. Bryan, B.B.A. (Oklahoma), M.B.A. (Chicago), Assistant Professor and Chairperson of the Department of Accounting

Erickson, Paul A., B.A. (Michigan), M.A. (Indiana), M.A. (Wayne State), Ph.D. (Connecticut), Associate Professor and Chairperson of the Department of Anthropology

Falk, Lilian, B.A., M.A. (Jerusalem), Ph.D. (Harvard), Associate Professor of English

Farrell, Anthony J., B.A., M.A. (California), Ph.D. (Princeton), Associate Professor of Spanish and Chairperson of the Department of Modern Languages and Classics

Fillmore, Keith G., B.Sc. (Queen's), M.A. (Princeton), Ph.D. (British Columbia), Assistant Professor of Physics

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

Fitzgerald, Patricia A., B.B.A. (St. Francis Xavier), M.A. (North Dakota), Ph.D. (Northern Colorado), Associate Professor and Chairperson of the Department of Management

Flynn, T. Edward, B.A. (Memorial), M.A. (Dalhousie), Ph.D. (London), Associate Professor of English

Gillis, D. Hugh, B.A. (St. Francis Xavier), Ph.D. (London), Professor of Political Science

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

Gregory, Janet, B.A.Sc. (Waterloo), M.Sc., B.Ed. (Dalhousie), Lecturer in Finance/Management Science

Grennan, Wayne, B.Eng. (Nova Scotia Technical College), B.A., M.A. (Dalhousie), D. Phil. (Oxford), Assistant Professor and Chairperson of the Department of Philosophy

Haigh, Elizabeth V., B.Sc., M.Sc. (Alberta), Ph.D. (Wisconsin), Associate Professor of History

Halebsky, Sandor, B.A. (City College of New York), Ph.D. (Cornell), Associate Professor of Sociology

Hallett, George B., B.A., M.A. (Dalhousie), Associate Professor and Chairperson of the Department of English (on leave 1980-81)

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

Hari Das, T. P., B. Comm. (Madras), M.B.A. (Indian Institute of Management), M.Sc., Ph.D. (British Columbia), Assistant Professor of Management

Haysom, John T., B.Sc. (London), Ph.D. (Cambridge), Professor of Education

Herrick, Michael J., B.A. (College of Steubenville), M.A. (John Carroll), Ph.D. (Texas), Associate Professor of Education

Higgins, Donald J., B.A. (Queen's), M.A. (Victoria, N.Z.), Ph.D. (Carleton), Associate Professor of Political Science

Hill, Kenneth A., B.A. (California State College), M.A., Ph.D. (Alberta), Assistant Professor and Chairperson of the Department of Psychology

Hope, David A., B.Comm. (Saint Mary's), M.B.A. (Harvard), C.A., Associate Professor of Accounting (on leave 1980-81)

Hope-Simpson, David, B.Sc., M.Sc., Ph.D. (McGill), Professor and Chairperson of the Department of Geology

Howell, Colin D., B.A., M.A. (Dalhousie), Ph.D. (Cincinnati), Associate Professor of History

Jabbra, Joseph G., M.A. (St. Joseph's, Beirut), Ph.D. (Catholic University of America), Associate Professor of Political Science

Jaquith, James R., B.A. (Mexico City College), M.A., Ph.D. (Indiana), Associate Professor of Anthropology (on leave, 1980-81)

Kabe, Dattatraya G., B.Sc., M.Sc. (Bombay), M.Sc. (Karnatak), Ph.D. (Wayne State), Professor of Mathematics (on leave, 1980-81)

Kapoor, Brij M., B.Sc., M.Sc., Ph.D. (Delhi), Associate Professor of Biology (on leave, 1980-81)

Kiang, Mo-Tak, B.Sc., M.A., Ph.D. (Dalhousie), Associate Professor of Mathematics

Kiesekamp, Burkhard, B.A. (Carleton), M.A., Ph.D. (Toronto), Associate Professor of History

Kling, Nathan D., B.B.A., M.B.A., Ph.D., (Texas), Associate Professor of Marketing

Konopasky, Robert J., M.A. (Western Ontario), B.A., Ph.D. (Windsor), Associate Professor of Psychology

Kruse, Robert L., B.A. (Pomona College), M.S., Ph.D. (California Institute of Technology), Professor of Mathematics

Landes, Ronald G., B.Sc. (Oregon), M.A., Ph.D. (York), Associate Professor of Political Science

Larsen, Michael J., B.A. (Saint Mary's), M.A. (Dalhousie), Ph.D. (Toronto), Assistant Professor of English (on leave 1980-81)

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

Le Pierrès, Guy, B.A., L.ès L. (Rennes), Dip d'Etudes Sup. (Montpellier), CAPES (Rennes, Paris and Montpellier), Associate Professor of French

Lonc, William, S.J., B.Sc. (Sir George Williams), Ph.L., Ph.D. (St. Louis), Associate Professor and Chairperson of the Department of Physics

MacCormack, John R., B.A., M.A. (Dalhousie), Ph.D. (Toronto), Professor of History

MacDonald, Roger A., B.A. (St. Dunstan's), M.A. (Dalhousie), Ph.D. (New Brunswick), Associate Professor of English

MacInnes, Daniel W., B.A. (Gonzaga), M.A. (Memorial), Assistant Professor of Sociology and Coordinator of Atlantic Canada Studies

MacKinnon, Kenneth A., B.Sc. (St. Dunstan's), M.A. (Dalhousie), Ph.D. (Toronto), Associate Professor of English

Mackriss, John, B.L.S. (McGill), B.A., M.A. (Toronto), Dip. d'Etudes App. (Paris-Sorbonne), Associate Professor of French

Marshall, Rowland C., B.A., M.A. (Western Ontario), Ph.D. (Ottawa), Associate Professor of Philosophy

McBride, Edward J., B.S. (Le Moyne), M.A. (Catholic University of America), Associate Professor of Political Science

McCalla, Robert J., B.A. (Western Ontario), Ph.D. (Hull), Assistant Professor and Chairperson of the Department of Geography

McFall, John D., B.Math. (Waterloo), M.Sc. (Northwestern), Ph.D. (Waterloo), Assistant Professor of Mathematics

McGee, Harold F., B.A., M.A. (Florida State), Ph.D. (Southern Illinois), Associate Professor of Anthropology

Meredith, Guy M., B.A. (Hons) (British Columbia), M.A. (Western Ontario), Lecturer in Accounting

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

Mills, Wallace G., B.A., M.A. (Queen's), Ph.D. (California, Los Angeles), Associate Professor of History

Millward, Hugh A., B.A. (Lanchester Polytechnic), M.A., Ph.D. (Western Ontario), Associate Professor of Geography

Miner, Frederick C., B.A. (Gettysburg College), M.B.A. (Utah), Ph.D. (Minnesota), Associate Professor of Management and Director of the Master of Business Administration Program

Mitchell, George F., B.Sc. (McMaster), M.A., Ph.D. (Toronto), Associate Professor of Astronomy

Monahan, Arthur P., B.A., M.A., Ph.D. (Toronto), M.S.L. (Pontifical Institute of Medieval Studies), Professor of Philosophy

Mukhopadhyay, Arun K., M.A. (Calcutta), M.A., Ph.D. (Brown), Assistant Professor of Economics

Mulrooney, Dermot L., B.Eng., M.Eng. (Nova Scotia Technical College), Associate Professor and Director of the Division of Engineering

Murphy, Arthur, B.A. (Saint Mary's), M.A. (Dalhousie), Assistant Professor of French (on leave, 1980-81)

Murphy, Lawrence F., S.J., B.A. (Montreal), M.A. (Saint Mary's), M.A. (Toronto), Ph.D. (Marquette), Associate Professor of Religious Studies

Murty, Dangety S., M.A. (Madras), B.Sc., M.Sc., D.Sc. (Andhra), C. Eng.; F.I.E.E.; F.I.E.R.E., Professor of Physics

Nahrebecky, Roman, M.A., Ph.D. (McGill), Dr. Jur. (Prague), Associate Professor of German

Okraku, Ishmael O., B.A. (Ghana), M.A., Ph.D. (Cornell), Associate Professor of Sociology

O'Neill, Timothy J., B.A. (St. Francis Xavier), M.A. (British Columbia), Ph.D. (Duke), Assistant Professor and Chairperson of the Department of Economics

Overington, Michael A., B.A. (Clark), M.A., Ph.D. (Wisconsin), F.L.A., Associate Professor of Sociology (on leave, 1980-81)

Pendse, Shriped, B.A. (Knox College, Illinois), M.S. (Massachusetts Institute of Technology), Ph.D. (Stanford), Associate Professor of Management

Pepin, Fernande, B.A., M.A., L. ès L., D. ès L. (Laval), Associate Professor of French

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

Perrier, David C., B.A. (Saint Mary's), M.A. (Dalhousie), Ph.D. (York), Assistant Professor of Sociology

Phelps, David J., B.A. (Kalamazoo College), Ph.D. (Carleton), Assistant Professor of Chemistry

Phillips, Francis R., Ph.D. (London), Associate Professor of Education

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

Qureshi, Zahoorul H., M.A. (Bombay), M.B.A. (California, Los Angeles), Associate Professor of Marketing

Ralston, Helen, R.S.C.J., B.A. (Newton College), M.A. (Boston College), Ph.D. (Carleton) Assistant Professor of Sociology

Robinson, Brian S., B.A. (Queen's, Belfast), M.A. (Alberta), Associate Professor of Geography

Robinson, Earl J., A.B. (Davidson College), M.S. (Bucknell), Ph.D. (Georgia), Assistant Professor of Finance/Management Science

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

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

Sabean, Allan T., B.A., B.Sc. (Saint Mary's), M.Sc. (McGill), Professor of Chemistry

Sanborn, George A., B.A. (California, Los Angeles), M.A. (Cornell), Ph.D. (Purdue), Professor of Management

Schroeder, Harold J., B.Comm. (Manitoba), M.B.A.(British Columbia), Associate Professor of Management

Schwind, Hermann F., B.B.A., M.B.A. (Washington), Ph.D. (British Columbia), Associate Professor of Management

Scobey, Porter, B.Sc., M.A., Ph.D. (Dalhousie), Associate Professor of Mathematics

Scrimger, J. Norman, B.Sc. (British Columbia), M.Sc., Ph.D. (Western Ontario), Visiting Assistant Professor of Astronomy

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

Shimabuku, D. M., Ph.D. (California), Assistant Professor of Anthropology

Siddiqui, Quadeer A., M.Sc. (Lucknow), M.Sc. (Birmingham), Ph.D. (Leicester), Associate Professor of Geology

Singh, Kirtan P., B.A., M.A. (Punjab), M.Sc. (Indian Institute of Science), Ph.D. (Pennsylvania State), Associate Professor of Mathematics

Singh, Yash Pal, M.Sc. (Rajasthan), Ph.D. (Birla Institute of Technology and Science), Associate Professor and Chairperson of the Department of Mathematics

Snyder, J. Kennedy, B.A., M.A. (Brown), Associate Professor of English

Stiegman, Emero S., B.A. (Don Bosco College), S.T.L. (Salesian Pontifical), M.A., Ph.D. (Fordham), Associate Professor of Religious Studies

Street, Philip A., B.A. (Windsor), M.A., Ph.D. (York), Assistant Professor of Psychology

Sun, Mary, B.A., M.A. (Hong Kong), Ph.D. (London), Associate Professor of History (on leave, 1980-81)

Swingler, David N., B.Eng., Ph.D. (Sheffield), Associate Professor of Engineering

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

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

Thomas, Kurian K., B.Sc., M.Sc. (Travancore), Ph.D. (Florida), Associate Professor of Biology

Tobin, Vincent McB., B.A., M.A. (Dalhousie), Assistant Professor of Classics (on leave, 1980-81)

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

Tudor, Kathleen R., B.A. (Sir George Williams), M.A. (Montreal), Ph.D. (Toronto), Associate Professor of English

Turner, Stephen J., B.A., M.A. (Maine), Ph.D. (Massachusetts), Assistant Professor of Finance/Management Science

Twomey, Richard J., B.A. (Eastern Connecticut), M.A., Ph.D. (Northern Illinois), Assistant Professor of History

Van Dyer, David, B.Eng., M.Eng., Ph.D. (Nova Scotia Technical College), Assistant Professor of Engineering

van Llerop, Johannes, Drs. (Dutch School of Economics), M.A. (Toronto), Lecturer in Economics

Vaughan, Keith, B.Sc. (Manchester), Ph.D. (St. Andrew's), C.Chem., F.R.I.C., Associate Professor and Chairperson of the Department of Chemistry

Veltmeyer, Henry, B.A. (Catholic University of Guayaquil), M.A. (Alabama), Ph.D. (McMaster), Associate Professor and Chairperson of the Department of Sociology

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

Walsh, Gregory M., B.Comm. (St. Mary's), Lecturer in Accounting

Walter, M. Susan, B.A., M.A., Phil.M. (Toronto), Assistant Professor of Anthropology

Weeren, Donald J., B.A. (Montreal), M.S. (Fordham), Ph.D. (Columbia), Associate Professor of Education

Welch, Gary A., B.S. (Harvey Mudd College), M.S., Ph.D. (Washington), Associate Professor of Astronomy (on leave, 1980-81)

Whalen, Terrence A., B.A. (Saint Mary's), M.A. (Melbourne), Assistant Professor of English

Wiles, Michael, B.Sc., Ph.D. (Leeds), Associate Professor and Chairperson of the Department of Biology

Young, G. Fred W., B.A. (Harvard), Ph.D. (Chicago), Associate Professor and Chairperson of the Department of History

Young, John C., B.Sc., Ph.D. (London), M.B.A. (New York), A.M.I.C.E., Associate Professor of Chemistry

Administrative Offices 1980-81

Academic Vice-President
William A. Stewart, S.J., B.A. (Montreal), S.T.L., Ph.L.
(Immaculate Conception)

Admissions Office
Leo R. MacDonald, C.D., B.A. (Saint Mary's), Director
Greg C. Ferguson, B.Comm. (Saint Mary's), Assistant Director

Athletics
Robert Boucher, Arena Manager and Hockey Coordinator
Helen Castonguay, B.P.E. (Dalhousie), Basketball Coordinator
Roy Clements, Soccer and Volleyball Coordinator
Gary Heald, B.S. (Maine at Portland), M.S. (Maine), Basketball
Coordinator
Allan Keith, B.A. (Saint Mary's), B.P.E. (McMaster), B.Ed.
(Queen's), Football Coordinator
Kathleen Mullane, B.P.E. (Dalhousie), Field Hockey Coordinator

Audio Visual Services
Paul E. Rooney, Head

Bookstore
Donald Harper, B.Sc. (Saint Mary's), Manager

Business Office
Richard W. Lowery, C.A., Comptroller
Ronald L. Cochrane, B. Comm. (Saint Mary's), Chief Accountant
Matthew Gallagher, Purchasing Officer
Russell Lownds, Receiving and Stores

Computer Services
A. M. Tingley, B.E., M.E. (Nova Scotia Technical College), Head

Conference Office
Patricia Lyall, B.Sc. (Saint Mary's), Coordinator

Continuing Education
Lloyd Fraser, B.A., B.Ed. (Mount Allison), Acting Director
Chesley Wells, B.S., M.S., (Bradley), Assistant Director

Deans' Offices
    Faculty of Arts
    Thomas J. Musial, M.S. (Wisconsin), B.A., Ph.D. (Notre
    Dame), Dean

    Faculty of Commerce
    Samuel H. Jopling, B.Mech. Eng. (Georgia Institute of
    Technology), M.S., PhD. (Pennsylvania State), Dean

    Faculty of Education
    Michael R. MacMillan, B.A., B.Ed. (St. Francis Xavier),
    M.A. (Saint Mary's), Ph.D. (Alberta), Dean

    Faculty of Science
    Jack L. Ginsburg, B.A. (Temple), Ph.D. (Rutgers), Dean

Development and Alumni Affairs
Charles A. Vaughan, Director
L. W. Smith, B.A. (Saint Mary's), B.Ed. (Dalhousie), M.A.
(Fordham), Coordinator of Alumni Affairs

Information and Public Relations
Elizabeth Stevens, B.A. (Dalhousie), Director

International Education Centre
James H. Morrison, B.A., B.Ed. (Acadia), Ph.D. (Ibadan), Director

Library
Ronald A. Lewis, B.A., M.Div. (Wheaton College), M.L.S. (Kent
State), Librarian
C. Gosine, A.L.A. (London), Head of Collections Development
Christine MacGillivray, Administrative Assistant
M. Schenk, B.ScN. (Western Ontario), M.L.S. (Dalhousie), Head
of Public Services
R. Tayyeb, B.A. (Karachi), B.L.S. (Toronto), M.L.S. (Toronto),
Head of Technical Services
D. Vaisey, B.A. (Trent), M.L.S. (Dalhousie), Head of Reference

Personnel
Daniel G. Stone, Personnel Officer

President's Office
Kenneth L. Ozmon, B.A. (St. Bernard College), M.A. (Catholic
University of America), Ph.D. (Maine), President
Carol M. Markesino, Executive Secretary

Registrar's Office
Elizabeth A. Chard, B.A., B.Ed., M.A. (Dalhousie), Registrar
Murray Wilson, B.A., B.Ed. (Saint Mary's), Assistant Registrar
Theresa Brennan, B.A. (Saint Mary's), Assistant to the Registrar

Residence
Keith Hotchkiss, B. A. (Saint Mary's), Director of Residences
P. Clay Fowler, B. A. (Saint Mary's), Assistant Director of
Residences

Senate Office
Kevin J. Cleary, B.A., B.Ed., M.A. (Saint Mary's), Secretary to
Senate

Student Services
Robert Hayes, B.A. (Saint Mary's), Director
Graham Black, B.A., B.Ed. (Saint Mary's), Counsellor
K. J. Cleary, B.A., B.Ed., M.A. (Saint Mary's), Counsellor
Belinda Gallagher, B.A. (Dalhousie), Director of Financial Aid
Rev. J. J. Hennessey, S.J., B.A., M.A. (Gonzaga), Counsellor
Rev. John Mills, B.A. (St. Anthony's College), B.D. (Mary
Immaculate Seminary), M.A. (Maryknoll Seminary), Chaplain
Kathleen Mullane, B.P.E. (Dalhousie), Counsellor
J. R. Leighton Davis, B.F.A. (N.S.C.A.D.), Curator, Art Gallery
John Rodgers, Manager, Canada Manpower Centre on Campus

University Services
Guy L. Noël, B.Eng. (Nova Scotia Technical College), Director
G. H. Somers, Dip. Eng. (Saint Mary's), Director of Physical Plant
Peter Weal, Manager, Printing Centre

Section 1

General
Information
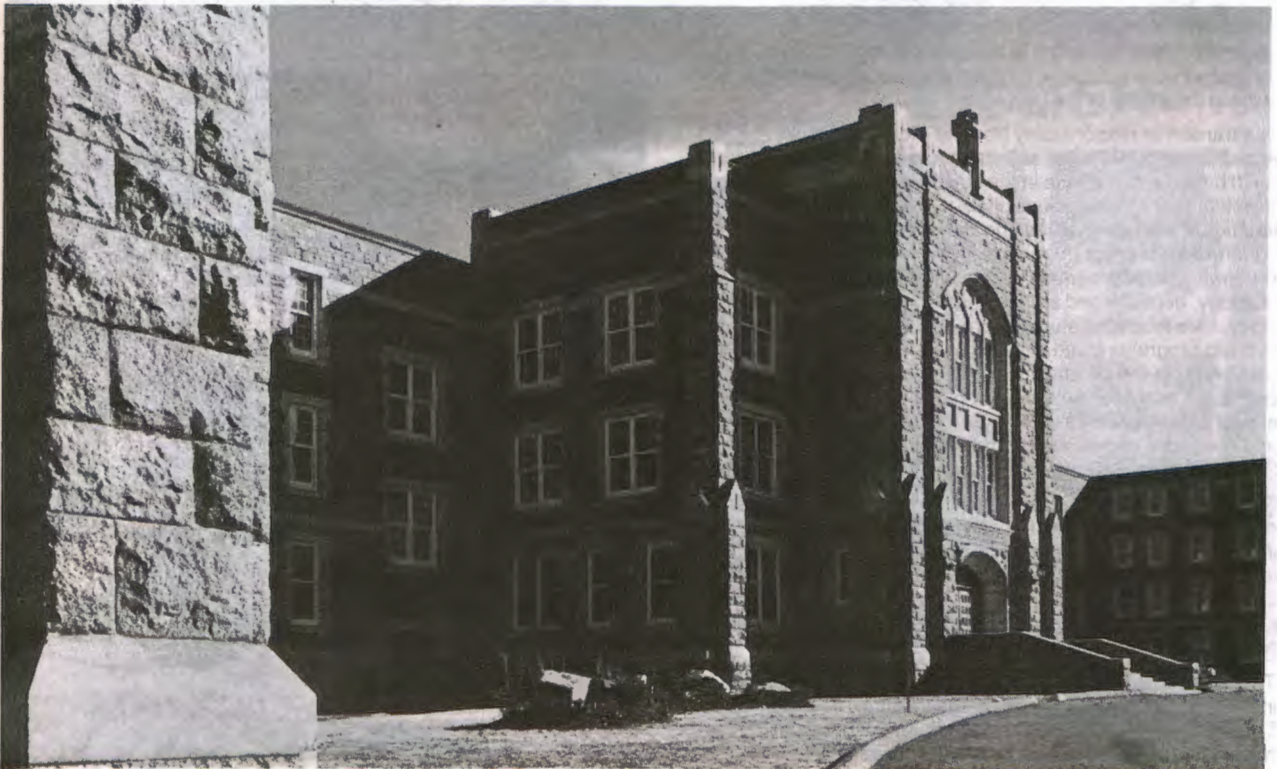
General Information

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 new Act gave legal status to the Board of Governors and Senate. Subject to the powers of the Board, Senate is responsible for the educational policy of the University. In 1974, under the Trade Union Act of Nova Scotia, faculty members formed a Faculty Union which has since become an influential voice in the affairs of the University.

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 Centre, 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, and Association of Commonwealth 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. The affiliation between Saint Mary's University and Regis College, Toronto, is presently in suspension in light of a new association between the Toronto School of Theology and Regis College.

Section 2

Admission

Academic Regulations and Information

Registration

Admission

Students seeking admission to any degree program, (except as noted below in 3, 4, and 6), undergraduate or graduate, at Saint Mary's University should address all enquiries, requests for application forms or correspondence to:

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

Telephone: (902) 422-7331 (local 257 or 258)
(902) 422-7361 (local 242 or 243)

This section is indexed for easy reference:

1. Procedures for Admission to Undergraduate Programs

a. Completed application forms should reach the Admissions Office by 1 April in the case of overseas applicants and 1 September for all other students. Provincial certificates or other accredited school certificates giving final grades or marks, plus a non-returnable processing fee of $5.00 must accompany the application forms.

b. 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.

c. All students registering for the first time must present, at or before the time of registration, a certificate of medical fitness signed by an authorized medical practitioner. Failure to file the required medical documents will result in the students' acceptances and subsequent registrations being considered conditional and subject to cancellation. Saint Mary's is quite prepared to accept students having particular physical handicaps if these applicants provide a suitably signed medical certificate.

d. Applicants who have 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 applicants to the above address. Failure to report all institutions attended may result in dismissal from the University.

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

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

f. Students who were registered in a degree program during the entire preceding academic year are not required to reapply for admission to the University. Such students will automatically be sent information with respect to registration for the coming year.

2. Requirements for Admission to Undergraduate Programs
a. Note

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

(ii) Definitions:

(a) "Satisfactory grades" means an average in five subjects of 60 per cent with no mark below 50 per cent,

(b) "Academically recognized subjects" means subjects offered in the university preparatory program of an approved school system.

b. Nova Scotia

(i) Students entering from the Nova Scotia school system must have Grade XI with satisfactory grades in English and four other academically recognized subjects, as defined above, to enter a four year degree or five year honor's program.

(a) Students intending to register in arts may be admitted to a four year general or five year honor's degree, if they meet the requirements of English and four other completed courses in Grade XI with satisfactory grades.

(b) Students intending to register in commerce may be admitted to a five year general or five year honor's degree, if they meet the requirements of satisfactory grades in English, mathematics, and three other academically recognized subjects.

(c) Students intending to register in science, engineering or pre-professional studies (e.g., medicine and dentistry) may be admitted to a four year general or major degree or a diploma program in engineering and a five year honor's degree if they meet the requirement of satisfactory grades in English, mathematics, two sciences and one other academically recognized subject.

(ii) Students entering from Nova Scotia Grade XII with satisfactory grades in English and four other academically recognized subjects, as defined below, may receive advanced standing.

(a) Students intending to register in arts may be admitted to a three year general or four year honor's degree, if they meet the requirements of English and four other completed

courses in Grade XII with satisfactory grades.

(b) Students intending to register in commerce may be admitted to a four year general or a four year honor's degree, if they meet the requirement of satisfactory grades in English, mathematics and three other academically recognized subjects.

(c) Students intending to register in science, engineering or pre-professional studies (e.g., medicine and dentistry) may be admitted to a three year general or major degree or a diploma program in engineering and a four year honor's degree if they meet the requirement of satisfactory grades in English, mathematics, two sciences and one other academically recognized subject.

(iii) Students who have completed Grade XII but whose final grades do not meet complete advanced credits under the provisions of 3(b) above, may 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 these subjects.

(iv) Students will not be granted credit for high school work done after their first registration at any university, or if the high school transcript is received after the last day for late registration.

c. New Brunswick and Prince Edward Island
(i) 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 students.

(ii) 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.

d. Newfoundland
Students who have completed Grade XI in the Newfoundland school system may be admitted to a four year degree program in arts and science or a five year degree program in commerce.

e. Other Provinces
(i) 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. Credits for students with two years of CEGEP will be assessed separately.

(ii) 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 with advanced standing.

(iii) Manitoba, Saskatchewan and Alberta: Grade XI certificate. Students who have completed Grade XII may be considered for advanced standing.

(iv) British Columbia: Completion of a four year secondary school program may be considered for advanced standing.

f. United States
(i) Students who have graduated from high school with 16 points — 4 in English and 12 in other academic subjects — will be considered for admission. Students seeking admission to engineering and science must have 3 points in mathematics and at least 3 points in science subjects. Students seeking admission to commerce must have 3 points in mathematics.

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

(iii) Student who have satisfactorily completed a year or more of a university or college program, beyond high school, may be considered for advanced credit.

g. Other Countries
(i) Students must have completed four years of a North American high school system or the English or the Caribbean GCE at the Ordinary Level to be considered for admission. Passes must be obtained, at the minimum, in five subjects including English for arts, and English, mathematics and two science subjects for engineering and science. Commerce students must have English, mathematics and three other subjects.

(ii) Student who have completed the Advanced Level GCE tests may be considered for advanced standing.

(iii) Students whose first language is not English, or who have not attended an English language secondary school, will normally 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. The normal Test of English as a Foreign Language (TOEFL) score required is 550.

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

h. Admission Requiring Interview
Applicants for full- or part-time study who do not meet the above admission criteria may apply for admission to the University on the basis of education, work or other experience which provides an indication of success in a program of university study. Such students will follow the regular procedures for admission to undergraduate programs and will additionally be required to meet personally with the appropriate Dean (or the Dean's designate) who may attach specific conditions to the students' admission. Ordinarily admission in this category will be limited to students who are at least twenty-one years old and who have not been enrolled in any program of full-time study for at least three consecutive years.

3. Mature Admission
a. To qualify for admission as mature students, applicants must be at least twenty-five years of age and must show, through education, work experience or in other ways, capability of successfully completing degree programs at Saint Mary's. Each mature applicant is considered on an individual basis. The Dean of the appropriate Faculty (or the Dean's designate) will determine the specific length of each mature student's program within the following guidelines (see 5(c) below):

Arts — 15 to 20 credits
Commerce — 20 to 25 credits

b. The application procedure for admission as mature students shall be as follows:
(i) Application forms may be obtained by writing, telephoning or visiting:

The Director of Continuing Education
Saint Mary's University
Halifax, N.S.   B3H 3C3
Telephone: (902) 422-7361
                        Ext. 250, 251, 252, 253

(ii)   The completed application form should be sent together with the regular application fee of $5.00, and, if possible, with an accredited school certificate giving the grades or marks attained during the last year of attendance.

(iii)   Applicants who have completed courses at another university or post-secondary educational institution must ask that institution to send official transcripts of their work to the Director of Continuing Education.

(iv)   Official transcripts from all institutions previously attended must be on file before the students' registrations will be considered official.

(v)   Each applicant must arrange through the Director of Continuing Education an appointment for interview, if possible before the following dates:

First summer session — May 1
Second summer session — June 15
Fall semester — August 15
Winter semester — December 1

4. Procedures for Other Admission Categories
a.   Transfer Students
Students who have been formally enrolled in a degree program at another university should follow the regular procedure for admission to Saint Mary's through the Admissions Office. If admitted, transfer students will receive advanced standing credit in conformity with the principles and procedures stated in academic regulation 20. Transfer students who also meet the criteria as mature students may apply for admission as mature students through the Continuing Education Office, and will be required to complete a program of study within the range of credits established for mature students by the Faculty to which they are admitted.

b.   Admission as an Upgrading Student
Students who already hold a degree or professional certificate may enrol in a course or courses to upgrade their qualifications. Special 'Application for Admission' forms are available in the Registrar's Office. Such students must meet the stated prerequisites for the course(s) for which they enrol. A separate application is required for each academic year or summer session when a student enrols in this particular category.

c.   Admission as a Student Auditor
Students who are interested in auditing a course (see academic regulation No. 2 below) are required to complete a special 'Application for Admission' form available in the Registrar's Office and to follow normal registration procedures. These students must meet any stated prerequisites for the course(s) in which they enrol.

d.   Admission by Letter of Permission as a Special Student
Students currently working on a degree at another institution, who have letters of permission to take courses at Saint Mary's University for transfer of credit to their home institution, must complete a special 'Application for Admission' form available in the Registrar's Office. In addition, these students must have the Registrar of their University forward a Letter of Permission to the Registrar at Saint Mary's. In all cases the Registrar of Saint Mary's will forward the grades for these courses to the students' home universities. Saint Mary's shall not be held responsible for meeting the deadlines of other universities.

e.   Admission to a Non Degree Program (N.D.P.)
(i)   Individuals interested in taking one or more courses at the University without being registered in a degree program can seek admission as a non degree program student. Such students must meet the stated prerequisites for the course(s) for which they enrol. Students may take no more than five full courses (or half course equivalents) as non degree students. If non degree students wish to continue to study at Saint Mary's beyond five full courses (or half course equivalents), they must formally be admitted to a degree program in one of the Faculties of the University.

(ii)   Under special circumstances, high school students, with the permission of the appropriate Dean, may be admitted to enrol in one or more of Saint Mary's courses for which they have the necessary prerequisites. Such students would enrol as non-degree students.

(iii)   Students who wish to study at Saint Mary's in a non-degree program should apply through the office of the Director of Continuing Education. A separate application is required for each academic year or summer session in which the student is enrolled in this program.

5. Length of Program of Study
a.   Students will be awarded advanced standing credit in conformity with the principles and procedures stated in academic regulation 20.

b.   Students may earn up to five academic credits with the principles and procedures stated in academic regulation 22.

c.   In the case of mature students, the Director of Continuing Education may make a written recommendation to the appropriate Dean concerning the students' education, work or other experience which may have a bearing on the required length of the students' programs of study. The appropriate Dean (or Dean's designate) will determine the specific number of credits that each mature student will be required to complete within the ranges established for that Faculty (see 3(a) above). In determining the length of mature students' programs, the Dean will take into consideration the recommendations of the Director of Continuing Education, the requirements of the programs that the students wish to enter, and the official record of any previous formal education that the students may already have completed.

d.   Students who are admitted to degree or diploma programs from non degree status may count the university credits that they have earned as non degree students towards any degree or diploma programs at Saint Mary's to which they may later be admitted. All courses attempted at the University will remain a part of the students' permanent records.

6. Procedure for Admission to Graduate Programs
Admission to a graduate program at the University is covered in Section 3 of this Calendar.

The Director of Continuing Education
Saint Mary's University
Halifax, N.S.   B3H 3C3
Telephone: (902) 422-7361
Ext. 250, 251, 252, 253

(ii)   The completed application form should be sent together with the regular application fee of $5.00, and, if possible, with an accredited school certificate giving the grades or marks attained during the last year of attendance.

(iii)   Applicants who have completed courses at another university or post-secondary educational institution must ask that institution to send official transcripts of their work to the Director of Continuing Education.

(iv)   Official transcripts from all institutions previously attended must be on file before the students' registrations will be considered official.

(v)   Each applicant must arrange through the Director of Continuing Education an appointment for interview, if possible before the following dates:

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b.   Admission as an Upgrading Student

Students who already hold a degree or professional certificate may enrol in a course or courses to upgrade their qualifications. Special 'Application for Admission' forms are available in the Registrar's Office. Such students must meet the stated prerequisites for the course(s) for which they enrol. A separate application is required for each academic year or summer session when a student enrols in this particular category.

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(iii)   Students who wish to study at Saint Mary's in a non-degree program should apply through the office of the Director of Continuing Education. A separate application is required for each academic year or summer session in which the student is enrolled in this program.

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c.   In the case of mature students, the Director of Continuing Education may make a written recommendation to the appropriate Dean concerning the students' education, work or other experience which may have a bearing on the required length of the students' programs of study. The appropriate Dean (or Dean's designate) will determine the specific number of credits that each mature student will be required to complete within the ranges established for that Faculty (see 3(a) above). In determining the length of mature students' programs, the Dean will take into consideration the recommendations of the Director of Continuing Education, the requirements of the programs that the students wish to enter, and the official record of any previous formal education that the students may already have completed.

d.   Students who are admitted to degree or diploma programs from non degree status may count the university credits that they have earned as non degree students towards any degree or diploma programs at Saint Mary's to which they may later be admitted. All courses attempted at the University will remain a part of the students' permanent records.

6. Procedure for Admission to Graduate Programs

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

Academic Regulations

Introductory Information

Definitions

Academic Year	The period extending from Wednesday following Labor Day in September to and including Convocation Day in May of the following year.
Academic Status	Senior: one who has 13.0 or more credits; Junior: one who has 8.0 to 12.5 credits; Sophomore: one who has 3.0 to 7.5 credits; Freshman: one who has 0.0 to 2.5 credits.
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.
Chairperson	Faculty member responsible for a department or area of study.
Course	A unit of instruction in a particular subject. The last digit of course numbers designates the following: .0 — full year course .1 — first semester half course .2 — second semester half course
Credit	A completed unit of university work or recognized equivalent. One credit is granted for each successfully completed full-year course; a half credit is granted for a successfully completed one semester course.
Dean	Also called Dean of the Faculty; the chief academic administrator of a Faculty.
Elective	A course not specifically required by a student's program of studies.
Faculty	When spelled with capital F, refers to an academic unit offering its own degree program; when spelled with small f, refers to instructors in a Faculty.
Grade	The letter indicating an instructor's evaluation of a student.
Instructor	A member of faculty teaching either full or part time.
Major	A subject or area of concentration.
Non-Degree Program (NDP)	A status permitting a student to take a course although that individual has not been accepted in a degree program at Saint Mary's University.
Prerequisite	A stated regulation which must be fulfilled prior to registration in a particular course.
Probation	A conditional status assigned to a student who has shown evidence of academic weakness.
Program	An approved group of courses leading to a degree or diploma.
Registration	Enrolment of a student in a course, courses, or program, including the payment of fees.
Satisfactory academic standing (standard)	Maintaining a quality point average of at least 1.5.
Semester	A term or period of instruction corresponding to one half of the academic year; each semester lasts approximately fourteen weeks.
Special Student	A student, working on a degree at another academic institution, who has a letter of permission to take a course or courses at Saint Mary's University.
Subject	Also called a discipline; a specific field of study, e.g., accounting, chemistry, history.
Summer Sessions	Periods of instruction normally lasting six weeks, during the months of May through August. Two summer sessions are offered each year.
Transfer Credit	Credit granted for work completed at another institution after admission to Saint Mary's.
Upgrading Student	A student who already holds an undergraduate degree or professional certificate and who wishes to take additional credit courses at Saint Mary's University.

graduate level courses, where the IC will not automatically be converted to the grade of F until the end of the semester following the one in which the IC grade was given;

Masters' Theses/Projects where the IC remains until the work is completed or the time limits expire for registration in the program.

f) The maximum time limit permitted for a change of final grade is six months from the last day of classes in the semester.

g) Once students' final grade has been determined, supplementary examinations or any additional assignments for the purpose of changing that grade are not permitted.

5. Quality Point Average

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

b) Each letter grade is given a quality point equivalent as described in 5(a) above.

c) The quality point average is computed at the end of each academic year by dividing the total number of quality points obtained that year by the total number of full courses taken, or their equivalent.

d) The cumulative quality point average is based upon all courses taken for credit in any Faculty at Saint Mary's other than those for which grades of AE, W, or WP have been given (see No. 5(b) above). Courses for which grades of F or WF have been given will be included in the calculation of the quality point average even if such courses are subsequently retaken and passed.

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

7. Standing Required for Continuance

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

b) In the case of students readmitted after an absence of five or more years, or after having been required to withdraw for academic weakness, or in the case of students transferring to a different degree program, the regulations in force at the time of readmission or transfer apply.

c) **Satisfactory Standing**

i) To qualify for a Bachelor's degree in Arts, Science, or Commerce, or a Diploma in Engineering, a student must achieve a cumulative quality point average of 1.5. For this reason, performance in any individual course below the grade of C– or a quality point average below 1.5 in any given semester is considered unsatisfactory.

ii) To qualify for a Bachelor's degree in Education a quality point average of 2.0 is required. For this reason, performance in any individual course below the grade of C or a quality point average below 2.0 in any given semester is considered unsatisfactory.

iii) To qualify for a Master's degree, a student must achieve a quality point average of 3.0. For this reason, performance in any individual course below the grade of B or a quality point

average below 3.0 in any given semester is considered unsatisfactory (see F in the section of this Academic Calendar dealing with the Master's Degree).

d) Probationary Status
Probationary status is incurred

i) if at the end of any academic year full-time students have not attained a quality point average of 1.5 for that year;

ii) if, after taking any five consecutive courses (or half course equivalents), part-time students have not attained a quality point average of 1.5 in respect of those five courses;

iii) on readmission after being required to withdraw because of academic weakness (see (g) below).

iv) if students are required to confer with their academic advisor and fail to do so or fail to make appropriate efforts to resolve problems which are affecting their academic performance. See academic regulations 3(b) and 3(c) above.

e) Removal of Probationary Status

i) Full-time students with probationary status can have that status removed only by achieving a quality point average of 1.5 during their first year of full-time study after being placed on probation.

ii) Part-time students with probationary status can have that status removed only by achieving a quality point average of 1.5 in respect of the first five courses taken after being placed on probation.

Note:

i) Transfer to a different Faculty does not remove probationary status.

ii) Unless the permission of the Dean of the Faculty has been obtained in advance, courses taken at another educational institution cannot be used to remove probationary status.

f) Required Withdrawal

Withdrawal from the University for a minimum of one calendar year is required if students fail to have their probationary status removed in accordance with the provisions of (e) above.

Note: No credit will be given for any courses taken at another institution during the year of required withdrawal.

g) Re-admission after Required Withdrawal

i) Students who are not eligible for readmission to their former institution are normally not admissible to Saint Mary's University.

ii) Students who have been required to withdraw, and who wish subsequently to be readmitted, must apply to the Admissions Office.

iii) If readmitted, students will be placed on academic probation and must fulfill the terms outlined in the letter of readmission. These will include the requirement that full-time students achieve a quality point average of 1.5 during the academic year after readmission, or part-time students achieve a quality point average of 1.5 in respect of the first five courses taken after readmission. Students failing to satisfy the terms of readmission may be denied the right to further registration. [See also regulation 7(b).]

8. Examinations

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

(iii) graduate level courses, where the IC will not automatically be converted to the grade of F until the end of the semester following the one in which the IC grade was given;

(iv) Masters' Theses/Projects where the IC remains until the work is completed or the time limits expire for registration in the program.

f) The maximum time limit permitted for a change of final grade is six months from the last day of classes in the semester.

g) Once students' final grade has been determined, supplementary examinations or any additional assignments for the purpose of changing that grade are not permitted.

6. Quality Point Average

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

b) Each letter grade is given a quality point equivalent as described in 5(a) above.

c) The quality point average is computed at the end of each academic year by dividing the total number of quality points obtained that year by the total number of full courses taken, or their equivalent.

d) The cumulative quality point average is based upon all courses taken for credit in any Faculty at Saint Mary's other than those for which grades of AE, W, or WP have been given (see No. 5(b) above). Courses for which grades of F or WF have been given will be included in the calculation of the quality point average even if such courses are subsequently retaken and passed.

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

7. Standing Required for Continuance

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

b) In the case of students readmitted after an absence of five or more years, or after having been required to withdraw for academic weakness, or in the case of students transferring to a different degree program, the regulations in force at the time of readmission or transfer apply.

c) Satisfactory Standing

i) To qualify for a Bachelor's degree in Arts, Science, or Commerce, or a Diploma in Engineering, a student must achieve a cumulative quality point average of 1.5. For this reason, performance in any individual course below the grade of C– or a quality point average below 1.5 in any given semester is considered unsatisfactory.

ii) To qualify for a Bachelor's degree in Education a quality point average of 2.0 is required. For this reason, performance in any individual course below the grade of C or a quality point average below 2.0 in any given semester is considered unsatisfactory.

iii) To qualify for a Master's degree, a student must achieve a quality point average of 3.0. For this reason, performance in any individual course below the grade of B or a quality point

average below 3.0 in any given semester is considered unsatisfactory (see F in the section of this Academic Calendar dealing with the Master's Degree).

d) Probationary Status
Probationary status is incurred

i) if at the end of any academic year full-time students have not attained a quality point average of 1.5 for that year;

ii) if, after taking any five consecutive courses (or half course equivalents), part-time students have not attained a quality point average of 1.5 in respect of those five courses;

iii) on readmission after being required to withdraw because academic weakness (see (g) below).

iv) if students are required to confer with their academic advisor and fail to do so or fail to make appropriate efforts to resolve problems which are affecting their academic performance. See academic regulations 3(b) and 3(c) above.

e) Removal of Probationary Status

i) Full-time students with probationary status can have that status removed only by achieving a quality point average of 1.5 during their first year of full-time study after being placed on probation.

ii) Part-time students with probationary status can have that status removed only by achieving a quality point average of 1.5 in respect of the first five courses taken after being placed on probation.

Note:

i) Transfer to a different Faculty does not remove probationary status.

ii) Unless the permission of the Dean of the Faculty has been obtained in advance, courses taken at another educational institution cannot be used to remove probationary status.

f) Required Withdrawal

Withdrawal from the University for a minimum of one calendar year is required if students fail to have their probationary status removed in accordance with the provisions of (e) above.

Note: No credit will be given for any courses taken at another institution during the year of required withdrawal.

g) Re-admission after Required Withdrawal

i) Students who are not eligible for readmission to their former institution are normally not admissible to Saint Mary's University.

ii) Students who have been required to withdraw, and who wish subsequently to be readmitted, must apply to the Admissions Office.

iii) If readmitted, students will be placed on academic probation and must fulfill the terms outlined in the letter of readmission. These will include the requirement that full-time students achieve a quality point average of 1.5 during the academic year after readmission, or part-time students achieve a quality point average of 1.5 in respect of the first courses taken after readmission. Students failing to satisfy terms of readmission may be denied the right to further registration. [See also regulation 7(b).]

8. Examinations

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

ERRATA PAGE FOR 1980-81 ACADEMIC CALENDAR

1. On page 15, section 3: Mature Admissions, add the following:

Science	- 15 to 20 credits
Engineering	- 16 to 18 credits

2. On page 20, in 7(d-iii) change (see (g) below) to read (see (i) below).

3. On page 20, delete 7 (f) and replace with following:

   f) REQUIRED ACADEMIC COUNSELLING

   Students whose academic performance at the University is unsatisfactory or who fall into one of the categories as described in regulation 3(c) above will be required to confer with their academic advisor.

   g) UNIVERSITY ACTIVITIES

   Students on probation are not in good academic standing and may not represent the University in any public activity such as dramatics, debating, oratorical contests, or athletic competitions; may not serve on any University Committee, or the Senate; may not hold office or stand for election to any office in any student organization; may not serve as a student representative in an academic department; and may not be involved in the organization of any extracurricular activity.

   h) REQUIRED WITHDRAWAL

   Withdrawal from the University for a minimum of one calendar year is required:

   i) If a student fails to obtain a 1.5 quality point average during the first year of full-time study after being placed on probation; or
   ii) If a student on academic probation fails to comply with any specific formal conditions governing his probation.

   Students who are required to withdraw from the University may be denied the right to return to Saint Mary's.

   Section entitled RE-ADMISSION AFTER REQUIRED WITHDRAWAL becomes i) instead of g).

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

c) In a course for which a formal examination during the special period is not being held, no test or examination is permitted in the semester's last three weeks of lectures other than during a single, regular class period. During these last three weeks two or more tests or examinations are not permitted as a substitute for a formal examination allowed under (a) and (b) above, and laboratory periods may be used only for laboratory work, laboratory tests or laboratory examinations.

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

e) Supplementary examinations are no longer offered.

9. Evaluations

a) At the end of each semester, instructors will submit to the Registrar, on the forms provided, their evaluations of all students registered in their courses. For full courses, interim grades will be submitted at the end of the first semester and final grades at the end of the academic year.

b) First semester Grade Report Forms are available to students at the beginning of the second semester. Those not picked up by the end of the first week of this semester are mailed to students' local address. Should the latter not be on file in the Registrar's Office, the form is mailed to students' permanent address.

c) As soon as possible after the conclusion of the academic year Grade Report Forms showing the final grades for all courses in which students were registered are mailed to the students' permanent address.

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

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

10. Special Examinations

a) A special examination may be arranged

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

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

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

b) The standard grading system (see No. 5) will be followed.

c) Special examinations will be scheduled by the Registrar. 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.

11. Academic Appeals

Students who have good reason to believe they have been subject to mistaken, improper or unjust treatment with respect to their academic work have the right to submit their case to the Committee on Academic Appeals. An appeal, however, must be based on solid evidence and not merely on injured feelings.

Appeals shall be governed by the following procedures.

a) Appealing of Final Grades

The only grades that may be appealed are final grades.

  i) Students who wish to appeal a grade must first consult the instructor concerned within one month of receiving the grade and, failing satisfaction, should also consult the appropriate chairperson and dean. If the problem is still unresolved, students may forward their appeal to the Committee on Academic Appeals. This must be done in writing, through the Registrar, within three months from the last day of the semester in which the course is taken.

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

  iii) The Committee will normally appoint two qualified examiners to review the evidence presented and reconsider the grade. The examiners will submit their report and the evidence reviewed to the Chairperson of the Committee.

  iv) On the appeal for a change of grade, the decision of the Committee shall be final.

b) Other Appeals

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

  i) Normally within one month of the event or of the decision being received by students, they shall submit their appeal in writing and direct it to the Committee on Academic Appeals through the Registrar.

  ii) The Chairperson of the Committee on Academic Appeals shall forward a copy of the appeal to the Dean of the appropriate Faculty, and, if relevant, to the chairperson of the department and the instructor.

c) Decision

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

d) Appeal of Committee's Decision

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

  i) Within one month of receiving the decision of the Committee, students shall submit their appeal in writing to the Secretary of Senate who shall forward the appeal together with all previously considered evidence to the Executive Committee of Senate for its consideration.

  ii) Within one month of receiving the appeal, the Executive Committee shall render and communicate its decision through the Secretary of Senate to the Registrar, who in turn shall communicate the decision to the student and to the Committee on Academic Appeals and take any further required action.

  iii) The decision of the Executive Committee shall be final.

e) Fee

All appeals to the Committee on Academic Appeals must be accompanied by a payment of a $25.00 fee. Further appeal under d) above requires an additional payment of $25.00. In the event of a decision favorable to the appellant, all payments will be refunded.

Note:

i) Appellants may ask or be asked to appear before the committee(s) hearing their appeal.

ii) Members of a committee cannot participate in the hearing of an appeal arising from an action to which they were a party.

12. Credit without Final Examination

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

13. Course Changes

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 records. During this period, a course or section may be added, dropped, or exchanged for another course or section.

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 course).

c) Changes can be effected only by filing with the Registrar a Change of Registration Form, indicating the desired change(s) and signed as follows:

i) in the case of a change of section only (e.g. Egl 200.0A to Egl 200.0D), by the Chairperson of the Department offering the course;

ii) in a case involving the adding, dropping or changing of an unsectioned course or courses (e.g. adding or dropping His 340.0, or changing from Ant 340.0 to Pol 350.0), by the Chairperson of the Department in which students are majoring, or (if no major has been declared) by the Dean of the students' Faculty;

iii) in a case involving both courses and sections (e.g. adding or dropping Egl 200.0A, or changing from Egl 200.0A to Pol 200.0C), by the Chairperson of the Departments offering the sectioned course(s), and the Chairperson of the Department in which students are majoring, or (if no major has been declared) by the Dean of the students' Faculty.

14. Declaration or change of Major Area of Concentration

a) In order to declare or change a major area of concentration, students must file a Change of Registration Form with the Registrar. This form must have been signed by the Chairperson of the Department in which the students intend to major. Studen[t] are strongly urged to declare their major areas of concentration before registering for the final ten credits.

b) The regulations governing the major program will be those in effect at the time of declaration, or change, of major.

15. Procedure for Changing Faculty

In order to register an official change of Faculty, students must file with the Registrar a Change of Registration Form which has been signed by the Dean of the Faculty into which the students intend to transfer.

Upon receipt of such a Change of Registration Form, the Registrar, on the advice of the Dean of the Faculty, will inform th[e] students of the number of credits (including advanced standing credits) being transferred to their new degree program.

Students on probation at the time of authorized transfer of Facul[ty] automatically remain on probation.

16. Withdrawing from a Course

a) After the time limits indicated in 13(b) above have expired, an[d] provided the course still has one quarter of the instruction time remaining, students may be authorized by their faculty advisors to withdraw from the course. Students who do not have a facult[y] advisor must obtain this permission from the Dean of their Faculty.

b) If authorization is granted, students will be responsible for submitting the authorization on a prescribed Change of Registration Form to the Registrar, who will then inform the appropriate instructor and request a grade. The instructor will assign a grade of WP (withdrawal when passing) if up to that point the students have completed all required work and achieved at least the minimum passing grade as defined in 5(c) above; WF (withdrawal when failing) if all required work has not been completed and/or the minimum passing grade has not be[en] achieved; or W (withdrawal) if no work has been required of the student and no assessment is therefore possible.

c) After the time limits indicated in 13(b) above have expired, th[e] only basis for a grade of W will be under the provisions outlined [in] 16(b) above.

d) Students cannot withdraw from a course after it has entered i[ts] last quarter of instruction except with the grade of "F".

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

17. Retaking a Course

a) Students may retake any course, including either class or laboratory portions. Although all grades, including failing grade[s] count in computing quality points for the year and for the degre[e] each course counts only once as a credit in the degree progra[m]

b) Students will not ordinarily be given credit for a course taken [at] another educational institution which they have already taken a[nd] failed at Saint Mary's.

18. Withdrawal for Academic Reasons

Students whose participation, work, or progress is deemed to b[e]

...satisfactory may have their registration terminated and be denied the right to continue at the University by the Dean of the Faculty.

19. Academic Responsibility

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

b) While the University does not compel attendance at every class, students should realize that failure to attend regularly may seriously jeopardize their chances of success. [See No. 4(b)]

c) Students who do not adhere to traditional ethical standards in the conduct of their academic work will be subject to penalty, including the possibility of being expelled from the University.

20. Advanced Standing

a) High School

Students from Nova Scotia Grade XII (or the equivalent) seeking advanced standing must forward their final transcript or certificate of marks to the Director of Admissions. A maximum of five credits can be awarded in respect of work completed in high school.

b) University and Post-Secondary Institutions

After an official transcript has been received by the Registrar, students transferring from other recognized universities or other post-secondary institutions to a degree program at Saint Mary's will be given advanced credit as judged appropriate by the Dean of the Faculty. To obtain a first baccalaureate degree or a diploma they must fulfill all requirements for that degree or diploma and successfully complete a minimum of seven full courses (or the equivalent) at Saint Mary's of which a minimum of three full courses (or the equivalent) must be in the students' major subject or area of concentration. In the case of students in an honors program the minimum number of courses required at Saint Mary's is twelve of which a minimum of eight full courses must be in the subject(s) of honors.

Note:

i) A request for advanced standing will not be considered after one year from the date of the students' first registration in a degree program at Saint Mary's.

ii) Advanced standing will be given only for courses with satisfactory grades as required by the relevant Saint Mary's program, and grades of D or lower are not acceptable.

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

21. Transfer Credit

a) While registered at Saint Mary's University students may be authorized by the appropriate Dean to take courses at another academic institution for transfer credit to a degree program at Saint Mary's. Students applying for such permission must provide the Registrar with a full description of the course(s) involved. The description from the academic calendar will suffice. The Registrar will notify the students of the Dean's decision and, if permission has been granted, will forward a Letter of Permission directly to the institution at which students are permitted to study. Students are responsible for completing the proper registration procedures

at the designated institution. These procedures also apply to summer session courses.

b) The University will pay the tuition fee of full-time students who have been given permission to register in a credit course at another Halifax institution unless the course is an overload or summer session course, in which case the students must pay the fee directly to that 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) In the case of correspondence courses, the normal procedures for transfer credits are to be followed. In addition, proof must be presented that the institution offering the correspondence course also recognizes it as a credit course.

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

f) No transfer credit will be given for courses with grades of D (or the equivalent).

g) Except under the above provisions, students may not register concurrently at Saint Mary's and at another academic institution.

22. Advanced Standing Credit by Examination

a) Students who have been admitted to Saint Mary's may obtain a limited number of credits in introductory (100 and 200) level courses by passing Advanced Standing Credit Examinations.

b) An Advanced Standing Credit Examination is given at the discretion of and administered by the Department.

c) For a course with an accompanying laboratory, the Department may require demonstration of appropriate laboratory skills as a prerequisite to taking the Advanced Standing Credit Examination.

d) Grading

i) Advanced Standing Credit Examinations will be graded either P (pass) or F (fail).

ii) Advanced Standing Credit Examination failures will not be recorded on students' transcripts.

iii) If the Advanced Standing Credit Examination is passed, credit for the course will be recorded on the students' transcripts along with an indication that credit was obtained by passing a Advanced Standing Credit Examination.

e) Conditions

i) A request for Advanced Standing Credit Examinations will not be considered after one year from the date of the students' first registration in a degree program at Saint Mary's University.

ii) The Advanced Standing Credit Examination for a given course may be taken only once.

iii) Advanced Standing Credit Examination cannot be taken in courses for which the student has already received grades of AU, WF, or F.

iv) Credits obtained from Advanced Standing Credit Examinations cannot be used to reduce a twenty-course program to less than a fifteen-course program or a twenty-five course program to less than a twenty-course program.

v) Advanced Standing Credit Examination credits in excess of the above allowance will be entered as credits on the students' transcripts but will not be used to reduce the number of courses required for a degree.

f) Registration Procedures
Advanced Standing Credit Examinations are given three times a year. Dates and specific registration procedures may be obtained from the Registrar.

g) Fees
Information available from Registrar.

23. Second Undergraduate Degree
Students who hold a first degree may register in a different Faculty for a second undergraduate degree. To be admitted to a program leading to a second undergraduate degree, students must meet the normal admission requirements and have at least a 1.5 cumulative quality point average (or the equivalant). They must complete all of the degree requirements, as specified by the Dean of that Faculty. In so doing, they must obtain credit for at least five additional full courses (or the equivalent), but may not use the same concentration to meet the requirements for both degrees.

24. Honors Equivalency: Certificate of Honors Standing
The Certificate of Honors Standing was established by the University Senate to provide a means of granting appropriate recognition to those graduates who did not follow the regular honors program of the University, but have subsequently completed all requirements for graduation in such a program and, having already received a degree, cannot have a second undergraduate degree in the same Faculty conferred upon them.

25. Convocation Dates, Degrees and Diplomas
a) Students must file an Application for Graduation with the Registrar by the dates stipulated in the University Diary (see centrefold of this Calendar), and pay the graduation fee.

b) Normally there is only one convocation exercise each year, in May. The names of students who complete their degree or diploma requirements during the summer months are presented to Senate in the fall, usually in November. Successful fall candidates will be notified by the Registrar and may opt either to graduate the following May at the regular convocation exercise, or to obtain their degrees by mail as soon as they have 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 the major area of concentration nor any distinction which may have been awarded. These, however, are noted on the students' official record card and hence appear on any academic transcript issued.

d) The University grants the following degrees:

Bachelor of Arts	B.A.
Bachelor of Science	B.Sc.
Bachelor of Commerce	B.Comm.
Bachelor of Education	B.Ed.
Bachelor of Education (Vocational Education)	B.Ed. (Voc.)
Master of Arts	M.A.
Master of Business Administration	M.B.A.
Master of Science	M.Sc.
Doctor of Laws, Honoris Causa	LL.D
Doctor of Letters, Honoris Causa	D.Litt

e) Students whose accounts are in arrears may be denied the right to graduate until the debt is cleared.

26. Degree or Diploma in Absentia
Provided that candidates have officially notified the Registrar at least ten days in advance that they will not be present at convocation, they may receive their degrees or diplomas *in absentia*. Failure to give such notification will result in a $10.00 penalty which students must pay, in addition to the Graduation Fee, before the parchment will be mailed to them.

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

B.A., B.Sc., & B.Comm.	Quality Point Average	Diploma in Engineering
summa cum laude	3.91-4.00	With greatest distinction
magna cum laude	3.76-3.90	With great distinction
cum laude	3.50-3.75	With distinction

b) The above quality point averages will be calculated on the basis of the highest grades attained in twelve full courses (or the equivalent) taken at Saint Mary's, including the last ten full courses in the students' program. Students who have taken fewer than twelve courses at Saint Mary's are not eligible for distinctions.

c) No distinctions are awarded in the Bachelor of Education and Master's degree programs.

d) Students whose academic record contains a grade of F or WF will not be awarded a distinction except upon the recommendation of the appropriate Chairperson and Dean of the Faculty, and with the approval of Senate.

e) Bachelor's degree with Honors: A Bachelor's degree with Honors will be awarded with the distinction "First Class" when the cumulative quality point average for 17 full courses (or the equivalent) taken while registered at Saint Mary's, including the last 15 in the student's program, is at least 3.6. Otherwise the Honors degree will be awarded without special distinction.

28. University Medals
At each Convocation, the following are presented:

a) Governor General's Medal
This medal is awarded to the undergraduate with the highest cumulative quality point average.

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

Note: The cumulative quality point averages will be calculated on the same basis as that for determining distinctions (see No. 26).

In the case of a tie, Senate will determine the recipient of the medal.

29. Dean's List

At the end of the academic year, full-time students whose quality point average indicates high academic achievement will have their names placed on the Dean's List by the Dean of the Faculty. To qualify for this recognition, students must have taken at least five courses (or the equivalent) during that academic year and have achieved a quality point average of 3.5 or higher. Placement on the Dean's List will be recorded on the students' transcript.

30. Transcripts

To request a transcript students must complete the appropriate form obtainable from the Registrar. Transcript requests are processed in the order in which they are received. Although the normal processing time is three days, additional time may be needed at certain periods of the year. Transcripts include the following information:

1) Faculty, program, and area of concentration;

2) advanced standing credits;

3) grades (failing as well as passing) in respect of all academic work attempted while registered at Saint Mary's.

Where appropriate, reference is also made to:

1) placement on, and removal of, academic probation;

2) requirement to withdraw for academic weakness, or for disciplinary reasons;

3) distinctions and scholarships, including placement on the Dean's List.

The cost is $1.00 for the first copy of the transcript and $0.50 for each copy made at the same time. Official transcripts are those forwarded directly from the Registrar's Office to an official third party. If detailed course descriptions are also required, there will be an additional fee of $1.00 per description. Students whose accounts are in arrears will be denied transcripts until the debt is cleared.

Registration

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

2. Early Registration
From the first working day in August to the Friday preceding Labor Day, Early Registration takes place. This involves (a) the selection and approval by the appropriate authorities of students' courses for the coming academic year and (b) the partial payment of tuition fees. This amounts to at least $100.00 for full-time students and one half the full year's fees for part-time students. Those who register early must make satisfactory arrangements with the Business Office no later than 29 September in respect of any remaining tuition fees. Detailed information (including a *Calendar* and a timetable) is made available to each eligible student no later than 15 July.

3. Regular Registration
The dates and times for regular registration in September are given in the University Diary (see centre pages of this Calendar).

4. Late Registration
On payment of a late fee of $10.00, students may register after the final day for regular registration but before the expirary of the time limits specified in Academic Regulation 13B.

5. Alterations in Timetable
The University reserves the right, in special circumstances, to change the times of a course from those advertised in the official timetable.

6. Cancellation of Courses
If the number of students registered for a course is insufficient to warrant it being offered, that course may be cancelled by the Dean of the Faculty.

7. Addresses
During the academic year, all communications mailed to students are sent to local addresses. Therefore students are urged to keep their address up-to-date in the Registrar's Office. During the summer months communications are sent to the students' permanent address.

8. Identification Cards
At the time of first registration students are required to purchase an I.D. card at a cost of $2.00. This card is issued upon presentation of the Registration Form duly signed by the University cashier. It provides the student with a University identification, serves as a Library card, and enables students to obtain discounts from some local business establishments.

Each subsequent year I.D. cards are validated during registration. There is no charge for validation. However, a replacement card costing $5.00, for lost or damaged cards, will be issued with a photocopy of the registration form or with a form stamped "I.D. Issued". No cards will be issued without a registration form.

Students who have not received their I.D. card by September 30th can obtain one in the Language Laboratory, located on the second floor of the Ignatius Loyola Building, Monday-Thursday, 9:00 a.m. to 9:00 p.m. Any changes to these hours will be posted throughout the University and published in the University newspapers.

Students who withdraw from the University must return their I.D. card to the Registrar before the withdrawal can become effective. Should such students subsequently be readmitted, they must purchase new I.D. cards.

Faculties and Programs

Arts
Commerce
Science
Engineering
Education
Masters
Special Program
Pre-Professional

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.

Requirements for the Degree of Bachelor of Arts

The following requirements apply to all students registering 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.

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 must be Arts full courses (or the equivalent) 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 Chairperson of the English Department, an alternative full course in English;
   (b) the equivalent of one full course in one of the following subjects:

   Philosophy 200 (Basic Logic) (No other philosophy course satisfies this requirement.)
   OR Mathematics
   OR a language other than English

   OR a natural science (except psychology);
   (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 one full course in at least two of the following 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, Atlantic Canada Studies and West European Studies are three 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 the 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. The regulations governing the major program will be those in effect at the time of declaration of the major.

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 the Faculty may authorize an extension of this upper limit to meet special program requirements or where there are sound academic reasons for doing so.

7. In order to have major subjects or areas of concentration formally entered upon their records, candidates must have maintained a cumulative quality point average of 2.0 (or a

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 Chairpersons, may reduce these requirements in the light of a student's overall record.

10. In conformity with academic regulation 7(c-ii) students must achieve a minimum cumulative quality point average 1.5 in order to qualify for graduation.

Requirements for the Degree of Bachelor of Arts — Honors

11. The Faculty of Arts offers honors programs in anthropology, economics, English, geography, 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.

12. Admission requirements
    (a) Not later normally than the beginning of their junior year, candidates should make application for admission to the honors program on the special form obtainable from the Registrar. They must obtain the approval of the Chairperson of the appropriate department and of the Dean of the Faculty in which they are enrolled.
    (b) The normal prerequisite is a cumulative quality point average of 2.5. Each candidate, however, will be assessed on the basis of his overall academic record.

13. Requirements for continuance in and for graduation with Honors:
    (a) Students must accumulate 25 full course credits or equivalent, including any advanced standing credits.
    (b) To continue in the program, students must achieve a yearly quality point average of 3.0.
    (c) To graduate, students must achieve a cumulative quality point average of 3.0.
    (d) Students must receive credit for not fewer than ten full courses or equivalent in the honors subject, of which eight must be at the 300 level or above. Each year the students' programs must have the approval of the Chairperson of the Department who may permit the substitition of up to two courses from a related subject area as part of the ten courses required.
    (e) In the courses presented to satisfy 13(d), students

must have a quality point average of 3.0 with at least eight grades of B or higher and no grade lower than C (2.0).

14. Requirements for graduation with combined honors:
    (a) Candidates for a combined honors degree must receive credit for not fewer than seven full courses (or equivalent) in each of two honors subjects. At least ten of these courses must be at the 300 level or above, including a minimum of four in each subject. Each year, the students' programs must have the approval of the Chairpersons of both Departments involved.
    (b) To continue in the program, students must achieve a yearly quality point average of 3.0.
    (c) To graduate, students must achieve a cumulative quality point average of 3.0.
    (d) In the courses presented to satisfy 14(a), students must have a quality point average of 3.0 with at least eleven grades of B, and no grade lower than C (2.0).

15. Candidates for honors must complete the requirements for the Bachelor of Arts degree as outlined in the Calendar (see no. 3), and any additional requirements of the relevant department(s).

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

17. In addition to the overall quality point average noted in 13 above, 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's 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 general B.A. will normally enter the two-year program. The course requirements are as follows:
   Year I — A 500 level seminar and 3 other courses at the 500 or 600 level.
   Year II — His 690.0 and 3 other courses at the 500 or 600 level.
   Students with a B.A. (Honors) or equivalent qualification may be permitted, at the discretion of the Department, to enter a one-year program, in which the course requirements will be a 500 level seminar, His 690.0 and 3 other courses at the 500 or 600 level.

2. 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.

3. The candidate will be required to demonstrate a reading knowledge of at least one language other than English. French is required of candidates intending to write a thesis on any aspect of Canadian history.

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

5. 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 subject to the approval of the Department of History. While the Department will make every attempt to meet individual requests, it cannot guarantee full compliance.

Degree of Master of Arts in Philosophy

The University's general requirements for admission to Graduate Studies and for the Master's 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, (B average), 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 Commerce

General Information

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

The bachelor degree programs couple a broad educational foundation in English, mathematics and other basic arts and science subjects with the study of a common body of business and economic knowledge and the opportunity to attain an appropriate degree of specialized expertise in one or more of the major commerce functional areas. These areas are accounting, economics, finance, management, management science, marketing, and personnel administration and industrial relations.

Both the honors and general bachelor degree programs are of the same duration and require the same total number of courses. A cumulative quality point average of B (3.0) is needed for admission to, and continuation in, the honors program. This program also requires completion of certain other specified courses including an honors project or thesis.

The Master of Business Administration program encompasses a common body of business and economic knowledge and advanced study in the following areas: accounting, finance, management, management science and marketing.

The Business Administration Department has been replaced by four Departments: Accounting, Finance and Management Science, Management, and Marketing. Courses previously offered by the Department of Business Administration are now the responsibility of one of the new departments. While the numerical portion of each course designation remains the same as in previous years, the prefix BUS has been replaced by one of the following:

Acc	—	Accounting
Fin	—	Finance
Msc	—	Management Science
Mgt	—	Management
Mkt	—	Marketing

Requirements For The Degree of Bachelor of Commerce

The following requirements apply to all entering commerce students except those who were enrolled in (a) any bachelor's program at the College of Cape Breton or the Universite Ste. Anne on 16 February 1977; (b) the previous Bachelor of Commerce program at Saint Mary's University on or before 16 February 1977 and are returning after a voluntary withdrawal. Students in either of these categories should refer to the 1977-78 Academic Calendar pages 36 and 37 for specific eligibility requirements.

1. The Bachelor of Commerce program consists of the equivalent of twenty full courses beyond Nova Scotia Grade XII (or equivalent) or a total of twenty-five full courses (or equivalent) for those entering from Nova Scotia Grade XI or otherwise not granted advanced standing.

2. In conformity with academic regulation 7(c-ii) students must achieve a minimum cumulative quality point average of 1.5 in order to qualify for graduation.

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

4. Each candidate for the Bachelor of Commerce degree is required to successfully complete the courses listed below (credit value of each course is indicated in parentheses after the course number). They are arranged by year as a guide to students in preparing their individual programs of study.

Freshman Year (First year of 25 credit program for students without advanced standing)

Mat 113 (1)	Mathematics for Commerce students
Egl 200 (1)	Introductory English (see note a below)
Non commerce electives (3)	

Sophomore Year (First year of 20 credit program)

Msc 205 ($^1/_2$)	Introduction to Quantitative Methods for Commerce I (see note b below)
Msc 206 ($^1/_2$)	Introduction to Quantitative Methods for Commerce II (see note b below)
Mgt 281 ($^1/_2$)	Principles of Management
Msc 321 ($^1/_2$)	Introduction to Computers
Eco 201 ($^1/_2$)	Principles of Economics: Micro
Eco 202 ($^1/_2$)	Principles of Economics: Macro
Egl 200 (1)	Introductory English
Non commerce electives (1) (see note c below)	

Junior Year

Msc 207 ($^1/_2$)	Introductory Statistics for Commerce
Acc 241 ($^1/_2$)	Introductory Accounting I
Acc 242 ($^1/_2$)	Introductory Accounting II
Mkt 370 ($^1/_2$)	Introduction to Marketing
Mgt 382 (1)	Organizational Behavior (see note d below)
Cml 301 ($^1/_2$)	Legal Aspects of Business — Part I
Economics electives 1 (see note e below)	
Free elective ($^1/_2$) (see note f)	

First Senior Year

Acc 348 ($^1/_2$)	Planning and Control
Fin 360 ($^1/_2$)	Business Finance I (see note g below)
Fin 361 ($^1/_2$)	Business Finance II
Written and oral communications (1) (see note h below)	
Courses as listed for major ($2^1/_2$) (see requirement 5).	

Second Senior Year

Mgt 489 ($^1/_2$)	Business Policy
Courses as listed for major ($4^1/_2$) (see requirement 5)	

Notes:

a) English 200.0 is required of all students, including those entering with advanced standing as a result of senior matriculation. Students on a 25 credit program should take Egl 200.0 in their freshman year and substitute a non-Commerce elective for Egl 200.0 in their sophomore year.

b) Nova Scotia Grade XII Mathematics (or equivalent) is a prerequisite for Msc 205 and 206. In the event that students have not received advanced standing for Grade XII Mathematics they are required to take Mat 113 as one of the non-commerce or free electives.

c) All undergraduate Commerce students are required to successfully complete at least three (3) elective courses, (or equivalent) offered outside of the Faculty of Commerce.

Non-Commerce courses taken in lieu of Commerce courses cannot be counted as non-Commerce electives.
d) Economics students may take Mgt 381 and another half course.
e) Economics students must take Eco 300($^1/_2$) and 301($^1/_2$). Other Commerce students may take one or both of these courses or any other two half courses in Economics for which they have the necessary prerequisites.
f) Students may choose to take a full free elective and defer a credit of Economics or Commercial Law until later in their program. A free elective may be chosen from any Faculty.
g) Economics majors may substitute either Eco 320($^1/_2$) or both Eco 307($^1/_2$) and Eco 308($^1/_2$) for this requirement.
h) Further information regarding this requirement will be available from the Dean of Commerce at the time of registration.

5. Students are also required to complete a major in Accounting, Business Administration, or Economics. During the latter part of their junior year, students are expected to choose a major (i.e. Accounting, Business Administration, or Economics). At this time, Business Administration Majors are also expected to choose their program (finance, management, management science, marketing, personnel and industrial relations or general business studies). The First and Second Senior Year requirements are listed below by major, and programs where applicable.

a) Accounting Major
First Senior Year
Acc 323($^1/_2$) Information Systems I
Acc 341($^1/_2$) Intermediate Financial Accounting I
Acc 342($^1/_2$) Intermediate Financial Accounting II
Acc 345($^1/_2$) Financial Accounting Theory
Acc 346($^1/_2$) Introductory Cost Accounting

Second Senior Year
Acc 455($^1/_2$) Accounting Seminar
Accounting electives (1) — see note below
Non commerce electives (2)
Free electives, 200 level or above (1)

Note:
Msc 324($^1/_2$) may be used to partially satisfy this requirement.

b) Economics Major
First Senior Year
Eco electives, 300 level or above (1) — see note below
Non commerce electives (1)
Free electives, 200 level or above ($^1/_2$)

Second Senior Year
Economics electives (1$^1/_2$)
Non commerce elective (1)
Free electives (2)

Note:
Economics majors who are taking Eco 307($^1/_2$) and Eco 308($^1/_2$) in lieu of Fin 360($^1/_2$) should take an Economics elective ($^1/_2$).

c) Business Administration Major (Finance Program)
First Senior Year
Commerce elective, 300 level or above (1)
Non commerce elective (1)
Free elective, 200 level or above ($^1/_2$)

Second Senior Year
Fin 463($^1/_2$) Financial Management
Fin 464($^1/_2$) Corporation Finance
Fin 466($^1/_2$) Investments
Fin 467($^1/_2$) Portfolio Management
Free electives, 200 level or above (1$^1/_2$)
Non-Commerce elective (1)

d) Business Administration Major (Management Program)
First Senior Year
Msc 317($^1/_2$) Introduction to Operations Management
Accounting elective ($^1/_2$)
Marketing electives (1)
Commerce elective ($^1/_2$)

Second Senior Year
Mgt 385($^1/_2$) Personnel Management
Mgt 386($^1/_2$) Industrial Relations
Mgt 481($^1/_2$) Organization Theory: Structure, Process, Analysis and Design
Finance elective ($^1/_2$)
Non commerce electives (2)
Free elective, 200 level or above ($^1/_2$)

e) Business Administration Major (Management Science Program)
First Senior Year
Msc 301($^1/_2$) Operations Research
Msc 303($^1/_2$) Statistical Analysis for Business and Economics
Msc 317($^1/_2$) Introduction to Operations Management
Non commerce electives (1)

Second Senior Year
Msc 302($^1/_2$) Principles of Mathematical Programming
Msc 322($^1/_2$) Computer Simulation
Msc 409($^1/_2$) Seminar in Operations Research and Statistics
Commerce electives in a non-quantitative area (1)
Non commerce electives (1)
Free electives, 200 level or above (1)

f) Business Administration Major (Marketing Program)
First Senior Year
Mkt 371($^1/_2$) Marketing Management
Marketing electives (1)
Non commerce electives (1)

Second Senior Year
Marketing electives (1$^1/_2$)
Non commerce electives (1)
Free electives, 200 level or above (2)

g) Business Administration (Personnel and Industrial Relations Program)
First Senior Year
Mgt 385($^1/_2$) Personnel Management
Mgt 386($^1/_2$) Industrial Relations
Eco 339($^1/_2$) Labor Economics
Eco 340($^1/_2$) Human Resources Economics
Free elective, 200 level or above ($^1/_2$) — see note below

Second Senior Year
Mgt 481($^1/_2$) Organization Theory: Structure, Process, Analysis and Design
Mgt 483($^1/_2$) Interpersonal Behavior I
Non commerce electives (2)
Free electives, 200 level or above (1$^1/_2$)

Note:
If Eco 339 ($^1/_2$) and/or Eco 340 ($^1/_2$) were used to satisfy the required Economics electives in the Junior Year, the number of free electives is increased to (1) or (1$^1/_2$) as appropriate.

h) Business Administration Major (General Business Studies)

First Senior Year
Commerce electives, 300 level or above (1¹/₂)
Non commerce electives (1)

Second Senior Year
Commerce electives, 300 level or above (1¹/₂)
Non commerce electives (1)
Free electives, 200 level or above (2)

Requirements For The Degree of Bachelor of Commerce (Honors)

1) Admission Requirements:
a) Minimum cumulative quality point average of 3.0 at the end of the junior year.
b) Candidates must make application for admission to the honors program on the special form obtainable from the Registrar no later than the last day of registration at the beginning of their first senior year. They must obtain the approval of the chairperson of the appropriate department and of the Dean of Commerce.

2) Requirements For Continuance and Graduation:
a) To continue in the program and to graduate, students must maintain a minimum cumulative quality point average of 3.0.
b) Students must accumulate 20 full course credits, or equivalent, beyond completion of Nova Scotia Grade XII, or equivalent. They must also complete all the normal requirements for the Bachelor of Commerce degree and any additional requirements of the relevant department.
c) Students must receive credit for not fewer than ten full courses or equivalent in business and economics of which eight must be at the 300 level or above. The chairperson of the department may permit the substitution of up to two courses from a related subject area as part of the ten courses required.
d) In the courses presented to satisfy 2(c), students must have a minimum quality point average of 3.0 with at least eight grades of B or higher and no grade lower than C (2.0).

Honors Program in Business Administration
In addition to the general requirements for a Bachelor of Commerce degree all candidates for graduation with Honors in Business Administration must meet the following requirements:
a) maintain a minimum cumulative quality point average of 3.0;
b) complete twenty full courses (or equivalent) beyond Nova Scotia Grade XII or equivalent;
c) complete the requirements for a Bachelor of Commerce degree with a functional specialization (at least 2¹/₂ courses or equivalent above the 200 level) in one of the following areas: accounting, economics, finance, personnel and industrial relations, management science, and marketing;
d) successfully complete an Honors project or thesis;
e) complete ten full courses or equivalent to be presented for honors. Normally, all of these courses will be in the field of business administration. However, if the department chairperson deems it appropriate, permission may be granted to a student to substitute up to two full courses or equivalent from a related subject area.

Honors Program in Economics
The Department of Economics offers honors programs to students enrolled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts with Honors and Bachelor of

Commerce with Honors are contained in Section 4. In addition to these general requirements, all candidates for graduation with honors in economics must comply with the following:
a) students must satisfy the applicable requirements for a major in economics as outlined on the preceding pages.
b) the ten full courses or equivalent in economics presented for honors must include:
  i) Eco 201.1 (.2), Eco 202.1 (.2), Eco (or Msc) 206.1 (.2), and 207.1 (.2)
  ii) one full credit (or equivalent) in microeconomic theory beyond the 200 level
  iii) one full credit (or equivalent) in macroeconomic theory beyond the 200 level
  iv) two of the following three courses: Eco 302.1 (.2), Eco 303.1 (.2) and Eco 309.1 (.2) or an equivalent full credit (two semesters) from the Department of Mathematics with the approval of the Chairperson of the Department of Economics.
  v) an honors project, which is the equivalent of ¹/₂ credit, done under the supervision of a faculty member.
c) with the approval of the Chairperson of the Department of Economics, a student may be permitted to substitute up to two full courses or equivalent from a related subject area as part of the ten courses in economics presented for honors.

Dual Bachelor Degree Programs
Since it is possible to obtain two Bachelor degrees from Saint Mary's University students may desire to arrange their courses so as to obtain a Bachelor degree in Arts or Science, and a second degree in Commerce.

While the total time required is somewhat longer, such dual degree programs are quite feasible. Students who contemplate pursuing any dual degree program should consult with the Deans of both faculties **before** embarking on their program of study.

Master of Business Administration

Director, Associate Professor   F. C. Miner

Program Objectives
The primary objective of the Master of Business Administration Program is to provide an intellectual and social environment in which the students 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 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 satisfy short-term and long-term educational needs by providing:

a. *generalist* concepts in anticipation of potential to succeed to more general and senior management positions later; and

b. *specialist* concepts and techniques applicable to a particular line or staff area.

Qualifications for Admission
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 GMAT.

Application Procedures

Applications for admission to the M.B.A. program should be made as early as possible. The normal deadline for the receipt of all application material is May 31, for entry the following September, except for overseas students whose applications and supporting documents must be received by 1 April.

Application material and program information may be obtained by contacting the:
Director of Admissions
Saint Mary's University
Halifax, Nova Scotia
B3H 3C3

To be considered for admission, students will be required, where applicable, to submit the following to the Director of Admissions:
(a) completed application forms;
(b) an official transcript for all work previously undertaken;
(c) two letters of recommendation;
(d) GMAT results (Note: 0958 is the appropriate code for the MBA program at Saint Mary's University);
(e) for overseas students whose native language is not English, a test in English (TOEFL);
(f) a non-returnable application fee of $5.00.

Note: Enquiries regarding the status of an application for admission are to be addressed to the Director of Admissions.

Financial Aid

In addition to Canada Student and other loans, financial aid is available through university scholarships and assistantships. (See Section 6 for additional information).

Part-Time Basis

The program is 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 evening classes each semester. Subject to satisfactory enrolment, courses will also be offered during the summer sessions. Consequently, students may complete the whole program on a part-time basis within four years.

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 students to discover and develop their management potential.

Program Structure
Year I

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 students how the concepts and techniques developed by the basic disciplines are used to enhance managerial effectiveness.

Basic Disciplines
•   Economics of the Enterprise
•   Economics of the Enterprise Environment
•   Management Science
•   Computers in Business
•   Organizational Behavior

Functional Areas
•   Accounting — a. Financial
                           b. Managerial
•   Managerial Finance
•   Marketing Management

Year II

The second year of the program is designed such that the students maintain a broad managerial perspective, but can concentrate in a more specialized area. Students are required to take Mgt 689 (Management Policy and Strategy Formulation) and MBA 691 (Management Research Project) as part of their second year program. In addition, the student must take at least one second year course in Accounting, Finance, Management, Management Science, and Marketing. Beyond this, students have four second year courses (2 credits) which are designated as free electives. Students may desire to maintain a broad perspective by taking these courses in four different areas or they may take these courses in one area in order to gain a more specialized knowledge.

Thus, the overall intention of this program is to ensure that students receive a broad business overview which provides an essential element of successful management. The program, however, is flexible enough to allow for concentrated knowledge through the judicious selection of free electives.

Program Summary

The overall course requirements for the MBA Program are summarized below:

First Year

Course	Credits
Eco 500	$1/2$
Eco 501	$1/2$
Msc 506	$1/2$
Msc 507	$1/2$
Msc 521	$1/2$
Acc 540	$1/2$
Acc 548	$1/2$
Fin 561	$1/2$
Mkt 571	$1/2$
Mgt 584	1
	$5^1/2$

Second Year (See Note below)

Course	Credits	Comments
Mgt 689	$^1/_2$	Required
MBA 691	$^1/_2$	Required
Acc 6XX	$^1/_2$	Acc elective
Fin 6XX	$^1/_2$	Fin elective
Mgt 6XX	$^1/_2$	Mgt elective
Mkt 6XX	$^1/_2$	Mkt elective
Msc 6XX	$^1/_2$	Msc elective
600 Level	2	Free electives
	$5^1/_2$	

Note: The latter part of this calendar section lists the departmental courses that can be used to satisfy this requirement.

Alternative 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 and a half credits from the remainder of the second year program.

Advanced Standing

If students believe that through previous course work or practical experience that they possess the knowledge embodied in any of the first year courses, they should contact the Director of the MBA Program. The Director may grant advanced standing on the basis of previous course work or waiver examinations, which are written in September. Students will normally take these examinations prior to the commencement of their degree program. The successful completion of waiver examinations will result in the students receiving credits for those courses.

Listed below are the first year required courses, second year required courses, and second year elective courses. Students are referred to the appropriate departments for complete course descriptions and for individual course requirements.

First Year Required Courses

Eco 500.1 (.2)	Economics of the Enterprise
Eco 501.1 (.2)	Economics of Enterprise Environment
Msc 506.1	Introductory Decision Analysis I
Msc 507.2	Introductory Decision Analysis II
Msc 521.1 (.2)	Computers in Business
Acc 540.1 (.2)	Financial Accounting
Acc 548.1 (.2)	Managerial Accounting
Fin 561.1 (.2)	Business Finance
Mkt 571.1 (.2)	Marketing Management: An Overview
Mgt 584.0	Organizational Behavior

Second Year Required Courses

Mgt 689.1 (.2)	Management Policy and Strategy Formulation
MBA 691.1 (.2)	Management Research Project

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.

Second Year Elective Courses (Listed by Department)

Accounting

Acc 626.1 (.2)	Management Information Systems
Acc 641.1 (.2)	Financial Reporting: Problems and Issues
Acc 648.1 (.2)	Management Control Systems
Acc 692.1 (.2)	Directed Study

Finance

Fin 663.1 (.2)	Capital Budgeting and Cost of Capital
Fin 664.1 (.2)	Corporate Financing
Fin 690.1 (.2)	Seminar in Finance
Fin 692.1 (.2)	Directed Study

Management

Mgt 683.1 (.2)	Management of Interpersonal Relations
Mgt 684.1 (.2)	Management of Organizational Design and Development
Mgt 685.1 (.2)	Personnel Administration
Mgt 686.1 (.2)	Labor-Management Relations
Mgt 687.1 (.2)	Small Business Management
Mgt 688.1 (.2)	Social Issues in Business
Mgt 692.1 (.2)	Directed Study

Management Science

Msc 603.1 (.2)	Statistical Applications in Management Science I
Msc 604.1 (.2)	Statistical Applications in Management Science II
Msc 615.1 (.2)	Operations Management
Msc 616.1 (.2)	Production Applications in Management Science
Msc 690.1 (.2)	Seminar in Management Science
Msc 692.1 (.2)	Directed Study

Marketing

Mkt 672.1 (.2)	Marketing Communications: Planning and Strategy
Mkt 673.1 (.2)	Marketing Distribution: Planning and Strategy
Mkt 675.1 (.2)	Multinational Marketing
Mkt 676.1 (.2)	Consumer Behavior: Decision-Making Applications
Mkt 678.1 (.2)	Marketing Research
Mkt 679.1 (.2)	Marketing Policy
Mkt 692.1 (.2)	Directed Study

Graduate students should also refer to the material entitled "Master's Degree" which is found in Section 3 of this Calendar.

Faculty of Science

General Information
Students electing to pursue a program leading to the Bachelor 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 Chairperson 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.

Requirements for the Degrees of Bachelor of Science
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 one of 200.0 or 226.1/227.2);
   (c) two courses in the humanities in addition to (a) — (the humanities herein intended are classics, English, history, modern languages, philosophy and religious studies);

(d) in conformity with academic regulation 7(c-ii) students must achieve a minimum cumulative quality point average of 1.5 in order to qualify for graduation.

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) four science courses not in the subject of concentration and in addition to the required mathematics courses;
   (c) sufficient elective courses to complete the degree program.

Degree of Bachelor of Science - Major
Note: With the approval of the departments involved, a student may pursue a combined major program in any two science subjects.

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 beyond the 100 level in the major subject;
   (b) four science courses not in the major subject and in addition to the required mathematics courses;
   (c) sufficient elective courses to complete the degree program.

6. Each candidate for the Bachelor of Science degree with a combined Major shall, in addition to satisfying the requirements in sections 1 to 3, receive credit for:
   (a) at least five full courses beyond the 100 level in each major subject;
   (b) two Science courses not in the major subjects and in addition to the required mathematics courses;
   (c) sufficient electives to complete the degree program.

7. The candidate's program must be approved by the Department(s) in which the major is taken and must satisfy any core programs specified by the Departments 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(s) concerned.

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

Degree of Bachelor of Science - Honors
9. An honors program can be taken with a major in: biology, chemistry, geology, mathematics, physics or psychology; or with a combined major in any two of these subjects. Students who plan to take an honors program must have the approval of the major department(s) and the dean. Since the

honors programs require the equivalent of 5 full courses more than the major programs, they normally require an additional year of study.

10. Each candidate for the Bachelor of Science degree with Honors shall, in addition to satisfying the requirements in Section 3, receive credit for;
    (a) the equivalent of 25 full courses following Grade XI or 20 full courses following Grade XII. Without the approval of the Dean, no more than 7 credits of the required 25 may consist of Grade XII and 100-level courses. [See academic regulation 20 (a)];
    (b) ten to 12 full courses beyond the first year level in the major subject or, in a combined major, 12 to 16 courses in the two major subjects (at least 6 in each subject);
    (c) four science courses not in the major subject in an honors program (2 in a combined honors) in addition to the required mathematics courses;
    (d) sufficient electives to complete the degree program.

11. The student's courses must be approved by the major department(s).

12. A candidate for the Bachelor of Science degree with Honors must obtain a grade of not less than C (2.0 quality points) in every honors course described in Section 9(b) and 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 students applying to enter an Honors program from September 1979 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.

Degree of Master of Science in Astronomy
Graduate students in astronomy come with a diversity of university backgrounds. Indeed, some have previously had no undergraduate courses in astronomy though obviously some exposure to such courses is desirable. (Saint Mary's students can consider Ast 202.0, 401.1 and 402.2). A student who is interested in entering the program should write the Chairman of the Department (enclosing an up-to-date transcript) and ask for an outline of the course program he would be expected to complete.

The University's general requirements for admission to Graduate Studies for the Master's degree apply to this program. (See material entitled "Master's Degree" found later in this Section of the Calendar). Particular requirements are as follows:

1. Admission to the program requires an honors degree in astronomy, mathematics, or physics, or the equivalent. (This represents four years after N.S. Grade XII). Students who have not completed such a program may be admitted to a make-up year to bring themselves up to an acceptable level.

2. Students accepted into the program will normally be required to take four courses in addition to preparing a satisfactory thesis on their research. Ast 605.0 and Ast 606.1 are required courses. The others will be chosen from astronomy, mathematics and physics. The individual student's program must be approved by the Department.

3. An average grade of B (3.0) must be achieved, and an acceptable thesis must be submitted.

4. Candidates must pass an oral examination in which they will be expected to demonstrate comprehensive knowledge of basic areas in astronomy. For full-time students this examination will normally be given at the end of the first year of study.

Degree of Master of Science in Applied Psychology
The Department of Psychology offers a Master of Science (M.Sc.) in Applied Psychology with concentrations in clinical and industrial/organizational psychology. The program is designed for part-time as well as full-time students. Normally, part-time students will be concurrently employed in an occupation related to applied psychology. Full-time students will need at least two years to complete all degree requirements (part-time students, or students completing a make-up year, may require longer). Further information can be obtained from the Department Chairperson.

The University's general requirements for admission to graduate studies for the Master's degree apply to this program. Departmental requirements are as follows:

1. Admission to the program requires an honors degree in Psychology, or its equivalent (i.e., four years after Nova Scotia Grade XII). Students who have not completed such a program including those with degrees in areas other than psychology, may be admitted to a make-up year. A completed application form, official transcript, letters of reference, and Graduate Record Exam scores must be forwarded to the Director of Admissions no later than March 1st. Appropriate consideration will also be given to relevant work experience.

2. Normally students accepted into the program will be required to take four full-year courses (or equivalent) in addition to preparing a thesis (Psy 695.0) and completing a supervised practicum (Psy 690.0). Normally, a full-time student will take the equivalent of three full-year courses during the first year of study and one full-year course, thesis and practicum course during the second. The following first year courses are required.

    Psy 601.1 (Advanced Psychological Statistics)
    Psy 602.2 (Advanced Research Methods)
    Psy 603.1 (Advanced Assessment)
and one of the following:
    Psy 604.2 (Clinical Assessment)
    Psy 605.2 (Assessment of Work Behavior)
    Psy 606.2 (Neuropsychological Assessment)
The remaining course work will be chosen in accordance with the individual student's program as approved by the Department.

3. Students must achieve an average of at least "B" (3.0). A review of a candidate's progress will be undertaken by the Department at the end of the first year of study (three full-year courses). Notwithstanding the candidate's grade point average, the Department reserves the right to recommend to the Dean that a student be required to withdraw from the program.

4. Each student must submit a thesis on a topic chosen in consultation with his/her thesis committee, which shall consist of the student's advisor, one other member of the

Faculty of Education

General Information

This program of studies is designed to give university graduat 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.

(a) Admission Requirements

Candidates must hold a Bachelor's degree from Saint Mary's University or from another recognized university of similar standing with at least a C average in either case..

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.

(b) 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, to the Director of Admissions, Saint Mary's University, but in any case, applications received after August 1st may not be processed in time for registration in September.

4. A student may register for an education graduate studies course (M.A.) for upgrading purposes. In order to enrol for a second graduate M.A. course, an individual student must apply and be accepted into the regular M.A. program.

(c) Requirements for the Degree of Bachelor of Education

1. Program

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 521.1 through 540.1 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.

2. Certification

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 certification status.

It is the student's responsibility to determine what category of licence he will receive from the issuing authorities. While the Faculty of Education Office will post whatever information is received from the provincial Ministries of Education, the University will not assume responsibility for guaranteeing the precise level of licence which graduates will receive from different provinces upon the completion of the Bachelor of Education program. The Province of New Brunswick, for example, requires 12 and not 8 weeks of Practice Teaching as does Nova Scotia.

3. Academic Regulations

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 Edu 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.

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. (See the material on the "Master's Degree" later in this section of the Calendar.) 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. Bachelor of Education or its equivalent with a minimum of B standing is essential.

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.   Three diverse optional routes open to the degree are as follows:

(a)   four full courses and the normal research thesis requirement;

(b)   four full courses and an action research study (classroom oriented);

(c)   a five full course program selected in consultation with the Dean of Education.

5.   The Master's program is available on a full-time or part-time basis.

Pre-Professional Programs

Professional Schools
Students who intend to continue studies at professional schools, such as theology, law, medicine, architecture and dentistry, should ensure that their plan of studies includes courses needed for admission to the appropriate professional schools. Calendars of professional schools may be consulted in the Library.

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.

(a) Pre-Medical
Students intending to study medicine should have an impressive academic record as a basic qualification for admission into medical school. Dalhousie University considers applications from students who have entered university with Nova Scotia Grade XII or its equivalent and completed at least 10 university courses usually during two years of full-time attendance.

The following subjects are the minimum requirements of all Canadian medical schools: general biology, general chemistry, organic chemistry, physics and English, each of an academic year's duration. Dalhousie University requires that five additional elective classes must include two or more in one subject. Students should extend their studies beyond the minimum requirements and are encouraged to include subjects in the humanities and social sciences in their program. In addition to the academic factors, medical schools also take into consideration several other criteria such as Medical College Admission Test, interviews and non-academic factors like emotional stability, social values, leadership, personal maturity, motivation, etc. For complete details the student should consult the academic calendar of the university to which admission is sought.

(b) Pre-Dental
The preceding information is equally applicable to the pre-dental program. The students interested in complete information should consult the academic calendar of the university in which admission is sought.

(c) Pre-Optometry
The University of Waterloo's School of Optometry accepts a limited number of candidates from the Atlantic Provinces to its program of Optometry.

Applicants are considered from students who have entered a university with Nova Scotia Grade XII or its equivalent and completed at least one year of University study with courses in chemistry, physics, biology, mathematics and psychology. Applications obtainable from the University of Waterloo are submitted to the Ontario Universities' Application Centre.

(d) Pre-Veterinary
Students with high academic standing in science, especially Biology or Chemistry, are considered by Ontario Veterinary College at the University of Guelph. The University of Saskatchewan also accepts competitive students into their veterinary medicine program. The University of British Columbia offers a two-year pre-veterinary program leading to a four-year veterinary program at the University of Saskatchewan.

Prospective students should contact the veterinary college of their choice for specific information.

(e) Pre-Law
Students applying for admission to the Law School are required to submit results of the Law Schools Admission Test of the Educational Testing service, Princeton, New Jersey. Information for taking this test at Canadian universities can be obtained from the Law School. Dalhousie University considers applications from students who have completed at least three full years' studies after junior matriculation (Nova Scotia Grade XI or equivalent) or two full years' after senior matriculation (Nova Scotia Grade XII or equivalent) of a program leading to the degree of B.A., B.Sc., or B.Comm. Applications are considered as they are received or in the month of June.

(f) Pre-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.

(g) Pre-Theological Courses
Students who are candidates for the Christian Ministry are in most cases required to obtain a B.A. degree, or its equivalent, before proceeding to theology. Normally the B.A. course will be followed by three years in theology. Requirements may vary somewhat from one denomination to another, but generally speaking students are advised to select a broad range of subjects from such departments as English, history, philosophy, classics, psychology and sociology, along with some courses in religious studies. A working knowledge of Greek is desirable for students entering theology.

Pre-Professional Counselling Committee
Because of the severe competition for admission to graduate and professional schools, the Science Faculty organized a Pre-Professional Counselling Committee in 1977. This Committee of faculty members compiles up-to-date information on graduate and professional schools and advises students of the closing dates for admission to these schools and the dates of various admission tests. The Committee also gives guidance to students on how they can best prepare for the admission tests and some interviews.

Students (from any faculty) who are interested in applying to graduate or professional schools are urged to contact the Office

of the Dean of Science for further information on the Counselling Committee. These students should also regularly check the Counselling Committee Bulletin Board located on the third floor of the Science Building.

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 an extensive 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.

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.

In response to an increasing demand from communities outside Halifax, courses are offered at off-campus locations: Dartmouth, Truro, Kentville, Sackville, Bridgewater and Shearwater. Courses will be offered in other locations if there 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.

Summer Sessions

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.

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 eight instructional units:

Year 1	Canadian Business Concepts
	Canadian Business Law
Year 2	Organizational and Human Behavior
	Marketing
Year 3	Financial Accounting
	Managerial Accounting
Year 4	Finance
	Policy Formulation and Administration

Students who complete successfully the eight 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 of the Institute of Canadian Bankers

The Fellows' Program in Banking is designed to provide formal education for men and women who wish to prepare themselves for more responsible positions in banking. The program requirements may be satisfied through successful completion of either degree-credit or non-credit courses. In the case of degree-credit courses, students are advised to consult individual course descriptions for information concerning prerequisites.

Candidates seeking admission to the program should make application both to the University and to the Personnel Department of the Bank in which they are employed.

The Fellows' Program comprises nine compulsory and one elective course. Diplomas are granted in the following sequence as the student completes the required courses in each component:

Letter of Accomplishment
Communications
Business Administration
Fundamentals of Accounting

Associate of the Institute of Canadian Bankers (ACIB)
Organizational Behavior
Economics
Marketing
Business Finance
Business Strategy

Section 5

Description of Courses

Accounting

Chairperson, Assistant Professor	B. Emerson
Associate Professors	D. Hope, F. Dougherty
Assistant Professors	F. Bourne, I. Elkhazin
Lecturer	G. Walsh

The Department of Accounting offers a program for majors which aids in preparation for careers in professional accounting, industry, and government. The Department also offers courses in financial and managerial accounting and information systems for all Commerce students.

Professional Designations in Accounting: A commerce graduate with an accounting major who has obtained the required grades is normally in a position to sit for the uniform final examinations of the Institutes 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 chairperson.

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 Management Accountants to Commerce graduates who register in the management accounting program sponsored by the Society, and by the Certified General Accountants Association in meeting the requirements of its professional designation.

The Accounting Major: In addition to meeting the general requirements for a Bachelor of Commerce degree, students must complete the following:

First Senior Year

Acc 323(^{1}/$_2$)	Information Systems 1
Acc 341(^{1}/$_2$)	Intermediate Financial Accounting I
Acc 342(^{1}/$_2$)	Intermediate Financial Accounting II
Acc 345(^{1}/$_2$)	Financial Accounting Theory
Acc 346(^{1}/$_2$)	Introductory Cost Accounting

Second Senior Year

Acc 455(^{1}/$_2$)   Accounting Seminar
Accounting electives (1) (see note below)
Non commerce electives (2)
Free electives, 200 level or above (1)

Note: Msc 324 (^{1}/$_2$) may be used to partially satisfy this requirement.

Students with a grade of D in Acc 242, Acc 341 or Acc 342 are advised against pursuing an Accounting Major.

241.1(.2)   Introductory Accounting — Part I
Prerequisite: Eco 201.1(.2); Eco 202.1(.2); Mgt 281.1(.2); Mat 113.0 or consent of instructor.

Part I of a two-course series. This course is concerned with a study of basic accounting concepts and principles, their application to business transactions and financial statements, and an introductory consideration of balance sheet and income statement accounts.

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

242.1 (.2)   Introductory Accounting — Part II
Prerequisite: Acc 241.1.(.2)

Part II of a two-course series. This course deals with accounting for corporate equity and debt, the statement of changes in financial position, analysis of financial statements, introduction to manufacturing accounting, and managerial uses of accounting data.

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

323.1 (.2)   Management Information Systems I
Prerequisite: Msc 321.1 (.2), Acc 242.1(.2) and Mgt 382.0.

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.

341.1 (.2)   Intermediate Financial Accounting Part I
Prerequisite: Acc 242.1 (.2).

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
Prerequisite: Acc 341.1. and Acc 345.1(.2) which may be taken concurrently.

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.

345.1 (.2)   Financial Accounting Theory
Prerequisite: Acc 341.1(.2) which may be taken concurrently.

Perceived objectives of financial accounting. Major accounting theories, evolution of financial accounting theory and practice, survey of contemporary accounting practice with emphasis on latest developments and issues. This course should be taken concurrently with Acc 341.1(.2) or Acc 342.2.

Classes 3 hrs. a week. 1 semester.

346.2   Introductory Cost Accounting
Prerequisite: Acc 348.1 (.2).

This is a basic course in cost accounting principles, techniques and procedures, dealing primarily with normal and standard, job-order and process, product-costing.

Classes 3 hrs. a week. 1 semester.

348.1 (.2)   Planning and Control
Prerequisite: Acc 242.1 (.2) and Mgt 382.0 (or concurrently Mgt 382.0).

Covers concepts and techniques of planning and control such as profit planning, financial forecasting, budgets, performance measurements, management control systems, analysis of performance, and relevant costs for decision-making.

Classes 3 hrs. a week. 1 semester.

425.1(.2)   Management Information Systems II
Prerequisite: Acc 323.1 (.2).

Systems theory; development of computerized information systems; management implications of computers; planning, organizing and staffing for computer systems; controls in computerized systems.

Classes 3 hrs. a week, 1 semester.

443.1   Advanced Financial Accounting I — Corporate Accounting
Prerequisite: Acc 342.2.

An advanced study of mergers and acquisitions, consolidated financial statements, branch accounting, and foreign operations.

Classes 3 hrs. a week. 1 semester.

444.2   Advanced Financial Accounting II — Special Topics
Prerequisite: Acc 342.2.

An advanced study of special topics including partnerships, fiduciary accounting, fund accounting, receivership and liquidations, and price-level and current-value accounting.

Classes 3 hrs. a week. 1 semester.

449.1 (.2)   Management Control Systems
Prerequisite: Acc 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
Prerequisite: Acc 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(.2)   Taxation
Prerequisite: Acc 342.2 or Fin 361.2.

An introductory study of the theory and procedures of taxation at all levels of government.

Classes 3 hrs. a week. 1 semester.

455.1(.2)   Accounting Seminar
Prerequisite: Acc 342.2. and Acc 345.1(.2).

An intensive study of the problems of income determination, asset valuation and liability and equity measurements; a study of the conventional accounting model and the accounting theories that are proposed as a framework for the resolution of the problems in the conventional model.

Classes 3 hrs. a week. 1 semester.

The following courses are available only to students registered in the Master of Business Administration Program.

540.1 (.2)   Financial Accounting
This course provides an introduction to financial accounting and presumes no prior knowledge of the subject. Using a conceptual approach, the student is given a thorough understanding of financial accounting concepts, principles and practices. Emphasis is placed on providing the student with a fundamental knowledge of how to interpret and analyze financial statements and also with an appreciation of the limitations inherent in published financial data.

548.1 (.2)   Managerial Accounting
Prerequisite: Acc 540.1(.2).

The primary objective of this course is to provide the student with a knowledge of the various types of accounting information which are available for use by managers in decision-making. The student examines selected cost concepts and the appropriateness of their use in diverse areas of decision-making. Financial forecasting, budgeting, profit-planning and performance measurement make up the major portion of the course content.

626.1 (.2)   Management Information Systems
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

In this course students study the development and management of a computerized management information system. The course deals with information system design, cost-benefit analysis of MIS proposals, resource selection and the management of systems design and operations.

641.1 (.2)   Financial Reporting: Problems and Issues
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

648.1 (.2)   Management Control Systems
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

592.1 (.2) Directed Study
Prerequisite: completion of all 500 level courses and the consent of the Director of the MBA Program, the departmental chairperson, and instructor.

Intended to supplement or provide an alternative to the regular accounting courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Anthropology

Chairperson, Associate Professor   P. Erickson
Associate Professors   J. R. Jaquith, H. McGee, Jr.
Assistant Professors   S. Davis, D. Shimabuku
    S. 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 Ant 200.0 or its equivalent and four additional courses at the 300 level or above.

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 200.0 or its equivalent, 300.0, 360.0, 380.0, 390.0, 450.0 and 499.0; (d) in addition, honors majors are urged to take at least one of the following methods courses: Ant 321.0, 360.0, 410.0, 411.0.

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 200.0, 201.0, 220.0, 221.0, 270.0 and 319.0 do not have prerequisites.

200.0 Introduction to Anthropology
An introduction to the scientific study of humanity. Origins, physical and cultural evolution and diversification, prehistory, ecological adaptation, social organization, economic systems, religion, language and value systems of the world's peoples.

Note: This course may not be taken by students who already have obtained a credit for Ant 260.0 or 210.0.

201.0 Women: Anthropology's Other Half
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.

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

221.0 Native Peoples of Atlantic Canada and Maine
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.

270.0 World Prehistory
A study of man's use of tools as the foundation for the development of culture. The course investigates the earliest known tools and their associated activities. The development of technology is traced from the early stone age through the iron age in a world-wide setting.

300.0 Culture and Society
Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

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.

310.0 Applied Anthropology: Culture Change and Development
Prerequisite: a social science course or permission of instructor.

An introduction to the applications of sociocultural anthropology. Consideration is given to the nature of society and culture as well as to anthropological and other theories of culture change, including development.

315.0 Peasant Society and Culture
Prerequisite: an introductory socio-cultural anthropology course or permission of the instructor.

A treatment of theories and substantive studies of peasant society and culture.

319.0 Cultural Ecology
(Gpy 319.0) (formerly 230.0)

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

320.0 World Ethnography
Prerequisite: Ant 200.0, 220.00 or permission of the instructor.

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

321.0 Ethnohistory
Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

Ethnohistory and the development of ethnohistorical research, with particular reference to North America. This course is concerned with the anthropologist's use of archival material, and the critical evaluation of different types of oral traditions as sources of historical information. Some ethnohistorical studies are examined.

325.0 Ethnology: Oceania
Prerequisite: a socio-cultural anthropology course or permission of the instructor.

Ethnological survey of selected (representative) societies of Polynesia, Micronesia, Melanesia and Australia.

330.1(.2) Anthropological Approaches to Folklore
Prerequisite: an introductory anthropology course, a folklore course or permission of the instructor.

As a traditional system for the storage and transmission of information about how the world is perceived by a people, folklore is of interest to the anthropologist. In this course, the student will

...ade familiar with current anthropological approaches to the ...ty of folklore and will have the opportunity to analyze a body of ...lore.

...1(.2)   Expressive Aspects of Culture
Prerequisite: an introductory course in anthropology or ...mission of instructor.

...nsideration of the role of the arts in the maintenance of social ...anization. Special attention will be given to plastic and graphic ...s, rituals and games.

Classes 3 hrs. a week. 1 semester.

...5.0   Psychological Anthropology
Prerequisite: Ant 200.0, Psy 201.0 or permission of instructor.

Deals with the interaction between the individual and culture. Examines roots of both individual and group differences and explores human nature from an anthropological perspective. Looks at complex relations between heredity, culture and environment in a cross-cultural context.

Classes 3 hrs. a week. 2 semesters.

345.0   Evolution and Human Behavior
(formerly 340.0 Human Ethology)

Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

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

349.0   Myth and Symbol
(Rel 320.0)

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.

350.0   Anthropology of Religion
Prerequisite: Ant 200.0, 210.0 or permission of the 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.

360.0   Method and Theory in Archaeology
Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

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.

370.0   Archaeology of North America
Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

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

371.0   Biblical Archaeology
A survey of ancient Near Eastern civilization with emphasis on the special contribution of Near Eastern archaeology to anthropology as well as to Biblical studies.

372.0   European Prehistory
A survey of the prehistorical cultures of Europe and the Northern Mediterranean area, from the Old Stone Age to the beginning of the Greco-Roman civilization.

Classes 3 hrs. a week. 2 semesters.

380.0   Physical Anthropology
Prerequisite: Ant 200.0, 260.0 or permission of the instructor.

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

390.0   Linguistic Anthropology
Prerequisite: Ant 200.0, 210.0 or permission of the 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.

391.0   Ethnography of Communication
Prerequisite: a social science course (including psychology) and permission of the instructor.

A wide-ranging consideration of the nature, forms and functioning of human communication. Lecture and laboratory facilities will be utilized in examining the way in which anthropologists study and describe human communication.

399.0   Directed Independent Studies
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.

410.0   Methodology and Fieldwork in Socio-cultural Anthropology
Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

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

411.0   Anthropological Statistics
Prerequisite: Ant 200.0 and N.S. Grade XII mathematics or equivalent, or permission of the instructor

An introduction to basic noncalculus anthropological statistics by means of class lectures and tutorials. The following topics will be treated in order: data; grouping data; measues of central tendency and dispersion; probability theory; binominal distribution; normal distribution; estimates of means and variances; hypothesis testing; students' distribution; nonparametric nominal scales; nonparametric ordinal scales; linear regression; correlation coefficients; sampling.

421.1 Native Peoples of Atlantic Canada and Maine: Seminar
Corequisite or prerequisite Ant 221.0

This course consists of series of seminar topics concerned with the culture history of Wabanaki Peoples prepared by each student and a major research paper based on primary sources or personal research.

Note: Classes in this half course will be spread over the entire academic year.

430.1(.2) Political Anthropology
Prerequisite: Ant 200.0, 210.0 or permission of the instructor.

A consideration of the structure and processes of decision-making concerning public goals. Emphasis will be placed on strategic deployment of personnel, material, and information in a variety of settings.

435.1(.2) Communication in Social Transaction
Prerequisite: one of Ant 200.0, Mgt 382.0, Pol 200.0, or Soc 200.0

An information theory approach to the study of human interaction will be examined in this course. Emphasis will be placed on examination of economics or quasi-economic transactions. Limitations and strengths of the communications approach will be discussed.

Classes 3 hrs. a week. 1 semester.

440.1(.2) Social Boundaries
Prerequisite: an introductory anthropology course or permission of instructor.

An examination of concepts used in the description of social differentiation and the theories suggested to explain those differences. Substantive ethnographic examples will be concerned with sex, age, residential, ethnic, class, national, and cultural differences.

Classes 3 hrs. a week. 1 semester.

450.0 History of Anthropological Theory
Prerequisite: Ant 200.0, 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.

460.0 Fieldwork in Archaeology
Prerequisite: Ant 200.0, 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. This course is offered during summer sessions.

3 weeks field work and 3 weeks lab.

461.0 Advanced Fieldwork in Archaeology
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. This course is offered during summer sessions.

3 weeks field work and 3 weeks lab.

470.0 The Dawn of Civilization
Prerequisite: Ant 200.0, 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.

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

499.0 Directed Honors Research
Supervised preparation of a significant research paper for honors students in anthropology.

Asian Studies

Committee on Asian Studies

P. Bowlby, Chairperson	Religious Studies
G. Boyd	Political Science
M. Boyd	Modern Languages
A. Chan	History
A. Mukhopadhyay	Economics
B. Robinson	Geography
H. Schwind	Management
M. Sun	History
S. De Mille Walter	Anthropology

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

Each major should choose a supervisor from among the faculty in the Committee on Asian Studies who will oversee his program of study. 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. The credits must be obtained from at least three departments and may be chosen from the following courses.

Anthropology
315.0 Peasant Society and Culture
325.0 Ethnology: Oceania

Asian Studies
400.0 China's Developmental Experience
410.2 Special Topics on Japan

Economics
310.1 Development Economics
311.2 Issues in Economic Development
313.1 International Finance
314.2 International Trade
315.1 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
391.0 China and the West
511.0 Seminar on Modernization in East Asia

Modern Languages and Classics
Chinese
100.0 Elementary Chinese
200.0 Intermediate Chinese

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
240.0 When Great Religions Meet
323.0 Buddhist and Hindu Religious Traditions
324.0 Religions of China

400.0 China's Developmental Experience
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.

410.2 Special Topics on Japan
Prerequisite: one Asian Studies course or permission of instructor.

Special Topics on Japan is a seminar to be taught by a Japanese specialist invited to Saint Mary's University.

Astronomy

Chairperson, Associate Professor   D. L. DuPuy
Observatory Director   D. L. DuPuy
Associate Professors   G. F. Mitchell, G. A. Welch
Visiting Assistant Professor   J. N. Scrimger

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 0.4-metre 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. Both full-time and part-time students can be accommodated. 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 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 (or up to six years for part-time students) and includes course work and a thesis. The number of courses required will depend on the qualifications of the student, but will normally be four plus thesis. The major effort of the first year will be in acquiring a basic knowledge of astronomy through courses, seminars, and general reading. Three courses will normally be taken. During this first year a thesis topic will be chosen in consultation with the Department. In the second year the student will normally take one course 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
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 semesters.

202.0   Introductory Astronomy for Science Students
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.

401.1   The Solar System
Prerequisite: Phy 221.0 and Mat 300.0.

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 Viking experiments will be discussed.

Classes   3 hrs. a week. 1 semester.

402.2   Stars and Stellar Systems
Prerequisite: Phy 221.0 and Mat 300.0.

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.

601.1 (.2)   Radio Astronomy
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.

602.1 (.2)   Galactic Structure
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. and lab a week. 1 semester.

605.0 Fundamental Astrophysics

Prerequisite: Phy 432.2 and 439.2 and Mat 401.1 and 402.2 (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.

606.1 Techniques in Observational Astronomy

Prerequisite: Phy 432.2 and 439.2 and Mat 401.1 and 402.2 (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.

607.1 (.2) Binary and Variable Stars

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. Application 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.

609.1 (.2) Extragalactic Astronomy

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.

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.

611.1 (.2) Directed Readings in Current Literature

Prerequisite: graduate standing in astronomy.

A topic of current interest in astronomy will be chosen in consultation with a faculty member. After a thorough study of recent work on the topic a detailed written report with references will be submitted. Extensive use will be made of available research journals.

Atlantic Canada Studies

Committee on Atlantic Canada Studies

D. MacInnes	Coordinator
J. Baker	English
C. J. Byrne	English
P. Connelly	Sociology
S. Davis	Anthropology
D. Day	Geography
P. Fitzgerald	Management
L. Fraser	Continuing Education
D. Higgins	Political Science
C. D. Howell	History
D. Hope-Simpson	Geology
J. G. Jabbra	Political Science
B. Kiesekamp	History
D. MacInnes	Sociology
K. A. MacKinnon	English
R. McCalla	Geography
H. F. McGee	Anthropology
J. Morrison	International Education Centre
T. O'Neill	Economics
B. Robinson	Geography
A. T. Seaman	English
G. Thomas	English
H. Veltmeyer	Sociology
M. Wiles	Biology

Atlantic Canada Studies is an inter-disciplinary major option in the Arts Faculty which has developed out of an increasing demand by students, faculty and the community generally, for a more organized study of this region.

Students who complete a major in Atlantic Canada Studies will have helped to prepare themselves for a fuller and more meaningful participation in the life of Atlantic Canada, and will have acquired a useful background for careers in teaching, trade and industry, and the various bureaus of the Provincial and Federal Civil Services. Their attention is particularly drawn to the advantages, from a career point of view, of taking Atlantic Canada Studies as part of a double major. Saint Mary's is the only institution in Canada which offers this program.

To complete a major concentration in Atlantic Canada Studies, a student must meet the usual University requirements for the Bachelor of Arts degree, and in particular obtain six full course credits (or the equivalent) from the courses listed below. Three of these must be from different disciplines, and one must be the Atlantic Canada Seminar. Students are required to choose their courses in consultation with a member of the Atlantic Canada Studies Committee, and are strongly urged to select one of its members to advise them for the duration of the program, and to provide the necessary liaison with the Committee.

300.0   The Culture of Atlantic Canada
This course provides an introduction to the cultural traditions and institutions of the various regions and ethnic groups of the three Maritime Provinces and Newfoundland. Lectures will cover a wide variety of architectural, artistic, ecclesiastical, educational, ethnic, and linguistic topics. Students will engage in both individual and group projects and be required to write a final examination.

301.1   Selected Topics in Atlantic Canada Studies I
This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments in the University.

302.2   Selected Topics in Atlantic Canada Studies II
This semester course will provide the student with an opportunity to take courses on specific Atlantic Canada topics which do not fit in with the standard offerings of other departments in the University.

400.0   Atlantic Canada Seminar
Prerequisite: student must be a fourth year (senior) ACS major.

This course, intended for majors in Atlantic Canada Studies, will provide an opportunity for students in the program to integrate their knowledge of the region in an interdisciplinary fashion. Drawing upon the expertise of a number of guest speakers familiar with various aspects of Atlantic Provinces life, the course will deal with such topics as the Atlantic fishery, agriculture, industry and labor, business enterprise, regional protest, and cultural ethnicity. Students will be afforded an opportunity to use the vast quantity of primary source material at the Public Archives of Nova Scotia and other local repositories.

Students pursuing a major in Atlantic Canada Studies must select at least six full courses (or equivalent) from the following:

Acs 300.0	The Culture of Atlantic Canada
Acs 301.1	Selected Topics in Atlantic Canada I
Acs 302.2	Selected Topics in Atlantic Canada II
Acs 400.0	Atlantic Canada Studies Seminar
Ant 221.0	Native Peoples of Atlantic Canada and Maine
Ant 421.1	Native Peoples of Atlantic Canada and Maine: Seminar
Bio 207.0	The Atlantic Fisheries
Eco 324.1	The Atlantic Economy
Eco 325.2	The Atlantic Economy Seminar
Eco 330.1	Regional Economics
Egl 300.1, 301.2, 302.1, 303.2 Selected Topics	
Egl 335.0	Introduction to Folklore
Egl 380.0	Literature of Atlantic Canada
Egl 450.0	Special Subject
Egl 451.0	Special Author
Fre 303.0	Acadian Civilization
Gpy 210.0	The Atlantic Provinces
Gpy 314.0	Fisheries Development
Gpy 324.0	Ports and Shipping
Gpy 400.0	Regional Analysis and Development
Geo 202.2	Geology of Atlantic Canada
His 320.0	Atlantic Provinces and New England
His 340.0	A History of the Atlantic Provinces
His 344.0	A History of Nova Scotia
His 345.0	Blacks and Other Minorities in Nova Scotia

Pol 307.0   Provincial Government and Politics
Pol 420.0   Urban Government and Politics

Soc 320.0   Women in Canadian Society
Soc 321.0   Canadian Society
Soc 327.0   Social Policy
Soc 332.0   Sociology of The Atlantic Region
Soc 334.0   Society of the Scots in Scotland and Canada
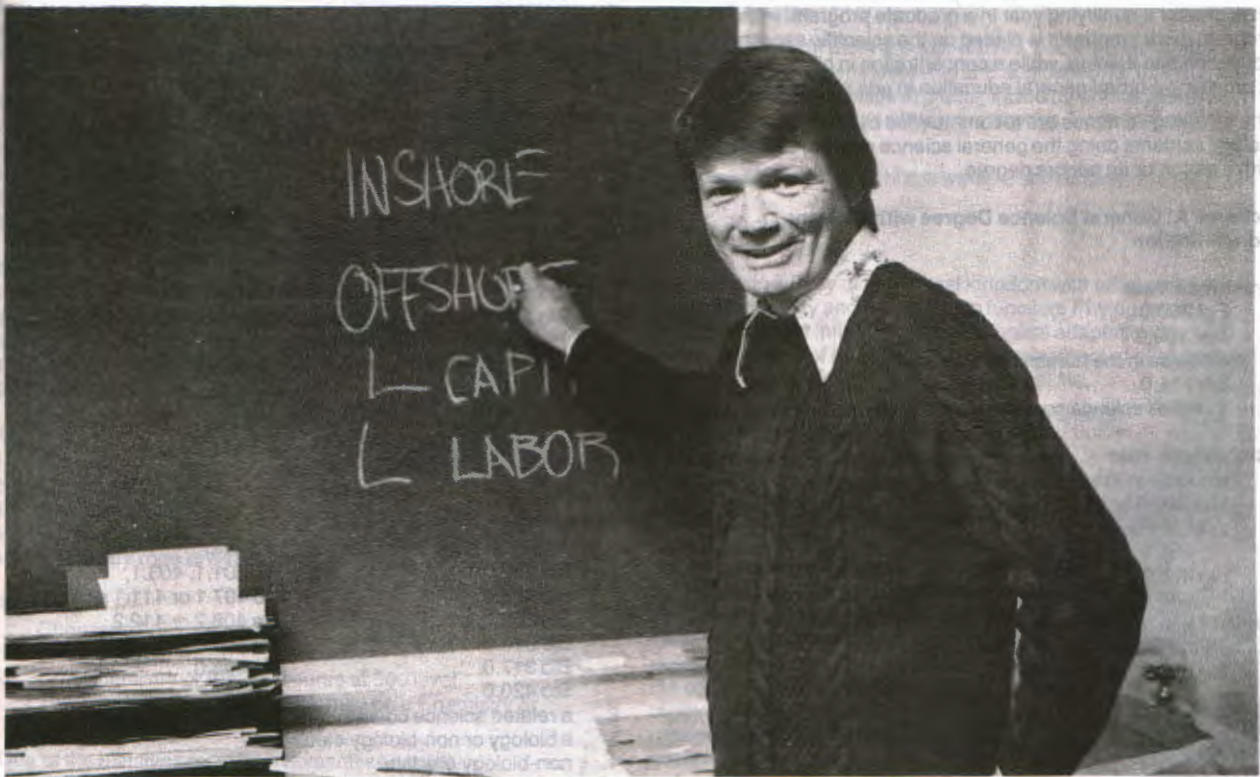
Biology

Chairperson, Associate Professor	M. Wiles
Professor	A. Rojo
Associate Professors	B. Kapoor, E. Rojo
	K. Thomas
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 chairperson 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 111.0
5. a related science course

Sophomore Year
1. a course in the humanities
2. Mat 200.0 or 225.0
3. a related science course
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. a related science course
3. a related science course
4. non-biology elective

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. non-biology elective
4. non-biology elective
5. non-biology elective

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 111.0
5. a related science course

Sophomore Year
1. a course in humanities
2. Mat 200.0 or 225.0
3. a related science course
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. a related science course
4. non-biology elective

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
Bio 420.0	

2. a related science course
3. a biology or non-biology elective
4. non-biology elective

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 554.0
Bio 552.0	Bio 555.0
Bio 553.0	
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.

Honors Program with a Combined Major in Biology and Chemistry

First Year
1. General Biology (111.0)
2. General Chemistry (101.0)
3. Mathematics (100.0)
4. English
5. Elective (Science or Arts)*

Second Year
1. Chemistry (201 or 202.0)
2. Biology (204.0)
3. Biology (205.0)
4. Mathematics (200.0)
5. English (200.0)

Third Year
1. Biology (307.1/308.2)
2. Biology (300.0 level, other than above)
3. Chemistry 241.0 (or 343 in special cases)
4. Chemistry 331.0 (or 311.0)
5. Mathematics 300.0

Fourth Year
1. Biology (400.0 level)
2. Biology (400.0 level)
3. Chemistry 311.0 (or 331)
4. Chemistry 321.0
5. Chemistry (one of 342, 441, or 411)

Fifth Year
1. Chemistry 500 or Biology 590
2. Biology 549.0
3. One Chemistry or Biology course at 500 level
4. Two electives* — one of which may be a Chemistry or Biology course.

*One of the electives must be a humanities course.

103.0 Biology, Environment and Man (for non-science students)
An introduction to the scope and principles of modern biological science. Wherever possible examples explaining 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 one hour 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 course: Bio 111.0.

Classes 3 hrs. a week. 2 semesters.

111.0 Principles of Biological Science
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. 2 semesters.

204.0 Botany
Prerequisite: Bio 111.0.

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

205.0 Zoology
Prerequisite: Bio 111.0.

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.

207.0 The Atlantic Fisheries
Prerequisite: permission of the instructor.

A study of the relationship between the biology and political economy of the Atlantic fisheries since 1945. Stress will be placed on the scientific facts underlying the fisheries, and in particular, the qualities and quantities in the marine ecosystem that supports them. A detailed study will also be made on the methods of fisheries science which are the basis of fish stock assessments by government scientists. Roughly the last third of the course will examine the effects on the livelihood of fishermen of government policies respecting the fisheries and the regional, national and international political forces which are behind federal government fisheries regulations.

Classes 3 hrs. a week. 2 semesters.

Note: This course cannot be used to satisfy the Bachelor of Science requirements 4(a), 4(b), 5(a), or 5(b). It also cannot be used to satisfy the 3(b) requirement of the Faculty of Arts.

249.1 Introduction to Marine Biology
Prerequisite: Bio 111.0 or equivalent.

A three-week summer course organized by, 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
Prerequisites: 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.

305.0 General Physiology
Prerequisites: 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.

307.1 (.2) Genetics
Prerequisites: Bio 111.0, 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. a week. 1 semester.

308.1 (.2) Biostatistics
Prerequisites: Bio 111.0, 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 will be undertaken.

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

309.0 Botany of Domesticated Plants
Prerequisites: Bio 111.0, 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.

310.0 Ecology
Prerequisites: 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.

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

317.0 Evolutionary Biology
Prerequisites: 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: P. A. Moody, *Introduction to Evolution,* Third Edition, Harper and Row; D. Pilbeam, *The Ascent of Man,* MacMillan and Company.

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

320.0 Comparative Chordate Anatomy
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 3 hrs. and lab 3 hrs. a week. 2 semesters.

401.1 Morphology of Vascular Plants
Prerequisites: 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.

403.2 Plant Taxonomy
Prerequisites: 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.

405.0 Biology Of Fishes
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.

406.0 Microbiology
Prerequisite: any two 300 level biology courses preferably from 302.0, 305.0, 307.1 and one university chemistry course or permission of the instructor.

Morphology, biochemical activity and classification of microorganisms: viruses, bacteria, molds, yeasts, and other microscopic life forms. Special emphasis will be placed on bacterial variations and their resistance.

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

407.1 Histological Techniques
Prerequisites: Bio 111.0, 204.0, 205.0, Che 101.0.

A study of the microscopic structure of tissues and organs with special emphasis on the 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.

408.2 Vertebrate Embryology
Prerequisites: 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.

411.1 Principles Of Animal Parasitology
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.

412.2 Human Genetics
Prerequisites: 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.

501.0 Advanced Bacteriology
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.

549.0 Honors Seminar
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.

550.0 Mycology
Prerequisites: 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.

552.0 Cytogenetics
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.

553.0 Marine Invertebrates
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.

554.0 Experimental Fish Embryology
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

555.0 Advanced Physiology
Prerequisites: 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 2 hrs. plus tutorials and lab projects. 2 semesters

590.0 Research Thesis
Prerequisite: fifth year honors standing.

Research project carried out by the student under the supervision of a member of the Department. The student will submit a thesis and present it orally.

Lab 6 hrs. a week. 2 semesters.

Chemistry

Chairperson, Associate Professor	K. Vaughan
Professors	D. H. Davies, A. T. Sabean
Associate Professors	C. M. Elson, J. Ginsburg, J. C. O'C. Young
Assistant Professor	D. Phelps

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 ideas of chemistry and provide them with the chemical skills necessary for their professional development.

All members of staff are engaged in active research projects, and 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 201.0, 241.0, 311.0, 321.0, 331.0, and two of 342.0, 411.0, 431.0, 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 201.0, 241.0, 311.0, 321.0, 331.0, 411.0, 441.0, 500.0 and one of 511.0, 513.0, 521.0, 531.0, 541.0 or 542.0. Students are required to take one to three additional chemistry courses of their choice.

Combined honors programs can be arranged and one suggested program is outlined in the Biology section of this Calendar.

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
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
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
Prerequisite: Che 101.0 and Mat 200.0 or Mat 225.0 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.

241.0   Introduction To Organic Chemistry
Prerequisite: Che 201.0 (may be taken concurrently).

An introduction to the major classes of 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
Prerequisite: Che 201.0, Mat 300.0 (may be taken concurrently).

Equilibrium of ideal and non-ideal systems with applications, chemical kinetics and reaction mechanisms, surface chemistry and catalysis.

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

321.0   Inorganic Chemistry
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   Analytical Chemistry For Chemists and Geologists (Geo 355.0)
Prerequisite: Che 201.0.

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
Prerequisite: Che 201.0 and 241.0 or 343.0.

An introduction to the Chemistry of sugars, lipids, amino acids, proteins, nucleic acids, and enzymes; molecular processes in living systems including metabolism, chemical genetics, biosynthesis and bioenergetics.

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

343.0   Elementary Organic Chemistry
Prerequisite: Che 202.0.

A comprehensive treatment of organic chemistry for non-chemistry majors. The principal functional classes, reaction mechanisms, stereochemistry 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
Prerequisite: Che 201.0, 202.0 or 203.0.

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
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.

411.0 Physical Chemistry
Prerequisite: Che 311.0, Mat 300.0.

Quantum chemistry, statistical thermodynamics, absolute reaction rate theory.

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

431.0 Analytical Chemistry
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
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
Prerequisite: restricted to final year students in the honors program.

Students will carry out a research project under the direction of one of the members of the Department and will prepare a thesis on their work. The thesis is presented orally.

Lab 6 hrs. a week (minimum). 2 semesters.

511.0 Advanced Topics In Physical Chemistry
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
Prerequisite: Che 411.0, Phy 221.0 and Mat 300.0.

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.

521.0 Advanced Topics In Inorganic Chemistry
Prerequisite: Che 321.0.

A lecture-seminar-laboratory course on selected topics in advanced areas of inorganic chemistry.

Classes and lab 5 hrs. a week. 2 semesters.

531.0 Selected Topics In Instrumental Analysis
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
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.

542.0 Advanced Topics In Biochemistry
Prerequisite: Che 342.0.

A lecture-seminar-laboratory course on selected topics in advanced areas of biochemistry.

Classes and lab 5 hrs. a week. 2 semesters.

Recommended Programs

The following programs are **recommended** by the Department
of Chemistry for Chemistry students taking the general science
degree, the degree with a major, or an honors degree.

Scheme A: General Science Degree with Chemistry Concentration

Freshman Year	Sophomore Year	Junior Year	Senior Year
1. Egl 200.0	1. Che 201.0	1. Two courses from:	1. A chemistry elective
2. Mat 100.0	2. Mat 200.0	Che 241.0	2. A chemistry elective
3. Che 101.0	3. A science elective	Che 311.0	3. A science elective
4. A science elective	(non-chemistry)	Che 321.0	(non-chemistry)
(non-chemistry)	4. A course in	Che. 331.0	4. An elective
5. A course in	the humanities	2. A science elective	5. A non-chemistry
the humanities	5. An elective	(non-chemistry)	elective
		3. An elective	
		4. A non-chemistry	
		elective	

Scheme B: Science Degree with a Major in Chemistry

Freshman Year	Sophomore Year	Junior Year	Senior Year
1. Egl 200.0	1. Che 201.0	1. Che 311.0	1. Two courses from:
2. Mat 100.0	2. Che 241.0	2. Che 331.0	Che 321.0*
3. Che 101.0	3. Mat 200.0	3. One course from:	Che 342.0
4. A science elective	4. A science elective	Che 321.0*	Che 411.0
(non-chemistry)	(non-chemistry)	Che 342.0	Che 431.0
5. A course in	5. A course in	Che 441.0	Che 441.0
the humanities	the humanities	4. Mat 300.0	2. A chemistry elective
		5. A science elective	3. A non-chemistry
		(non-chemistry)	elective
			4. Elective

*Che 321.0 MUST be taken in either the Junior or Senior Year

Scheme C: Science Degree with Honors in Chemistry (**Note:** The freshman and sophomore years are as in **Scheme B**)

Junior Year	Senior Year	Honours Year
1. Che 311.0	1. Che 411.0	1. Che 500.0
2. Che 321.0	2. Che 441.0	2. One course from:
3. Che 331.0	3. A chemistry elective	Che 511.0 Che 531.00
4. Mat 300.0	4. a science elective	Che 513.0 Che 541.0
5. A science elective	(non-chemistry)	Che 521.0 Che 542.0
(non-chemistry)	5. A non-chemistry elective	3. Two electives
		4. A non-chemistry elective

Classics

In September 1980 the subject area of Classics became part of
the Department of Modern Languages. Descriptions for courses
in Classics, Latin and Greek are found in the Department of
Modern Languages and Classics later in this section of the
Calendar.

Commercial Law

Commercial Law courses are administered by the Department of Accounting.

301.1 (.2)   Legal Aspects of Business — Part I
Prerequisite: Eco 201.1 (.2) and Eco 202.1 (.2).

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
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.

Computer Science

Although Saint Mary's does not offer a complete program in computer science, the following courses are available to interested students:

Msc 321.1 (.2)	Introduction of Computers
Msc 322.1 (.2)	Computer Simulation
Acc 323.1 (.2)	Management Information Systems I
Msc 324.2	The Use of Cobol in Data Processing
Acc 425.1	Management Information Systems II
Egn 204.1	Computer Science
Mat 125.1 (.2)	Basic Programming and Computer Concepts
Mat 226.1 (.2)	Introduction to Computer Programming
Mat 227.1 (.2)	Applications of Computers to Problem Solving
Mat 308.1 (.2)	Numerical Analysis I
Mat 309.1 (.2)	Numerical Analysis II
Mat 325.0	Data Structures and Combinatorial Computing
Mat 326.0	Computer Organization and Assembly Language Programming
Mat 335.0	Introduction to Operations Research
Mat 408.1 (.2)	Advanced Numerical Analysis I
Mat 409.1 (.2)	Advanced Numerical Analysis II
Mat 480.1 (.2) to	
Mat 489.1 (.2)	Special Topics in Computer Science

Economics

Chairperson, Assistant Professor   T. O'Neill
Professor   J. J. Vorstermans
Associate Professor   E. J. Doak
Assistant Professors   K. S. Chan
   A. K. Mukhopadhyay
Lecturers   G. M. Meredith
   J. van Lierop

Department Statement

Economics has been defined as "the study of how men and society end up choosing, with or without the use of money, the employment of scarce productive resources, which could have alternative uses, to produce various commodities over time and distribute them for consumption, now and in the future, among various people and groups in society." (Paul A. Samuelson).

Economics borders on other academic disciplines, such as political science, sociology, psychology, anthropology and business administration. It also draws heavily on the study of history, statistics and mathematics.

Students who desire some minimum understanding of economics are encouraged to consider taking one or more courses at the 200 level. Entrance into higher level courses ordinarily requires a full-year of principles of economics, but this may be waived with the approval of the Department.

The Economics Department is able to offer students with a special interest in economics, the opportunity to undertake some concentration beyond the core of required courses in the following areas and associated courses:

Money and Banking, Eco 307.1, 308.2, 320.1
Public Finance, Eco 318.1, 319.2, 321.2
International, Eco 313.1, 314.2
Quantitative, Eco 302.1, 303.1, 309.2
Urban-Regional, Eco 324.1, 325.2, 330.1, 350.2, 360.1
Comparative Systems, Eco 315.1, 323.2
History and Development, Eco 304.1, 310.1, 311.2
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.

The former requires a total of twenty full courses, or equivalent, following Nova Scotia Grade XI or fifteen full courses, or equivalent, following Nova Scotia Grade XII. The latter requires a total of twenty full courses, or equivalent, following Nova Scotia Grade XII or twenty-five full courses, or equivalent, following Nova Scotia Grade XI. (See Faculty of Arts and Faculty of Commerce, section 3 for the basic requirements for these degrees.) Regardless of the degree sought, the Department of Economics requires that the program of study leading to a major in economics include the following:

(1)   Mat 113.0 (Nova Scotia Grade XII Mathematics) or equivalent
(2)   Egl 200.0 (Introductory English)
(3)   One course in the humanities or a language
(4)   One natural science, university mathematics (beyond the level of difficulty of Mat 113.0) or computer course (Msc 205 and 321, which are required of all B. Comm. students, satisfy this requirement).
(5)   One course from the social sciences other than economics
(6)   The following economics courses:

Eco 201 ($^1/_2$)   Principles of Economics: Micro
Eco 202 ($^1/_2$)   Principles of Economics: Macro
Eco 206 ($^1/_2$)   Introduction to Quantitative Methods for Economists II or
Eco 207 ($^1/_2$)   Introductory Statistics for Economists or
Eco 300 ($^1/_2$)   Intermediate Microeconomic Theory
Eco 301 ($^1/_2$)   Intermediate Macroeconomic Theory

6 additional half course economic electives at the 300 level or above. (B.Comm. Economics majors may substitute Fin 360 ($^1/_2$) for one of these courses).

In addition, students must satisfy conditions set down by the faculty in which they enrol.

A suggested sequence of courses follows for students pursuing the degree of B.A. with major in economics. A suggested sequence of courses for those pursuing the degree of B.Comm. with major in economics is shown under Faculty of Commerce in Section 3.

Suggested courses leading to a B.A. with a major in Economics (assuming there is no advanced standing)
First Year
Eco 200.0 or 221.1 and 222.2
Mat 113.0
Social science other than economics (e.g. political science, anthropology, sociology, geography, psychology or history)
Elective
Elective

Second Year
Eco 201.1 and 202.2
Eco 206.1 and 207.1 (see note)
Egl 200.0
Elective
Elective

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

Note: Students taking Eco 205($^1/_2$) and Msc 321($^1/_2$) to satisfy requirement 4 above, should take Eco 205($^1/_2$) and 206 ($^1/_2$) in the second year and Eco 207($^1/_2$) and Msc 321($^1/_2$) in the third year.

Honors Program in Economics

The Department of Economics offers honors programs to students enrolled in either the Faculty of Arts or the Faculty of Commerce. Descriptions of the general requirements for the degrees of Bachelor of Arts with Honors and of Bachelor of Commerce with Honors are contained in Section 3. In addition to these general requirements, all candidates for graduation with honors in economics must comply with the following:

a)   Students must satisfy the applicable requirements for a major in economics as outlined on the preceding pages.

b)   The ten full courses or equivalent in economics presented for honors must include:

   i)   Eco 201.1(.2), Eco 202.1(.2), Eco 206.1(.2), and 207.1(.2).

   ii) one full credit or equivalent in microeconomic theory beyond the 200 level.

   iii) one full credit or equivalent in macroeconomic theory beyond the 200 level.

   iv) two of the following three courses: Eco 302.1 (.2), Eco 303.1 (.2) and Eco 309.1 (.2) or an equivalent full credit (two semesters) from the Mathematics Department with the approval of the Chairperson of the Economics Department.

   v)   an honors project, which is the equivalent of $1/2$ credit, done under the supervision of a faculty member.

c)   With the approval of the chairperson of the Department of Economics, a student may be permitted to substitute up to two full courses or equivalent from a related subject area as part of the ten courses in economics presented for honors.

200.0   Economic History of Europe

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; Europe since 1914.

Classes 3 hrs. a week. 2 semesters.

201.1 (.2)   Principles of Economics: Micro

General price theory, theory of the firm, market structure, production, cost, revenue and profit maximization, theory of distribution.

Classes 3 hrs. a week. 1 semester.

202.1 (.2)   Principles of Economics: Macro

National income determination, national accounting, business fluctuations, money and banking, international economics, economic growth.

Classes 3 hrs. a week. 1 semester.

205.1 (.2)   Introduction to Quantitative Methods for Economists I

Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

This course is designed to provide an overview of linear systems with emphasis on applications. It includes the topics of linear programming as well as transportation and assignment problems.

Classes 3 hrs. a week. 1 semester.

206.1 (.2)   Introduction to Quantitative Methods for Economists II

Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

The purpose of this course is to provide an overview of non-linear optimization, differential and integral calculus with emphasis on applications, as well as an introduction to decisions models under uncertainty.

Classes 3 hrs. a week. 1 semester.

207.1 (.2)   Introductory Statistics for Economists

Prerequisite: Eco 206.1 (.2).

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.

221.1   Introduction to Current Economic Issues I

A course which introduces the student to the discipline of economics through a survey of the major economic issues of the current decade. Specific topics will include unemployment and inflation, monetary and fiscal policy, economic growth, regional economic disparities, poverty and income inequality, economic problems of urbanization, expanding role of the public sector in economic activity. The course assumes no prior knowledge of economics and is open to both freshmen and those non-commerce students who are not planning to major in economics.

Classes 3 hrs. a week. 1 semester.

222.2   Introduction to Current Economic Issues II

As a sequel to Eco 221.1, this course is designed to continue the student's introduction to the discipline of economics through a survey of major economic issues of the 1970s. Specific topics will include international economic relations, monopoly power and competition policy, multinational corporations and foreign ownership, labor relations, agricultural problems, energy and natural resources, pollution and environmental problems. The course assumes no prior knowledge of economics and is open to both freshmen and those non-commerce students who are not planning to major in economics.

Classes 3 hrs. a week. 1 semester.

300.1   Intermediate Microeconomic Theory

Prerequisite: Eco 201.1 (.2) and 206.1 (.2).

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

Prerequisite: Eco 202.1 (.2) and 206.1 (.2).

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.

302.1 Mathematical Economics
Prerequisite: Eco 206.1 (.2) 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.

303.1 (.2) Intermediate Economics Statistics
Prerequisite: Eco 207.1 (.2) or equivalent.

A further study of the basic concepts of statistics and its application to the solution of business and economic problems; review of probability, random variables and their distribution, sampling and sampling distributions, normal and associated distributions, statistical inference, simple and multiple regression and related topics.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Msc 303.1 (.2).

307.1 Money and Banking I
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Money and the payments system; development of banking in Canada; financial instruments; theory of banks' intermediation, chartered banks structure, operation and competition, governments and Canadian financial markets.

Classes 3 hrs. a week. 1 semester.

308.2 Money and Banking II
Prerequisite: Eco. 201.1 (.2), Eco. 202.1 (.2) and Eco. 307.1.

The nature and characteristics of central banks in general and the Bank of Canada in particular; monetary policy and its objectives. The control of the money supply; governments' operations and monetary policies; determinants and theory of the money supply; the development of monetary theory.

Classes 3 hrs. a week. 1 semester.

309.1 Introduction to Econometrics
Prerequisite: Eco 206.1 (.2) 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
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Alternative theories of growth and development, including economic and non-economic determinants of growth in developing countries, the role of government in development policies and lessons from experience in growth and change.

Classes 3 hrs. a week. 1 semester.

311.2 Issues in Economic Development
Prerequisite: Eco 201.1 (.2) and 202.1 (.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
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

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
Prerequisite: Eco 201.1 (.2) and 202.1 (.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
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An introduction to the theory of international trade: comparative advantage, modern refinements, gains from trade, empirical relevance of trade models, tariffs and protection, economic integration, trade and growth.

Classes 3 hrs. a week. 1 semester.

315.2 Comparative Economic Systems
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

An examination of how different economic systems choose to solve the basic economic problems of resource allocation and distribution of income and wealth. Theoretical models of (idealized) economic systems as developed by the Classical economists, (e.g. Smith, Ricardo, Mill), Marx, Schumpeter, Lange, Keynes, etc., will be studied. The structure and performance of existing systems — e.g. Western managed capitalism, Yugoslavian market socialism and Eastern European command socialism — will also be analyzed.

Classes 3 hrs. a week. 1 semester.

316.1 Industrial Organization
Prerequisite: Eco 201.1 (.2), 202.1 (.2).

The course begins by laying out the arguments for competitive market processes and then proceeds to investigate the determinants of real-world industrial market structures, the behavior of firms, and efficiency in resource allocation.

Classes 3 hrs. a week. 1 semester.

318.1 Introduction to Public Finance
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

319.1 (.2) Issues in Public Finance
Prerequisite: Eco 318.1 or Eco 201.1 (.2) and 202.1 (.2).

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.

320.1 The Canadian Financial System
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

321.2 Canadian Economy Seminar
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

323.1 Soviet-Type Economies
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

This course traces the economic history of the Soviet Union from the 1917 revolution through the Stalinest period to the present. This provides a background for examining the functioning of the contemporary Soviet economy and economies which have been structured on the Soviet model in Eastern Europe and Asia. The trend in economic reforms in Eastern Europe will also be studied.

Classes 3 hrs. a week. 1 semester.

324.1 The Atlantic Economy
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

Analysis of the structure, development, and performance of the economy of the Atlantic region. Topics covered include: economic history of the region, current structure of the regional economy and state of economic development, sub-regional differences in economic structure and performance, external trade linkages, demographic and labor market characteristics, the role of government in the development process.

Classes 3 hrs. a week. 1 semester.

325.2 Atlantic Economy Seminar
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

The course will examine, in detail, a small number of current economic issues in the Atlantic region. General topic areas, from which specific issues may be chosen, include: the impact on the region of policies and programs of the federal government including monetary, fiscal, manpower, and development policies; the role of provincial and municipal planning and development agencies; the role of key sectors of the economy in future development, including energy, natural resources, steel, and transportation.

Classes 3 hrs. a week. 1 semester.

330.1 Regional Economics
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

339.1 Labor Economics
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

340.2 Human Resource Economics
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

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.

350.2 Urban Economics
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

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.

360.1 Economics of Natural Resources and Environmental Management
Prerequisite: Eco 201.1 (.2) and 202.1 (.2).

This is a course in the economics of public policy relating to environmental, 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, pollution control, and benefit-cost analysis as they apply to public policy problems.

Classes 3 hrs. a week. 1 semester.

440.1 Advanced Microeconomics
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
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.

492.1 (.2) Directed Study
Prerequisite: Eco 201.1 (.2) and 202.1 (.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.

591.1 (.2) Honors Seminar and Project
Prerequisite: admission to the honors program.

Students enrolled in the honors program are required to complete a project under the direction of a faculty member. This course is designed to enable the student to fulfill this requirement.

Classes and independent study. 1 semester.

The following courses are available only to students registered in the master of Business Administration program.

500.1 (.2) Economics of the Enterprise
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.

501.1 (.2) Economics of Enterprise Environment
The course studies the determinants of and changes in the level of national income, monetary and fiscal theory, and international trade and finance theory and policy.

Education

Dean, Associate Professor	M. MacMillan
Professor	J. Haysom
Associate Professors	B. E. Davis, F. Dockrill
	M. Herrick, F. Phillips
	D. Weeren
Assistant Professor	B. Hanrahan

The philosophy and structure of the Bachelor of Education program are described in section 3 of this Calendar.

Within several of the Bachelor of Education courses (Edu 501.0 through Edu 540.1) 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 1980-81 will be issued to prospective students by the Faculty of Education prior to registration.

501.0 Philosophy of Education
Via an existential perspective or a focus on educational relevance, exploration of the educational situation leads to applications to the curriculum, the school and student-teacher relationships.

Classes 3 hrs. a week. 2 semesters.

502.0 Psychology of Education
A study of the nature, equipment, growth, development, evaluation, and adjustment of the learner.

Classes 3 hrs. a week. 2 semesters.

503.0 General Methods of Teaching
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.

504.0 History of Education
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.

505.0 Practice Teaching
Students spend a minimum of eight weeks practice teaching in Nova Scotia schools. The details of school experience varies from year to year and are prepared by the Director of Practice Teaching. In addition to the in-school experience, students will meet with the Director of Practice Teaching for two hours a week throughout the academic year.

Content and Methods of Specific Fields 521.1 through 541.1

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 1980-81 is issued by the Faculty of Education prior to registration.

521.1 Secondary Reading
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 1 1/2 hrs. a week. 2 semesters.

522.1 Science
Objectives, programs, methods in junior and senior high school science.

Classes 1 1/2 hrs. a week. 2 semesters.

523.1 Mathematics
Objectives, programs, methods in junior and senior high school mathematics.

Classes 1 1/2 hrs. a week. 2 semesters.

524.1 Second Language I
Principles and techniques of current methodology for teaching of French, and other modern languages.

Classes 1 1/2 hrs. a week. 2 semesters.

530.1 Geography
Objectives, programs, methods in junior and senior high school geography.

Classes 1 1/2 hrs. a week. 2 semesters.

531.1 Junior High School Social Studies
This section focuses on history and civics at the junior high level.

Classes 1 1/2 hrs. a week. 2 semesters.

533.1 Social Studies: Contemporary Emphasis
Objectives, programs, methods for senior high school courses in modern world problems, economics, political science, sociology.

Classes 1 1/2 hrs. a week. 2 semesters.

534.1 Social Studies: An Interdisciplinary Approach
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 1 1/2 hrs. a week. 2 semesters.

540.1 English: Secondary High School Level
This methods course will consider objectives and approaches to teaching the English curriculum components of literature, language/grammar, composition, speech/drama/media at the junior and senior high school levels.

610.0 Thesis or Action Research
The thesis or action research study provides the student a unique opportunity to choose, design and complete a significant project in the field of education. Assistance in the design and completion of the project is provided in the form of a thesis advisor, a faculty member who works extensively with the student on a one-to-one basis, and in the form of a seminar introducing the student to those technical skills that are frequently used in thesis research.

These seminars meet jointly with course sessions of Edu 611.0. Credit for Edu 610.0 is given upon completion of the thesis or action research study.

Classes 1½ hrs. a week. 2 semesters.

611.0 Research Skills for Practicing Educators

This course is aimed at increasing the practicing educators' ability to understand and utilize published educational research and to enable them to design and conduct ad hoc educational research when needed. Topics covered will include the interpretation and use of educational research, construction of tests and questionnaires, making and testing hypotheses, the design of experiments, surveys, case studies, historical and theoretical research and basic statistical operations.

618.0 Semantics of Education: Analysis and Classroom Applications

This course examines the technical language employed in the description of classroom practice. The objective is to develop and clarify our terminology and apply it to a description of events in the classroom.

619.0 The Examination of Classroom Practice

Course participants will be invited to examine their own classroom practice using a variety of data gathering procedures. After analysing the data they will be invited to explore different ways of extending their methodology.

620.0 Curriculum Theory

This course is designed to develop an appreciation of the central and emergent ideas in curriculum theory. Participants will be encouraged to use these ideas in analyzing existing curriculum materials and in designing materials of their own choice.

Classes 3 hrs. a week. 2 semesters.

621.0 Curriculum Development: Literature

This course proposes to explore the teaching of poetry, short stories, drama and novels by analysing Canadian and other literatures as taught in junior and senior high. Teachers will study motivation and reading problems, values, literary criticism, and discovery teaching to develop a literature experience curriculum that includes integrated writing, speaking and viewing.

Course material will be related to the Nova Scotia List of Authorized Instructional Materials.

622.1 Curriculum in Historical Perspective (General) and
623.2 Curriculum in Historical Perspective (Nova Scotia)

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.

624.0 Curriculum Development: Science

The course blends practical and theoretical aspects of curriculum design with particular reference to the teaching of science.

625.0 Curriculum Development: Instructional Media

This course will analyze the effectiveness of audio-visual media on instructional programs. Teachers will learn to understand, select, produce, and use appropriate media and materials to stimulate learning in their specific curricula.

626.0 Curriculum Development: Written Composition

This course considers problems of teaching writing, reading and grammar in all subjects. It will focus on maintaining acceptable standards of literacy by concentrating on rhetorical study, curriculum development and actual writing practice and marking.

627.0 Curriculum Development: Oral Communication

This course proposes to improve teaching and learning effectiveness by dealing with the basic interactions of teacher and students in a verbal and nonverbal, social and intellectual classroom environment, by analyzing the process and patterns of human communication, and by planning for the improvement of personal speaking skills and creative communication in the classroom.

629.0 Curriculum Implementation: Science

Teachers will be given the opportunity of examining, rehearsing, implementing and reviewing new science curriculum materials. Concurrently, related pedagogical matters will be explored, e.g., relating science to other subjects, responding to students' interest, grouping students.

630.0 Psychological Principles of Learning and Their Educational Application

The course will begin with discussion of the basic tenets of modern learning theory as developed through the findings of experimental psychology. Such topics as conditioning, reinforcement, stimulus control of behavior, punishment and memory will be dealt with in relation to classroom application. As the course develops, more complex educational topics such as concept learning, creativity, intelligence, perceptual learning and transfer of training will be introduced.

Classes 3 hrs. a week. 2 semesters.

634.0 Principles of Social Psychology and Education

A seminar course concerned with those aspects of social psychology which are of particular interest to teachers and administrators. Discussion will focus on such topics as group behavior, leadership, conformity, person perception and attitudes. In addition some of the research findings in social psychology, as they apply to school and classroom, will be examined. Students will be given the opportunity to research areas of particular interest to them.

Classes 3 hrs. a week. 2 semesters.

650.0 Comparative Education: Britain and the Commonwealth

A comparative study aimed at identifying educational problems and responses in selected countries. Canadian education will be a recurring reference point. Relevant comparative educators and their methodology will be examined.

Lectures and seminars 3 hrs. a week. 2 semesters.

653.0 Comparative Education: U.S.A., Middle and Far East

A comparative study aimed at identifying educational problems

and responses in selected countries. Canadian education will be a recurring reference point. Relevant comparative educators and their methodology will be examined.

Lectures and seminars 3 hrs. a week. 2 semesters.

654.0   Comparative Education: Europe, U.S.S.R. and Latin America.
A comparative study aimed at identifying educational problems and responses in selected countries. Canadian education will be a recurring reference point. Relevant comparative educators and their methodology will be examined.

Lectures and seminars 3 hrs. a week. 2 semesters.

660.0   Educational Administration
The central purpose of this course is to develop understandings, knowledge, and competencies which are useful for educational administrators and other system personnel. The attempt is to meld the emerging concepts and principles of modern educational administration with the practical work contexts in which administrators, coordinators, teachers and students find themselves.

Classes 3 hrs. a week. 2 semesters.

662.0   Educational Supervision
The purpose of this course is to develop knowledge and skills which are useful for teachers and educational supervisors in program planning, innovation and evaluation. Supervision is defined here as a planned program for the improvement of teaching and learning. The study of select literature and research is integrated with the perspective of the supervisor's role in program development.

Classes 3 hrs. a week. 2 semesters.

670.0   Curriculum Development in Mathematics
Curriculum Development Mathematics: Participants will work (as a team) to develop materials which will enrich their courses in mathematics.

671.0   Social Issues and Education
Each year one or more social issues will be examined in depth as to their relevance to the influence upon educational practice in Nova Scotia. Issues that might be covered in any particular year include: sex differences and sexism, race differences and racism, ability differences and special education, public opinion and censorship, economic development and labor unrest, national identity and regional disparity, Quebec independence and educational opportunities for Acadians, social stability and socio-economic disparity.

680.1 (.2)   The Public School and Religious Education
This course examines the question of whether there are ways in which Nova Scotian public schools can legitimately and effectively contribute to the religious education of students.

684.0   Curriculum and Instruction: Social Studies
Prerequisite: Certification. (Students should have had an undergraduate course in social studies education).

A graduate level course designed to give in-service social studies teachers the opportunity of further developing their competencies in the areas of social studies curriculum and instruction. Considerable attention will be given to social inquiry in both its factual and valuative forms, and participants will be required to become familiar with a broad range of teaching approaches and curriculum projects.

Classes 3 hrs. a week. 2 semesters.

685.0   Dynamics of Curriculum Through Models of Teaching
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.

690.1 (.2)   Individual Study
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.

Engineering

Director, Division of Engineering,
Associate Professor   D. L. Mulrooney
Associate Professors   W. P. Boyle, D. N. Swingler
Assistant Professor   D. B. Van Dyer

106.1   Engineering Design Graphics

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.

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.

107.2   Design and Descriptive Geometry

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.

113.1 (.2)   Surveying

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: Moffitt and Bouchard, *Surveying,* 6th edition, Intext Educational Publication.

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

203.1 (.2)   Engineering Mechanics (Statics)

Prerequisite: Egn 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.

204.1 (.2)   Computer Science

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: to be announced.

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

212.1   Engineering Measurements

Prerequisite: Mat 200.0 (concurrently).

The objective of the course is to introduce students to fundamentals of Engineering measurement and to provide them with opportunities to apply measurement techniques under typical engineering circumstances. Topics: nature of measurements, scales, units; concepts of accuracy and precision; systematic and random errors; laws of probability in relation to error; analysis of experimental data; transducers, functional elements, measurement of fundamental quantities; and data acquisition.

Text: Holman, *Experimental Methods for Engineers* (McGraw-Hill).

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

300.1   Dynamics of Particles

Prerequisite: Mat 300.0 (concurrently) and Egn 203.2.

The objective of this course is to study the kinematics and kinetics of a particle. The course extends the principles developed in the course on statics. Both scalar and vector methods are used where appropriate. While three-dimensional problems are included the emphasis is on two-dimensional problems. Topics: Kinematics of a particle, rectilinear and curvilinearmotion, relative motion, Newton's Second Law; work and energy methods; impulse and momentum methods.

Text: Beer and Johnson, *Vector Mechanics for Engineers* (McGraw-Hill).

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

302.1 (.2)   Dynamics of Rigid Bodies

Prerequisite: Mat 200.0, Egn 300.1.

This course extends the concepts developed in 300.1 to apply to rigid bodies. The emphasis will be on plane motion of rigid bodies. Topics: Kinematics of plane motion, kinetics of plane motion; kinematics and kinetics of three-dimensional motion.

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

303.1 (.2)   Fluid Mechanics

Prerequisite: Mat 200.0, Egn 203.2.

Fluid properties, fluid statics and stability. Lagrangian and Eulerian methods of analysis. Application of the control volume of continuity, energy and momentum. Euler's equation of motion, Bernoulli's equation and applications. Linear momentum equation and applications. Dimensional analysis and dynamic similitude. Viscous effects in pipe flow. Introduction to boundary layers and drag on immersed bodies. Flow measurement techniques.

Text: Victor L. Streeter, *Fluid Mechanics, 4th Edition* (McGraw-Hill).

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

304.1 (.2) Mechanics of Deformable Bodies
Prerequisite: Egn 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, the object is to develop understanding of the relationships between loads applied to non-rigid bodies and the resulting stresses and strains. Topics include: stress and strain, axially loaded members, torsionally loaded members, flexural loading, combined loadings, column loading and finally an introduction to the Theory of Elasticity.

Text: Higdon, Olsen, Stiles and Weese, *Mechanics of Materials, 3rd. edition* (John Wiley).

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

306.1 (.2) Engineering Thermodynamics
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: to be announced.

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

308.1 (.2) System Dynamics (Electric Circuits)
Prerequisite: Phy 221.0, Mat 300.0 (concurrently).

The objective of this course is to introduce the student to the fundamental laws of electric circuits and circuit parameters, the concept of time-constants, impedances and admittances and general network theorems. Topics include: Kinchoff's Laws; Ohm's law and circuit parameters, resistive networks, loop and node equations; network theorems, super position, Thevenin-Norton; A.C. circuits, sinusodial response, power, power factor, three-phase circuits; transients in simple circuits.

Text: to be announced.

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

314.1 (.2) Engineering Materials
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: Flinn and Trojan, *Engineering Materials and their Application* (Houghton Mifflin Co.)

Classes 3 hrs. a week. 1 semester.

English

Chairperson, Associate Professor	G. B. Hallett
Associate Professors	J. Baker, C. J. Byrne
	R. H. Crowther, L. Falk
	T. E. Flynn
	R. A. MacDonald
	K. A. MacKinnon
	R. Perkyns, J. K. Snyder
	K. R. Tudor
Assistant Professors	M. J. Larsen, D. Pigot
	A. T. Seaman, G. Thomas
	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 completion of Egl 200.0, students who do not wish to major in English may select courses at the 300 level. The 300 level courses are designed for intermediate-level students and for non-majors. Students are advised not to take courses at the 400 level unless they have a grade-point average of 2.5 in their previous work in English.

Students who declare a minor concentration in English must complete three courses beyond Egl 200.0.

The Major Program:
Students who declare a major concentration in English, or a major in both English and one other subject area (that is, a double major), must complete the following requirements: (a) a total of six English courses beyond Egl 200.0, at least four of which must be at the 400 (or a higher) level; (b) Egl 400.0; (c) they must select a faculty advisor in consultation with the department; and (d) they must select their courses in consultation with a departmental faculty advisor.

The Honors Program
All prospective honors students should refer to the section of this calendar pertaining to honors degrees and apply to the Registrar for enrolment in honors after their first year in the University.

While students are encouraged to enrol formally in Honors as early as possible, those who apply later will be considered if they have the requisite 3.0 average in their English courses.

Honors students must complete the requirements listed below. A slight adjustment in the Honors English requirements will be made for those in a Combined Honors Program.

(1) Ten courses in English (they are listed here in recommended order):
1. Egl 200.0.
2. One 300 level English elective. Only one course at this level may be included in a student's minimum for Honors. Any 400 level course may be a substitute for this elective.
3. Egl 400.0.
4. Egl 408.0.
5. Egl 406.0.
6. Egl 404.0.
7. 400 level elective.
8. 400 level elective.
9. 400 level elective.
10. Egl 552.0.

(2) Prospective Honors students must consult with the Department Chairperson about admission to the Program. After admission each candidate will work with the Chairperson in selecting an Honors advisor; each year the student's course selection must be approved by his or her advisor.

(3) Candidates must maintain an average of B (3.0) in their English courses.

(4) Candidates may substitute an Honors Thesis in lieu of one of the 400 level electives. The thesis topic must be approved by the student's Honors advisor and a supervisor arranged by the time of registration. The thesis must be ready in its final typed form by the first Monday in April of a given academic year. It must be presented to a Thesis Board consisting of the Thesis Supervisor and two other members of the department selected by the student. Honors Theses normally will not exceed 20,000 words. The supervisor will consult with his colleagues on the student's Thesis Board in deciding the final grade and the procedure for its determination. The final Honors Thesis mark will be reported as a grade in Egl 500.0.

200.0   Introductory English
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.

300.1, 301.2, 302.1, 303.2   Selected Topics
The subject matter of particular half-courses will be announced from time to time. These half-courses are designed to treat at an intermediate level authors and topics not dealt with in the other 300 level courses.

Classes 3 hrs. a week. 1 semester.

306.0   Cross-listed as Classics 306.0.

310.0   Modern English Language
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 semester.

320.0   Advanced Composition
Prerequisite: Egl 200.0 with a grade of C or higher.

A course in the writing and analyzing of expository prose.

Emphasis will be placed on the use and understanding of the principal varieties of rhetorical modes and devices. This course is intended for those who are seriously interested in improving their writing.

Classes 3 hrs. a week. 2 semesters.

330.0   Children's Literature
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.

Classes 3 hrs. a week. 2 semesters.

335.0   Introduction to Folklore
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.

Classes 3 hrs. a week. 2 semesters.

340.0   Introduction to Drama
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.

345.0   Literature Between The Wars: 1918-1939
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.

350.0   Contemporary American Fiction
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.

Classes 3 hrs. a week. 2 semesters.

355.0   Science Fiction
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.

365.0   The Modern Novella
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.

370.0   Contemporary Canadian Literature
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, Ringuet, Buckler, Garner, Richler, Moore, Atwood, Laurence, Nowlan, Purdy, Layton and others.

Classes 3 hrs. a week. 2 semesters.

380.0   Literature of Atlantic Canada
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.

390.0   A Study of Fiction
Prerequisite: grade of C in Egl 200.0.

A close study of representative and important fiction from the 18th to the 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.

400.0   The Study of Poetry
Prerequisite: grade of C in Egl 200.0

A study of methods and problems in poetics and the reading and

Saint Mary's University
Campus Guide

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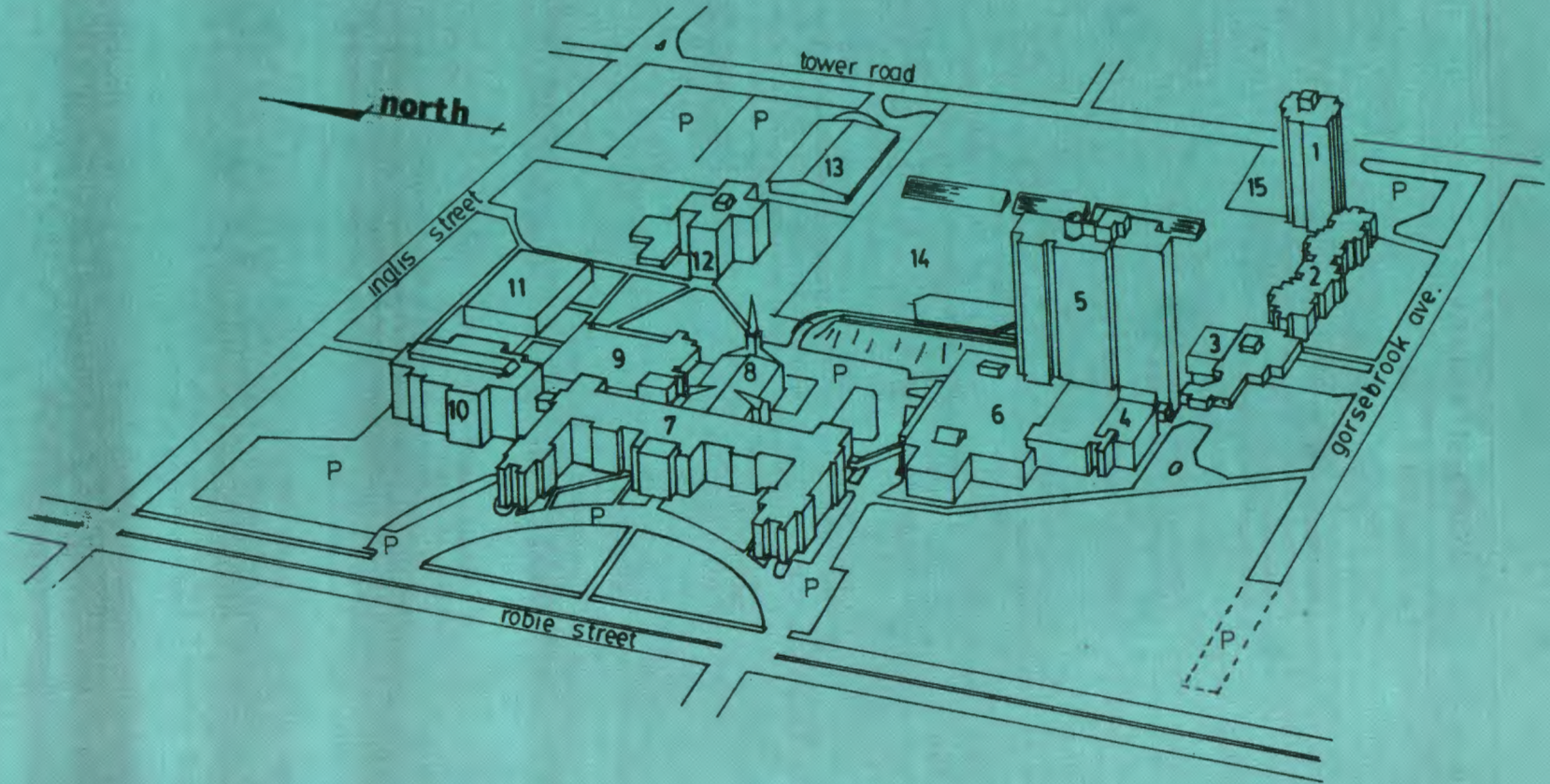
1. Edmund Rice Residence
2. Vanier House Residence
3. Dining Hall
4. Art Gallery
5. Ignatius Loyola Residence
6. Loyola Academic Complex
7. Archbishop McNally Building
8. Theatre-Auditorium & Gymnasium

9. Library
10. Science Building
11. Bishop Burke Building
12. Student Centre
13. Alumni Winter Arena
14. Huskies Stadium
15. Tennis Courts
P   Parking

UNIVERSITY DIARY

1980-1981

1980
August

1-29	Friday-Friday	**Early Registration**
1	Friday	Last day for filing applications for degrees and diplomas to be awarded in November 1980.
22	Friday	Last day for receipt of Early Registration forms by mail.

September

3	Wednesday	First day of residence registration for new students.
4	Thursday	Orientation for new students.

Registration and Payment of Fees

4	Thursday 7:00- 8:00 p.m.	New and returning part-time students except those in graduate programs.
5	Friday (a) 9:00-11:30 a.m.	(a) New students, including those transferring from other post secondary institutions.
	(b) 2:00- 4:30 p.m.	(b) Returning students; Bachelor of Education students; and those entering second undergraduate degree programs.
	(c) 7:00- 8:00 p.m.	(c) New and returning part-time students and Master's degree candidates, both full and part-time, in all faculties.

8	Monday	Classes begin and late registration begins.
15	Monday	Final date for late registration and changes in registration with respect to first semester courses (i.e., designated .1).
22	Monday	Final date for late registration and changes in registration with respect to full courses (i.e., designated .0).
26	Friday	Last day for filing applications for degrees and diplomas to be awarded in May 1981.

October

13	Monday	Thanksgiving Day. No classes.

November

11	Tuesday	Remembrance Day. No classes.
13	Thursday	Last day for withdrawing from a first semester course (i.e., designated .1). See "Withdrawing from a Course" section of this Calendar.

December

5	Friday	Last day of classes for first semester.
8	Monday	Patronal Feast of the University.
9-17	Tuesday-Wednesday*	Formal final examinations in first semester courses (i.e., designated .1) and formal mid-year examinations in full year courses (i.e., designated .0). If necessary to accommodate scheduling, these formal examinations may be written on Saturday and/or the examination period may be extended.
17	Wednesday	First semester ends.*

1981
January

5	Monday	Classes resume.
5-14	Monday-Wednesday	Payment of fees for second semester.
12	Monday	Final date for late registration and changes in registration with respect to second semester courses (i.e., designated .2)

February

13	Friday	Last day for withdrawing from a full course (i.e., designated .0). See "Withdrawing from a Course" section of this Calendar.
23-March 1	Monday-Sunday	Winter break. No classes.

March

| 19 | Thursday | Last day for withdrawing from a second semester course (i.e., designated .2). See "Withdrawing from a Course" section of this Calendar. |

April

10	Friday	Last day of classes.
13-28	Monday-Tuesday*	Formal final examinations in second semester courses (i.e., designated .2) and in full courses (i.e., designated .0). If needed to accommodate scheduling, these formal examinations may be written on Saturday and/or the examination period may be extended.
17	Friday	Good Friday.
20	Monday	Easter Monday.
28	Tuesday	Second semester ends.*

May

| 4 | Monday | Last day for applying to graduate in absentia at Spring Convocation. |
| 11 | Monday | Spring Convocation. |

August

| 3 | Monday | Last day for filing application for degrees and diplomas to be awarded in the Fall of 1981. |

*Subject to change should it not be possible to schedule all examinations in the designated time frame.

Saint Mary's University conducts two summer sessions each year. In 1981, the dates are May 12 to June 26 for the First Summer Session and July 2 to August 14 for the Second Summer Session. Further information will be available in the Summer Session brochure available from the Office of Continuing Education.

Please Note

a) **Early Registration** will take place during the month of August. This will involve the selection of courses and payment of fees. In the case of part-time students complete first term fees are required; and in the case of full-time students partial fee payment will be acceptable. For further information, please see section 2: Registration, of this Calendar.

b) **Charter Day** is held in March on a date to be announced. This has traditionally marked the end of extracurricular activities on campus.

c) **A President's Holiday** is sometimes held during the second semester.

1980

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1981

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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.

402.0 History of the English Language
Prerequisite: grade of C in Egl 200.0.

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.

404.0 Chaucer and the 14th Century
Prerequisite: Egl 440.0 (or 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.

406.0 The Poetry and Prose of the English Renaissance
Prerequisite: Egl 400.0 (or may be taken concurrently).

A study of forms and developments in the literature of the English Renaissance, excluding drama. Poets from Wyatt through the Metaphysicals and Milton will be examined and also a wide variety of prose writers from Elyot to Browne.

Classes 3 hrs. a week. 2 semesters.

408.0 Shakespeare And His Contemporaries
Prerequisite: grade of C in Egl 200.0.

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.

410.0 Drama and Society —Restoration to Late 19th Century
Prerequisite: recommendation of Departmental Advisor.

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

412.0 Restoration and 18th Century Poetry and Prose: 1666-1780
Prerequisite: recommendation of Departmental Advisor.

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.

414.0 The Novel: Defoe to Austen
Prerequisite: recommendation of Departmental Advisor.

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.

416.0 The Romantic Movement
Prerequisite: Egl 440.0 (or 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.

418.0 The 19th Century Novel
Prerequisite: recommendation of Departmental Advisor.

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.

420.0 Victorian Poetry and Prose
Prerequisite: recommendation of Departmental Advisor.

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.

422.0 19th Century American Literature
Prerequisite: recommendation of Departmental Advisor.

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.

424.0 20th Century American Literature
Prerequisite: recommendation of Departmental Advisor.

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.

426.0 The Modern Novel
Prerequisite: recommendation of Departmental Advisor.

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.

428.0   20th Century Poetry
Prerequisite: Egl 400.0 (or 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.

430.0   20th Century Drama
Prerequisite: recommendation of Departmental Advisor.

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.

432.0   The Development of English Canadian Literature
Prerequisite: recommendation of Departmental Advisor.

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.

434.0   Modern Anglo-Irish Literature
Prerequisite: recommendation of Departmental Advisor.

A study of the contradictions and fissures in modern Ireland as these are seen through the imagination of her writers. The writers studied will include: W. B. Yeats, J. M. Synge, G. B. Shaw, Sean O'Casey, Maurice O'Sullivan, Liam O'Flaherty, James Joyce, P. U. Kavanaugh, Padraic Colum, Sean O'Faolain, James Stephens, J. B. Kane, and Brian Freele.

Classes 3 hrs. a week. 2 semesters.

440.0   Theory and Practice of Criticism
Prerequisite: Egl 400.0 and recommendation of Departmental Advisor.

A course offering practice in individual judgment of various literary forms, with introduction to the principles of criticism.

Classes 3 hrs. a week. 2 semesters.

450.0   Special Author
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
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.

500.0   Honors Thesis
Prerequisite: enrolment in final year of honors program

See Section (4) of the Honors Program Requirements.

550.0   Special Author
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.

551.0   Special Subject
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
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.

Finance and Management Science

Chairperson, Associate Professor   M. Chew
Associate Professor   D. Connelly
Assistant Professors   P. Dixon, E. Robinson
   S. Turner
Lecturer   R. Christie, J. Gregory

The Department of Finance and Management Science offers a variety of courses that may be classified as follows:

(i) Those that deal **directly** with **two** of the primary functions of business — finance and production management; and

(ii) Those whose aim is to develop skills in management science — quantitative methods, computing, and statistics, which **indirectly** relate to **all** of the primary functions of business.

In addition to the core courses in quantitative methods (Msc 204, Msc 206, Msc 207), computing (Msc 321), and finance (Fin 360, Fin 361) that are required for the Bachelor of Commerce degree, the department offers a number of advanced courses. In particular, those students pursuing a B.Comm. degree with a major in Business Administration, may elect to specialize in Finance or Management Science. These two programs, along with others available within the Business Administration major, are outlined in the Faculty of Commerce section of the calendar.

At the graduate level, the department offers the core courses (Msc 506, Msc 507, Msc 521 and Fin 561) required of all students in year I of the MBA program, as well as a number of elective courses available at the 600 level in year II of the MBA program.

Finance

260.1(.2) Personal Finance
A survey course designed to enable the student to better understand the considerations involved in the management of personal income savings, investments, mortgage analysis and tax planning.

Classes 3 hrs. a week. 1 semester.

360.1(.2) Business Finance I
Prerequisite: Msc 207.1 (.2) and Acc 242.1 (.2).

A basic course in business finance introducing the student to the discipline and presenting financial analysis, working capital management and capital budgeting.

Classes 3 hrs. a week. 1 semester.

361.1(.2) Business Finance II
Prerequisite: Fin 360.1 (.2).

A continuation from Fin 360.1 (.2) covering cost of capital, capital mix, capital and money markets, dividend policy, financial instruments and mergers, consolidations and bankruptcy.

Classes 3 hrs. a week. 1 semester.

362.1(.2) Principles of Real Estate and Appraisal
Prerequisite: Cml 301.1 (.2), and (or concurrently) Fin 361.1 (.2).

This course provides an introductory exposure to real estate in Canada. Subject areas that will be addressed include: real estate trends in Canada, financing of real estate, and an introduction to real estate appraisal.

Classes 3 hrs. a week. 1 semester.

363.1 (.2) Principles of Life Insurance
Prerequisite: Cml 301.1 (.2), and (or concurrently) Fin 361.1 (.2).

This course introduces the student to the nature and management of risk. The major portion of the course will focus on life insurance, but a brief survey of general insurance will be included. Students will be acquainted with life insurance and criteria for selection, selection of the insurer, retirement plans and estate planning. Corporate life insurance programs will also be examined.

Classes 3 hrs. a week. 1 semester.

463.1 Financial Management
Prerequisite: Fin 361.1 (.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
Prerequisite: Fin 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
Prerequisite: Fin 361.1 (.2).

This course presents an overview of the Canadian investment environment. A framework is developed for assessing the merits of various security investment alternatives, and a brief introduction to portfolio management is given.

Classes 3 hrs. a week. 1 semester.

467.2 Portfolio Management
Prerequisite: Fin 466.1.

A comprehensive analysis of the decision-making process of portfolio 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, and the selection of portfolios which appear most likely to satisfy stated investment objectives.

Classes 3 hrs. a week. 1 semester.

492.1 (.2) Directed Study
Prerequisite: permission of department chairperson and instructor.

Intended to supplement or provide an alternative to the regular finance courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some

measure of independence and initiative.

Tutorial and independent study. 1 semester.

591.1 (.2)   Honors Business Research
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.

The following courses are available only to students registered in the Master of Business Administration Program:

561.1 (.2)   Business Finance
Prerequisite: Eco 500 or 501, Msc 506 or 507, Acc 540 or 548; or consent of the Director of the MBA program.

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.

663.1 (.2)   Capital Budgeting and Cost of Capital
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

Managerial in emphasis, this course examines in detail capital budgeting techniques and the problems inherent in these and cost of capital theory and valuation of the firm.

664.1 (.2)   Corporate Financing
Prerequisite: Fin 663.1 (.2). or equivalent.

This course is also managerial in emphasis and covers material related to financing both the short and long term assets of the firm: bank borrowings, bonds, preferred stock, common stock, as well as mergers and consolidation.

690.1 (.2)   Seminar in Finance
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This course deals with selected topics in finance. It is offered when in sufficient demand, and specific topics covered may vary depending on the interests of students and instructor.

692.1 (.2)   Directed Study
Prerequisite: completion of all 500 level courses plus the consent of the Director of the MBA program, department chairperson and instructor.

Intended to supplement or provide an alternative to the regular finance courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Management Science

205.1 (.2)   Introduction to Quantitative Methods for Commerce I
Prerequisite: Mat 113.0 or Grade XII Mathematics or equivalent.

This course is designed to provide an overview of linear systems with emphasis on applications. It includes the topics of linear programming as well as transportation and assignment problems.

Classes 3 hrs. a week. 1 semester.

206.1 (.2)   Introduction to Quantitative Methods for Commerce II
Prerequisite: Mat 113.0, Grade XII Mathematics or equivalent.

The purpose of this course is to provide an overview of non-linea optimization, differential and integral calculus with emphasis on applications, as well as an introduction to decisions models unde uncertainty.

Class 3 hrs. a week. 1 semester.

207.1 (.2)   Introductory Statistics for Commerce
Prerequisite: Msc 206.1 (.2).

An introduction to statistics and its application to business and economics. Topics covered include: descriptive statistics, statistical inference, linear regression, correlation and goodness-of-fit.

Class 3 hrs. a week, 1 semester.

301.1 (.2)   Operations Research
Prerequisite: Msc 205.1 (.2) and 207.1 (.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 Msc 205.1 (.2), 206.1 (.2), and 207.1 (.2). It will extend the material covered in Msc 205, 206, and 207 by examining standard O.R. techniques i 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
Prerequisite: Msc 205.1 (.2) and 207.1 (.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.

303.1 (.2)   Statistical Analysis for Business and Economics
Prerequisite: Msc 207.1 (.2).

This course provides a further study of the statistical concepts introduced in Msc 207. It develops a working knowledge of such statistical tools as chi-square tests on contingency tables, multiple regression analysis, time series, and analysis of varian as applied to a variety of business and economic problems with the aid of computerized data analysis.

Classes 3 hrs. a week. 1 semester.

Note: This is the same course as Eco 303.1 (.2).

308.1 (.2)   Multivariate Analysis
Prerequisite: Msc 303.1 (.2)

Topics covered include design of experiments, multiple regression and univariate and multivariate analysis of variance. Emphasis is placed on applications of the modeling process to

include assumptions and their violation, quality of data and problems of collection and interpretation of results from a decision viewpoint. The computer will be used to facilitate the analysis of data.

Classes 3 hrs. a week. 1 semester.

317.1 (.2)   Introduction to Operations Management
Prerequisite: Bus 280.0 or Mgt 281.1 (.2), and Msc 207.1 (.2).

An introduction to modeling techniques as they aid in the decision process for production functions. Models will be interpreted in a real world context and students will be expected to gather data from business sources.

Classes 3 hrs. a week. 1 semester.

318.2   Techniques of Production Management
Prerequisite: Msc 317.1 (.2) 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.

321.1 (.2)   Introduction to Computers
Prerequisite: Mat 113.0 or equivalent, and sophomore standing or chairperson's consent.

An introduction to computers and the use of computers in a business environment. Topics covered include: computer concepts, flowcharting, computer logic and programming (FORTRAN language), data processing functions, and a study of computer systems.

322.1 (.2)   Computer Simulation
Prerequisite: Msc 321.1 (.2), and Msc 207.1 (.2).

Management techniques using the computer to model real world systems; heavy reliance on statistical modeling including parameter estimation and tests of significance; emphasis on the process from problem definition through data analysis to model validation and verification; interpretation of results and strategy or action recommendations; quality of output format in terms of its management information value is stressed. Students will use FORTRAN subroutines to construct a simulation language as tailored to their own simulation problem.

Class 3 hrs. a week. 1 semester.

324.2   The Use of Cobal in Data Processing
Prerequisite: Msc 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.

409.1 (.2)   Seminar in Operations Research and Statistics
Prerequities: Msc 301.1 (.2), 303.1 (.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.

492.1 (.2)   Directed Study
Prerequisite: permission of department chairperson and instructor.

Intended to supplement or provide an alternative to the regular management science courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Tutorial and independent study. 1 semester.

591.1 (.2)   Honors Business Research
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.

The following courses are available only to students registered in the Master of Business Administration Program.

506.1   Introductory Decision Analysis I
The objectives of this course are to provide a basic understanding of (i) rational decision-making under uncertainty and (ii) the methods of statistical analysis. The approach taken in the course, and also in Msc 507, focuses on the logical process of assimilating quantitative information and the formulation of appropriate models in the context of case problems.

507.2   Introductory Decision Analysis II
This is a continuation of Msc 506 with emphasis on the methods of linear programming as applied to the allocation of scarce resources. Problems of queueing and inventory management are also considered.

521.1 (.2)   Computers in Business
This course acquaints the student with concepts relevant to the use of computers in business as well as the role of the computer in the management process. Special emphasis is placed on the logic and programming of a computer, interactive procedures using computer terminals, and the use of the computer as a management decision-making tool.

603.1 (.2)   Statistical Applications in Management Science I
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This course brings together many of the theories and skills which the student has learned and uses them in designing, conducting analyzing, and reporting the results of research designs. Statistical techniques used are: chi-square, analysis of variance and multiple regression. Extensive use is made of computer-oriented statistical packages.

604.1 (.2)   Statistical Applications in Management Science II
Prerequisite: Msc 603.1 (.2)

This course is a further study of the application of research design, statistical techniques, and reporting procedures to actual research problems. Statistical techniques used are multivariate analysis of variance, factor analysis, discriminant analysis and cluster analysis.

615.1 (.2)   Operations Management
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

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.

616.1 (.2)   Production Applications in Management Science
Prerequisites: all 500 level courses or consent of the Director of the MBA program.

A thorough analysis of the nature of operational production systems through the solution of real business problems. Emphasis is placed on problem definition, and the identification, examination, and amplification of relevant solution techniques that have been taught elsewhere in the program.

### 690.1 (.2)   Seminar in Management Science
Prerequisites: all 500 level courses or consent of the Director of the MBA program.

This course deals with selected topics in management science. It is offered when in sufficient demand, and specific topics covered may vary depending on the interests of students and instructor.

692.1 (.2)   Directed Study
Prerequisite: completion of all 500 level courses plus the consent of the Director of MBA program, department chairperson, and instructor.

Intended to supplement or provide an alternative to the regular management science courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.
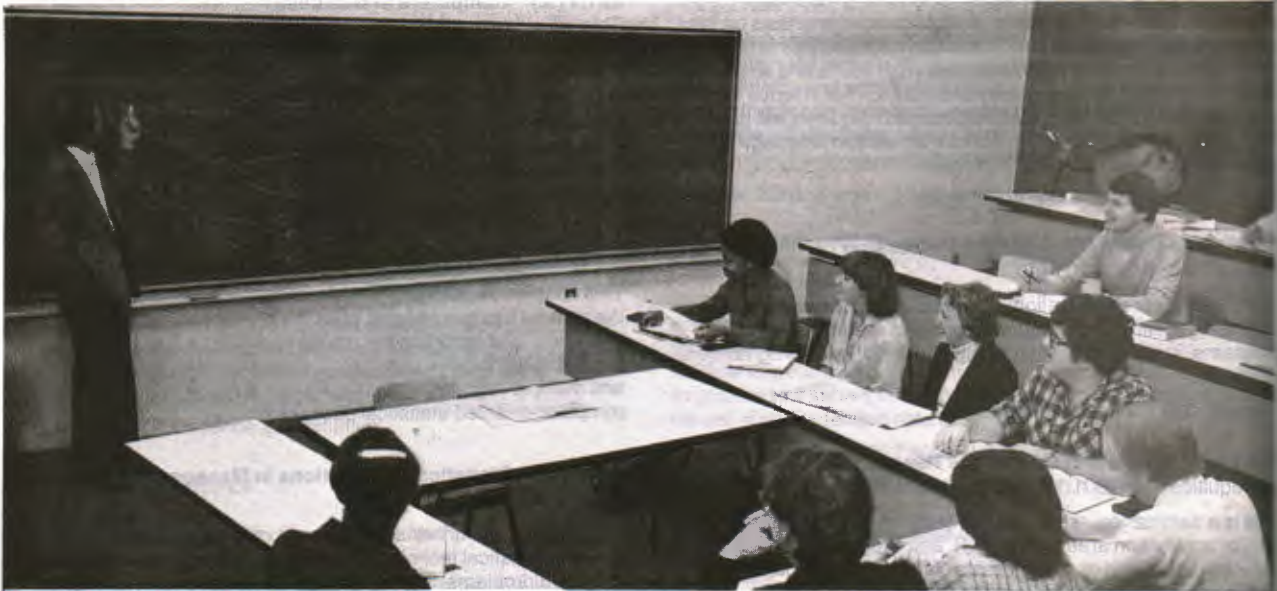
Geography

Chairperson, Assistant Professor	R. McCalla
Professor	D. Day
Associate Professors	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 three 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. A third major in coastal and marine studies has also been developed.

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, 202.0, 203.0 and 210.0 both as *service* courses for the university in general and basic introductory courses for geography majors and honors students. 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 prerequisite: for example, economics students may be admitted to Gpy 301.0 and 400.0; similarly anthropology and history majors may be allowed to take Gpy 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 complete two geography courses at the 200 level and are advised to complete three 200 level geography courses if their program permits. Students are advised to take 203.0 Majors must complete 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 counting towards the major.

(4) All majors must follow a program of study established in conjunction with, and approved by, a member of the Department of Geography and must have the program approved by the Department at the beginning of each year.

(5) For more complete information on the geography program, the student should obtain a copy of *Notes and Guidelines for Geography Students* from the departmental secretary.

(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 chairperson and approved by the department. After admission to the program, a student will be assigned an adviser. 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 203.0, 306.0, 326.0, 506.1, 516.2, 526.0 and one of 200.0, 202.0, or 210.0. If a student opts to take Gpy 202.0, he would be required to take an advanced regional geography course at the 300 level. If Gpy. 326.0 is not offered during a particular year, a student may be allowed to take a substitute course acceptable to the department. In addition to these required courses, a student must complete the equivalent of six other full courses in geography. The combination of electives chosen must be approved by the departmental chairperson. Complete details regarding the program and the honors thesis requirements are contained in *Notes and Guidelines for Geography Students,* available from the departmental secretary.

200.0   Geography of Canada

A study of the geography of Canada with case studies from 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.

202.0   Geographical Aspects of Contemporary World Problems

Course introduces students to various facets of geography with different approaches to geographical analysis, through major world problems including conflicts over the division of the sea and outer space; relationships between population growth and resources, food supply and health problems; natural hazards; the effects of climatic change; levels of economic development; ethnic and religious conflicts.

Classes 3 hrs. a week. 2 semesters.

203.0   Physical Geography

A study of the physical environment of man through an examination of the character and processes of the major components. The course includes an examination of the origin, nature and distribution of landforms.

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 interpretation 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.

210.0 The Atlantic Provinces
A study of the spatial structures of social and economic development in the Atlantic Provinces, the distribution of population, resource, manufacturing and tertiary activities. The course will study the impact of regional development programs on the spatial pattern of development in the region, together with government efforts to modernize the Newfoundland society and economy in the post-1949 era.

Classes 3 hrs. a week. 2 semesters.

301.0 Elements of Economic Geography
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.

302.0 Settlement Geography
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.

304.0 Geography of the Seas
Prerequisite: Gpy 202.0 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.

306.0 Geographical Techniques
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.

310.0 Geography of the United States
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.

312.1 (.2) Urban Land Use
Prerequisite: a 200 level geography course or permission of the instructor. (Students may not receive credit for both Gpy 312.1 and Gpy 402.0).

The course analyses the pattern of land use and the process of land use change in the city. Topics include: measurement and classification of land use; land use mix; models of the internal structure of cities; land values and land use zoning; the characteristics and use of residential, commercial, manufacturing land in cities; public and semi-public land; the impact of public policies on urban land use.

Classes 3 hrs. a week. 1 semester.

314.0 Fisheries Development
Prerequisite: a lower level geography course.

A geography of fisheries development including a study of the natural basis of the world fishing industry, geographical variation in the primary sector, locational analysis of fish processing facilities, the development of fishing ports, factors affecting the distribution channels and marketing patterns for fishery products. The course will include case studies of fisheries development from selected areas of the world.

Classes 3 hrs. a week. 2 semesters.

316.0 Air Photo Interpretation and Remote Sensing of the Environment
Prerequisite: a lower level geography course preferably 203.0 or permission of instructor.

A study of the principles and techniques of conventional air photo interpretation and satellite imagery analysis, together with their application to environmental problems and detailed land use analysis.

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

319.0 Cultural Ecology
(Ant 319.0) (formerly 209.0)
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.

320.0 Geography of Europe
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.

Classes 3 hrs. a week. 2 semesters.

324.0 Ports and Shipping
Prerequisite: Gpy 200.0 or 202.0.

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.

326.0 Methods of Locational Analysis
(formerly 206.0)
Prerequisite: Mat 100.0 or equivalent and 200 level geography course (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.

340.0 Geography of China
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. Special emphasis will be placed on how the Communist Government has transformed the geography of China since the revolution.

Note: Students who received credit for this course prior to 1980-81 are not eligible to retake it with its content as presently described.
M040.Classes 3 hrs. a week. 2 semesters.

350.0 Geography of the Soviet Union
Prerequisite: a lower level geography course.

A study of the physical, economic, social and political geography of the Soviet Union. Emphasis will be placed on the geographical basis of urbanization, industrialization, regionalization, resource use, transportation and contemporary problems in a centrally planned country.

Classes 3 hrs. a week. 2 semesters.

400.0 Regional Analysis and Development
Prerequisite: Gpy 210.0, 301.0 or 302.0.

A study of the methods of examining spatial changes at the regional and subregional levels, the spatial dimensions of regional development problems and policies designed to alleviate them in North America, Europe and Communist bloc countries. The foundation of regional development theory will be critically assessed in light of recent experience.

Classes 3 hrs. a week. 2 semesters.

402.0 Internal Structure of Cities
Prerequisite: Gpy 301.0, 302.0 or 326.0.

Theories, models and empirical research on the spatial structure of urban areas, including methods of urban analysis. Topics include: overall patterns of land use and land value, locational requirements for residential, commercial, industrial and institutional uses, growth processes, the role of transport in shaping growth, urban climate and hydrology, perception of urban areas and locational conflicts.

Classes 3 hrs. a week and field work. 2 semesters.

403.0 Coastal Geomorphology
Prerequisite: Gpy 203.0.

The course discusses both the physical processes which operate in the coastal zone and the resulting forms of these processes. Particular emphasis is placed on the action of waves and tides in the formation of coastal features. The effects of wind and people acting as geomorphological agents and the classification of coasts are considered.

Classes: 3 hrs. a week. 2 semesters. Field work: 4 times a year.

404.0 Coastal Zone Management
Prerequisite: Gpy 203.0 or 304.0, and one of 301.0, 302.0, 314.0 or 324.0.

Using a problem oriented approach, attention will be focused on the resource attributes of the coastal zone, the spatial organization of use that it supports and the areal impacts and conflicts that can occur at this land-sea interface. Techniques of resource evaluation will be reviewed. Concepts associated with the spatial aspects of coastal resource management will be discussed.

Classes 3 hrs. a week. 2 semesters.

406.1 Field Studies
Note: This same course description applies to 416.1, 426.1, 436.1, and 446.1.

Prerequisite: a geography course and permission of the 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.

Note: This course is offered only in summer.

409.0   The Birth of the City
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.

412.0   Transportation Geography
Prerequisites: Gpy 300.0, 301.0, 302.0, or 324.0.

The course considers air and land transportation's influence on the location of activities on the landscape. The structure of transportation networks through the use of graph theory is considered. Flows, their cause, dimension, and allocation are discussed. Furthermore, two problem areas in transportation are analysed: transportation's role in regional development, and the nature of transportation in cities.

Classes 3 hrs. a week. 2 semesters.

419.0   Urban Cultural Geography
Prerequisite: one 300 level geography course.

The geography of the city (its morphology and function) is employed as an indication of the landscape impression produced by various historical periods (conceived as cultures) during the evolution of urban forms in Europe and North America. Examples are taken in historical sequence from Greek to Industrial times.

Classes 3 hrs. a week. 2 semesters.

422.0   Urban Planning and Urban Futures
Prerequisite: Gpy 301.0, 302.0 or 326.0.

The planning and control of urban land use patterns, and an examination of the future spatial structures of cities. Topics include: the planning process, subdivision control, comprehensive development areas, municipal planning, metropolitan planning, urban allocation models, new towns, forecasting techniques, long-term futures.

Classes 3 hrs. a week. 2 semesters.

456.0   Directed Study
Prerequisite: permission of the chairperson.

An instructor will guide a student in topics of special interest that have been decided upon after consultation between student and instructor. The topics will be part of the special research interest of the instructor and of mutual interest to student and instructor.

506.1   Seminar in Theoretical Geography
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.

516.2   Seminar in Applied Geography
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.

526.0   Honors Research Project
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 and write-up of the research findings.

Geology

Chairperson, Professor	D. Hope-Simpson
Associate Professors	C. A. R. de Albuquerque
	Q. A. Siddiqui
Assistant Professor	J. Dostal

The Department of Geology offers programs of study for students enrolled in the degree of Bachelor of Science with concentration in geology and for those registered in the degree of Bachelor of Science with major and honors in geology.

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, and 457.0.

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
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 1 hr. lab and field work. 2 semesters.

201.1 (.2)   Principles Of Geology
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.

202.2 (.1)   Geology Of Atlantic Canada
Prerequisite: permission of the Department.

The Precambrian shield in 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.

204.0   The Face Of The Earth
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.

211.1   Introduction To Mineralogy And Petrology
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. and lab 3 hrs. a week. 1 semester.

213.2   Petrography
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. and lab 3 hrs. a week. 1 semester.

222.1   Field Methods
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.

224.2   Historical Geology
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
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.

322.0   Paleontology
Prerequisite: permission of the department chairperson.

Fossils, their nature and mode of preservation. The morphology, classification and stratigraphic ranges of the main groups of invertebrate fossils. Introductory micropaleontology. Elementary vertebrate paleontology. Ecological interpretation.

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

324.0   Stratigraphy and Sedimentary Petrology
Prerequisite: Geo 224.2.

The description and interpretation of stratified rocks in terms of their fossil fauna and flora and the changing ancient environments they record through time, in the light of modern environments and plate tectonic modelling. Local stratigraphic studies will be emphasized.

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

355.0   Analytical Chemistry For Chemists and Geologists (Che 331.0)
Prerequisite: Che 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.

413.0   Structural Geology
Prerequisite: Geo 224.2.

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
Modern concepts and theories of petrogenesis. Study of selected suites of igneous rocks and metamorphic complexes. Igneous rocks, lunar rocks and meteorites.

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

455.0   Geochemistry
Principles of distribution of elements; geochemical features of geological processes; chemistry of igneous rocks, lunar rocks and meteorites.

Classes 3 hrs. a week. 2 semesters.

457.0   Economic Geology
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
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.

464.0   Sedimentology
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
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.

468.0   Global Geology
Prerequisite: Geo 311.0 and 413.0; or 311.0 and 413.0 concurrently.

Global aspects of regional geology related to plate tectonics, including the contributions of ocean exploration, geophysics, geochemistry and experimental and theoretical petrology. Analysis and interpretation of major structural provinces as they relate to plate interactions and metallogenesis. Areas of specific emphasis may vary from year to year.

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

513.1   Tectonics
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
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.

519.0   Precambrian Geology
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.

540.1 (2)   Special Topics In Geology
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.

550.0   Honors Project
Prerequisite: honors standing and permission of Department.

Research project carried out under the supervision of one member of the Department or jointly by more than one faculty member. Originality of the research project is emphasized.

History

Chairperson, Associate Professor	G. F. W. Young
Professors	S. Bobr-Tylingo
	D. O. Carrigan
	J. R. MacCormack
Associate Professors	R. Bollini
	R. H. Cameron
	E. Haigh, C. Howell
	B. Kiesekamp
	W. Mills, M. Sun
Assistant Professors	A. Chan, R. Twomey

Departmental Policy

To obtain a major concentration in History, a student must have at least six university courses in History four of which must be at the 300 level or above. 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 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.

Graduate students should refer to the material entitled "Master's Degree" which is found in Section 3 of this Calendar.

General Course Description

a) All History courses are full year courses with one credit.

b) History courses numbered on the 200 level are survey courses open to students with no university credits in the discipline. They are normally lecture courses; some combine lectures with small tutorial group meetings.

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.

f) With renumbered or restructured courses, students are advised that they are *not* eligible to take a course for credit if they already have a credit for a comparable course, even if that course was taken at a different level.

Students with the following credits are not eligible to take the courses in brackets
120.0 (200.0); 121.0 (201.0); 122.0 (230.0); 123.0 (250.0; 251.0); 124.0 (221.0); 338.0 (202.0).

200.0   History of Civilization
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.

201.0   Civilization in the West
A course designed to explore the origins and development of the characteristic political, legal, and cultural institutions of Western Civilization and its impact on other cultures.

202.0   Values and Civilization
This 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 an historical perspective on contemporary problems relating to human values.

203.0   The Twentieth Century
An historical approach to the major problems of our time. Emphasis will be placed upon the backgrounds to World Wars I and II, the emergence of the United States as a world power, the Communist Revolution and its impact and the problems of industrial society.

204.0   Europe 1890-1945
An introduction to 20th century Europe with particular emphasis on the diplomatic and military background of the first and second World Wars.

209.0   Modern East Asia
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.

210.0   History of Latin America
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.

211.0   History of Science
This course will cover the major innovations and developments in Science from the ancient Babylonian and Egyptian civilizations to the present century. Emphasis will be placed on the interaction between any society and the Science and technology it develops.

212.0   History of Russia and the Soviet Union, 882 to the Present
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.

220.0 The British Empire — Commonwealth
A study of the British Empire in the 18th and 19th centuries; its formation, evolution, and final dissolution into the Commonwealth in the 20th century. Special attention will be directed to the theory and practice of imperialism in Britain and to the economic basis of British power.

221.0 The British Experience — from Primeval Beginnings to the Modern Age
This course explores the great landmarks and concerns of British history — in politics, in social and economic institutions and practices, in culture and ideas — during two thousand years of change and continuity.

230.0 History of Canada
A survey of Canadian history 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.

240.0 North American Social History
A survey of American and Canadian social history from the 1890's to the present day, with particular emphasis on the emergence of the so-called 'permissive society'. Such matters as work and welfare, marriage and family, race and minority groups will be considered in historical perspective.

250.0 The United States to 1877
A course dealing primarily with the major themes of American history from the colonial period to the Civil War and Reconstruction; the origins and nature of American government, politics, and society; the origins of slavery and racism; expansion. These themes will be approached through a study of the major groups and events in American history (the New England Puritans, the Founding Fathers, Southern slaveholders; the American Revolution, the Civil War), as well as major political figures from Thomas Jefferson to Abraham Lincoln.

251.0 The United States: 1877 to the Present
A course concerned with the impact of modern industrialism on American society since 1877. Included is an analysis of the changing nature of American foreign policy, new relationships between business, labor and agriculture, and the impact of industrialism on liberal democratic thought and culture.

301.0 (601.0) History of Greatness and Decay
This course will explore the long-standing historical question of "rise and decline" by comparing the imperial histories of such great and famous nations of the past as: Athens and Sparta; Rome and Byzantium; Florence and Venice; Spain and the Ottoman Empire; 18th Century France and 19th Century England; and the contemporary situation of the United States and the Soviet Union.

302.0 (602.0) The Enlightenment
The aim of this 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.

303.0 (603.0) Tudor and Stuart England
The history of England, 1485-1660, with special emphasis on the development of the English parliament.

304.0 (604.0) Europe 1815-1945
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.

307.0 (607.0) Science in the West Since 1500 A.D. (Phi 307.0)
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.

308.0 (608.0) The English Civil War
This course will explore the political, religious, and economic factors which created a revolutionary situation in England in 1640. Emphasis will be placed on the struggle for power which led to the overthrow of the monarchy and Cromwell's dictatorship.

309.0 (609.0) The Old World and the New: Transformation of European Ideals in Canada and the United States
The European confidence in the nation as the vehicle for the largest aspirations of men in community. Qualifications and revisions of this ideal in North America. War, the structure of law the limits of rational government. Topically organized, the course will draw from the history of the 18th, 19th and 20th centuries.

310.0 (610.0) Anglo-American History: Studies in Pre-Industrial Labour and Culture, 1600-1865
This course examines "pre-industrial" working people (slave and "free") from a comparative perspective. It begins with an overview of the various historical stereotypes of American and English crowds in the 18th century, American slaves from the 17th to the 19th centuries, the English radical and working class movements at the time of the American Revolution. It then looks at the political, economic and cultural lives and attitudes of these groups. Was there a distinctive "popular culture" in history? Did common people have significant ideas and play an active role in the making of history?

311.0 (611.0) Medieval England
The course attempts to trace the evolution and continuity of ideas and institutions in the great formative period of English history.

312.0 (612.0) Medieval Europe: the Birth and Progress of a Great Civilization
With the decline of Imperial Rome, Europeans were obliged to recreate for themselves the basic institutions and practices of a viable society. The course is concerned with their endeavours and achievements, from the first onslaught of the barbarian hordes to the heights of Medieval culture and onward to the dawn of the Renaissance.

315.0 (615.0) Britain in the Nineteenth Century: The Leading World Power in a New Age
The Modern Era was preceded by a great transformation from rural, agrarian, hierarchical to urban, industrial, pluralistic societies. The course explores the earliest occurrence of this process — in Britain — and traces her ascent to the heights of Victorian achievement and preeminence among Nations.

318.0 (618.0) The United States in the Twentieth Century
A history of the United States in the twentieth century with the main emphasis on political development.

319.0 (619.0)   Canadian-American Relations
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.

**320.0 (620.0)   The Atlantic Provinces and New England
1534-1974**
An examination of the relationship of New England and the
Atlantic Provinces undertaken from a comparative point of view.
This course deals with political, economic, and religious trends
common to the experience of both communities.

321.0 (621.0)   Africa in the 19th and 20th Centuries
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.

322.0 (622.0)   South Africa
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.

323.0 (623.0)   Dynastic History of China to 1911
A study of society, government and intellectual development in
China during the imperial age with special attention to factors
affecting the rise and decline of dynasties.

324.0 (624.0)   Cultural History of Japan, 710-1868
An exploration of the modern Japanese sense of cultural identity
through theme and form developed in Japanese art, literature,
and philosophy from pre-history to modern times.

326.0 (626.0)   History of Spain and Portugal
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 and Civil War of the 20th century.

329.0 (629.0)   History of Canada 1849-1920
This course deals with the problems arising from the attempt to
build a British North American nation in the age of Macdonald and
Laurier.

330.0 (630.0)   American Social and Intellectual History
Broadly defined, a study primarily of the political and social
thought of a variety of groups in American history from the
colonial period to the present. Special emphasis on the history
and current status of the American conservative, radical, and
liberal traditions. Groups, ideas, themes may differ from year to
year.

331.0 (631.0)   The American Revolution, 1763-1789
A consideration of the causes and consequences of the
American Revolution from several viewpoints — including
military, political, social, economic, religious — and the Loyalist
experience.

332.0 (632.0)   Canadian Social History, 1837-1919
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.

333.0 (633.0)   History of Canada in the 20th Century
A course designed to examine the emergence of Canada's
social, political, and economic structures in the 20th century.
Some attention will also be given to Canada's role as an
emerging world power, her relationship with the United States
and her role within the British Empire and Commonwealth.

**334.0 (634.0)   Myth and History: The Problem of Interpreting
Human Existence**
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.

**335.0 (635.0)   Restoration and Eighteenth Century Britain:
War, Revolution and Empire, 1660-1815**
Britain from the mid seventeenth century Revolution to the
struggle with Napoleon. The course deals with the resolution of
the great seventeenth century conflicts, the emergence of a new
stability and challenges to it from within and without in the half
century before Waterloo.

337.0 (637.0)   Russia in Revolution
This 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 which swept 19th century Russia in response to
autocratic intransigence 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.

339.0 (639.0)   Russia and the U.S.S.R. Since 1917
This course will deal with Russia and the Soviet Union from the
abdication of Tsar Nicholas II to the post-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.

340.0 (640.0)   History of the Atlantic Provinces
Commencing with the earliest European contact with the region,
this course will concentrate on the period after the beginning of
permanent settlement. Special emphasis will be given to Nova
Scotia as an area of severe clashes between the Indian and
European cultures, of intense English-French rivalry, and later of
the problems in adopting traditional British models of
government, settlement, and society to a colonial region.

342.0 (642.0)   China in Revolution 1850-1950
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.

343.0 (643.0)   To the Great War
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.

344.0 (644.0)   History of Nova Scotia
This course will examine political, economic and intellectual aspects of Nova Scotian development.

345.0 (645.0)   History of the Ethnic Groups and Minorities in Nova Scotia
This course will consider the historical experience of such ethnic groups and minorities as the Acadians, the Blacks, the Native Peoples, the Irish and the Scots within the context of the history of Nova Scotia from the 18th century to the present.

347.0 (647.0)   Blacks in Canada: 1628 to Present
A course dealing with Black history in Canada with special reference to Nova Scotia from 1628 to the present. Issues to be addressed include Black immigration and settlement, slavery, Black Loyalism, colour and prejudice, religion and education, characteristics and institutions of the Black community, Black identity, and contemporary institutions and values.

348.0 (648.0)   Modern Nationalisms and the Canadian Experience
Nationalism, in a multitude of forms, has been the most important and convulsive force over the past 200 years. Concrete examples from Europe and Africa will be used to develop a system for categorizing different types of nationalisms. This system will be applied to Canadian examples (French-Canadian nationalism, imperialism, Quebecois nationalism, 'federalism' and the 'Dene Nation').

349.0 (649.0)   Canadian Labour History
An examination of the development of labour in Canada in both its institutional and non-institutional forms, during the years 1800 to 1960. Topics will include the frontier labourer, growth of trade and industrial unions, conditions of living and working, class structure, women in the workplace, farmer-labour coalitions, worker education, the labour press, and strike activity.

350.0 Cross-listed as Classics 303.0

351.0 Cross-listed as Classics 304.0

352.0 Cross-listed as Classics 305.0

361.1(.2) [661.1(.2)]   Canadian Business History, 1820-1879
Between 1820 and Confederation, British North Americans came to accept the view that the development of an enterprising business sector was necessary for the survival of a British nationality in North America. This course will examine the origins of this concensus and the impact it had on the way the business community conducted its affairs in the period 1820 to 1879.

362.1(.2) [692.1(.2)]   Canadian Business History, 1880 to the Present
In the modern period, corporate business in Canada increasingly came to identify its objectives and goals with those of the nation. This course will examine how this self-understanding determined both the corporate strategy of the business sector and the contribution it made to society at large. Comparisons will be drawn with parallel corporate business practice in the United States.

390.0(690.0)   History of Asians in Canada
Asians have always played a significant part in the history of Canada from the arrival of the Chinese in the 19th century to the present coming of the Vietnamese. This examination of the historical experience of Asian Canadians will interest majors in Asian Studies and Canadian Studies, teachers and officials of multiculturalism as well as students of race and ethnic relations.

391.0 (691.0)   China and the West
This course will analyse contemporary China's foreign policy needs and aspirations. A study of Chinese history will shed light on the formulation of Chinese attitudes towards the West, and how they have coloured Sino-Western diplomatic relations.

508.0   Knowledge, Values and Freedom
Prerequisite: a course in History, Philosophy or Religious Studies, or permission of the instructor.

An inter-disciplinary 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.

511.0   Modern East Asia, Selected Problems in Modernization
Prerequisite: His 209.0.

The influence of the West on the modernization efforts of China and Japan during the 19th and 20th centuries.

515.0   Seminar in Historiography
Prerequisite: senior or graduate standing.

A specific historical period or topic will be selected by the instructor and each student will be assigned a particular historian or historical school for the purpose of writing a paper. The seminar will address a variety of historical viewpoints and demonstrate the influence of one's milieu on the writing of history.

520.0   The Two World Wars
This course will consider the origins of each of the two World Wars of the early Twentieth Century, and the diplomacy, war-aims, and conduct of the war by each of the principal belligerents. The first semester will be devoted to World War I and the second semester to World War II.

521.0   European Diplomatic History, 1815-1945
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 Habsburg Empire, World War II, and the post-war structuring of Central and Eastern Europe.

522.0   Seminar in North American History
A seminar on some aspects of North American History (Canadian, American, or comparative) intended for senior students in History. Topics to be examined will be determined by the instructor. Among them will be: nationalism, religion, reform/radicalism, slavery, liberal democracy and culture, regional history, populism and progressive reform.

523.0   Seminar in Social History
Prerequisite: background in history and social sciences.

This seminar will deal in depth with selected social problems in

American and Canadian history during the twentieth century, with a view to understanding their historical origins.

590.1(.2) - 599.1(.2)   Reading Courses in History
Prerequisite: permission 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.

600.0   Thesis Research
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 grade will be granted for this course.

Cross-Listed Courses.
Certain courses offered by the Departments of Modern Languages and Classics, Anthropology and Religious Studies may, in special circumstances, be cross-listed and counted in a student's history concentration. In such cases, the student must obtain the Department's permission.

Management

Chairperson, Associate Professor	P. Fitzgerald
Professor	G. A. Sanborn
Associate Professors	G. A. Badawi
	J. Chamard
	R. D. Connell
	F. A. Miner
	S. G. Pendse
	H. J. Schroeder
	H. Schwind
Assistant Professor	T. P. Hari Das

The Department of Management offers two programs to Business Administration Majors: Management, Personnel and Industrial Relations.

In addition to meeting the general requirements for the Bachelor of Commerce degree the following courses are required for each of these programs.

Personnel and Industrial Relations Program
First Senior Year

Mgt 385(1/2)	Personnel Management
Mgt 386(1/2)	Industrial Relations
Eco 339(1/2)	Labor Economics
Eco 340(1/2)	Human Resources Economics
Free elective, 200 level or above (1/2) — (see note below)	

Second Senior Year

Mgt 481(1/2)	Organization Theory: Structure, Process, Analysis and Design
Mgt 483(1/2)	Interpersonal Behavior I
Non-Commerce electives (2)	
Free electives, 200 level or above (11/2)	

Note: If Eco 339 and/or Eco 340 were used to satisfy the required economics electives in the junior year, the number of free electives is increased to 1 or 11/2 as appropriate.

Management Program
First Senior Year

Msc 317(1/2)	Introduction to Operations Management
Accounting electives (1/2)	
Marketing electives (1)	
Commerce elective (1/2)	

Second Senior Year

Mgt 385(1/2)	Personnel Management
Mgt 386(1/2)	Industrial Relations
Mgt 481(1/2)	Organization Theory: Structure, Process, Analysis and Design
Finance elective (1/2)	
Non-Commerce electives (2)	
Free elective, 200 level or above (1/2)	

281.1 (.2)   Introduction to Business Management
Prerequisite: sophomore standing or the consent of the departmental chairperson.

The purpose of this course is to introduce the student to the various aspects of business in the Canadian environment. Emphasis will be placed on the functional areas of marketing, production, finance, and the individual in the organization. In addition, the process of management will be outlined and discussed. Teaching methods will include lectures, group presentations and discussions of courses as well as other exercises.

Classes 3 hrs. a week. 1 semester.

381.1 (.2)   Principles of Organizational Behavior
Prerequisite: Bus 280.0 or Mgt 281.1 (.2).

Business administration and accounting majors may not take this course. A one term 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. 1 semester.

382.0   Organizational Behavior
Prerequisite: Bus 280.0 or Mgt 281.1 (.2).

This course presents behavioral science theories and concepts that apply to organizations. It is designed to help students diagnose, understand, and predict the behavior of people as individuals, in interpersonal relationships in groups, and in complex organizations.

385.1 (.2)   Personnel Management
Prerequisite: Bus 280.0 or Mgt 281.1 (.2) and 382.0 or 381.1 (.2)

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.

386.1 (.2)   Industrial Relations
Prerequisite: Bus 280.0 or Mgt 281.1 (.2) and 382.0 or 381.1 (.2)

An introduction to the field of industrial relations. It focuses on the impact of collective bargaining in Management/Labor relations. Topics covered include the historical development, structure, and operation of labor unions, the process and contents of negotiations and the settlement of union/management disputes

Classes 3 hrs. a week. 1 semester.

388.1 (.2)   Business and its Environment
Prerequisite: Bus 280.0 or Mgt 281.1 (.2), and Eco 201.1 (.2) 202.1 (.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
Prerequisite: Mgt 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
Prerequisite: Mgt 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
Prerequisite: Mgt 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.

485.1 (.2) Wage and Salary Administration
Prerequisite: Mgt 385.1 (.2).

This course is designed to integrate compensation systems with manpower planning, career development, and organizational planning concepts.

Classes 3 hrs. a week. 1 semester.

486.1(.2) Personnel Staffing, Training and Development
The course deals with the theoretical and practical issues of matching job requirements with pesonal characteristics and the assessment, counseling, training and development of human resources.

Classes 3 hrs. a week. 1 semester.

487.1 (.2) Small Business Management
Prerequisite: Fin 361.2 and Mkt 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.

488.1 (.2) International Business Management
Prerequisite: Mgt 381.1 (.2) or 382.0.

An introduction to the nature of environment of international business management including the study of multinational corporations, intercultural differences and their effects on management style and policy and execution.

Classes 3 hrs. a week. 1 semester.

489.1 (.2) Business Policy
Prerequisite: Fin 361.1 (.2), Mkt 370.1 (.2), Mgt 382.0 and one additional full credit at the 300 level from Mgt, Fin, Mkt, Msc or Acc.

This is a "capstone" course that attempts to utilize all the business disciplines (Management, Marketing, Finance,

Accounting, etc.) in an effort to identify, diagnose, and recommend appropriate action for real managerial problems. It is hoped that through this course, students will gain a better understanding of the complexity and interrelationship of modern managerial decision making. It is also hoped that this exposure will facilitate the students' ability to analyse complex problem situations.

Classes 3 hrs. a week. 1 semester.

492.1 (.2) Directed Study
Prerequisite: permission of department chairperson and instructor.

Intended to supplement or provide an alternative to the regular management courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Tutorial and independent study. 1 semester.

591.1 (.2) Honors Business Research
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.

The following courses are available only to students registered in the Master of Business Administration Program.

584.0 Organizational Behavior
This course will present 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.

681.1(.2) International Business Management
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

The course focuses on the nature and environment of international business management, including the study of multi-national corporations and joint ventures and their impact on the host country, inter-cultural differences and their aspects on management style, policy, and execution.

682.1(.2) Compensation Theory and Administration
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

The focus of this course will be on the historical development of wage and salary administration, fundamentals of job and employee evaluation, motivation theories and how they relate to reward systems, job satisfaction, the relationship between reward and performance, basic compensation systems (including fringe benefits), managerial compensation, and wage and salary administrative controls.

683.1 (.2) Management of Interpersonal Relations
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This course aims at improving the individual's ability to interact productively with others in two-person and small groups.

relationships. It seeks to develop an individual's awareness of how his behavior affects and is affected by that of others.

684.1 (.2) Management of Organizational Design and Development
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

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.

685.1 (.2) Personnel Administration
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

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.

686.1 (.2) Labor-Management Relations
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

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.

687.1 (.2) Small Business Management
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This half course stimulates students to identify, evaluate and plan for a small business opportunity in Atlantic Canada (or elsewhere).

688.1 (.2) Social Issues in Business
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This course will foster an awareness of the social impacts of business activity and decision making. Social costs and corporate social responsibility will be examined. Various social issues and the manner in which management might respond to societal expectations will be discussed.

689.1 (.2) Management Policy and Strategy Formulation
Prerequisite: all 500 level courses or consent of the Director of the MBA program.

This course focuses attention on the role of the senior management function to develop and implement strategy in the context of the resources. 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.

692.1 (.2) Directed Study
Prerequisite: completion of all 500 level courses plus the consent of the Director of the MBA program, department chairperson and instructor.

Intended to supplement or provide an alternative to the regular management courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Marketing

Chairperson, Associate Professor   V. Baydar
Associate Professors   N. D. Kling, Z. Qureshi
Lecturer   C. Duffy

The Department of Marketing offers a program for Business Administration majors which, in addition to the general requirements for a Bachelor of Commerce degree as outlined in section 3 of this **Calendar**, requires students to take Mkt 371 (Marketing Management) and five additional marketing electives (2½ credits). For additional information students should consult the departmental chairperson and/or faculty advisors.

370.1 (.2) Introduction to Marketing
Prerequisite: Bus 280.0 or Mgt 281.1 (.2), and Eco 201.1 (.2) and 202.1 (.2).

A study of principles and fundamental concepts of marketing and marketing management: pricing, promotion, merchandising, distribution structure and marketing research.

Classes 3 hrs. a week. 1 semester.

371.2 Marketing Management
Prerequisite: Mkt 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
Prerequisite: Mkt 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.

373.1 Management of Marketing Channels
Prerequisite: Mkt 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
Prerequisite: Mkt 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
Prerequisite: Mkt 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
Prerequisite: Mkt 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
Prerequisite: Mkt 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
Prerequisite: Mkt 207.1 (.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.

492.1 (.2) Directed Study
Prerequisite: permission of department chairperson and instructor.

Intended to supplement or provide an alternative to the regular marketing courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the students some measure of independence and initiative.

Tutorial and independent study. 1 semester.

591.1 (.2) Honors Business Research
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.

The following courses are available only to students registered in the Master of Business Administration Program.

571.1 (.2) Marketing Management: An Overview
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.

672.1 (.2) Marketing Communications: Planning and Strategy
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

673.1 (.2)   Marketing Distribution: Planning and Strategy
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

675.1 (.2)   Multinational Marketing
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

A comprehensive survey of the nature and environment of multinational marketing. This course focuses on the marketing management aspects of multinational business. Emphasis is placed on developing analytic-decision oriented abilities in the area of multinational pricing, product, policy, distribution, promotion, research and development and market segmentation.

676.1 (.2)   Consumer Behavior: Decision-Making Applications
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

678.1 (.2)   Marketing Research
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

679.1 (.2)   Marketing Policy
Prerequisite: completion of all 500 level courses or the consent of the Director of the MBA program.

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.

692.1 (.2)   Directed Study
Prerequisite: completion of all 500 level courses plus the consent of the Director of the MBA program, department chairperson and instructor.

Intended to supplement or provide an alternative to the regular marketing courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

Mathematics

Chairperson, Associate Professor	Y. P. Singh
Professors	D. G. Kabe, R. L. Kruse
Associate Professors	M. T. Kiang, P. Scobey
	K. Singh
Assistant Professors	W. Finden, J. D. McFall

The Mathematics Department offers a broad range of courses, including introductory courses intended for students with little mathematical background, preparatory courses for students intending to enter fields requiring mathematics, and specialized courses for more advanced students and mathematics majors.

Introductory Courses
Mat 118.1 (.2) is a remedial course designed for students with a weak mathematical background who need to review topics usually covered in high school algebra.

Mat 125.1 (.2) is an introduction to computer programming designed for the student with little mathematical background and no previous experience with computers, who may have only casual interest in programming or needs only limited knowledge for application in other subjects.

Mat 205.1 (.2) and 206.1 (.2) are surveys of matrix theory and calculus, respectively, designed primarily for students in the social and management sciences.

Mat 207.1 (.2) is an introductory course in statistics, requiring relatively little background in mathematics, and including applications chosen from a broad range of subjects. This course will be particularly valuable as preparation for more specialized courses in applications of statistics offered in other departments.

Note: The above courses are not allowed as credit towards a major or concentration in mathematics.

Preparatory Courses
Mat 100.0 and 113.0 are both accepted as the equivalent of Grade XII Mathematics. Mat 100.0 is intended, primarily, for students entering natural sciences or mathematics, and includes emphasis on trigonometry as well as algebra. Mat 113.0 is intended, primarily, for students in commerce and the social sciences, omits trigonometry, and concentrates instead on applicable finite mathematics.

Mat 200.0 is the first course and Mat 300.0 is the second course in calculus.

Mat 320.1 provides an introduction to linear algebra. In the second term, engineering students will continue in Mat 305.2, while other students can proceed to further topics in linear algebra in Mat 321.2.

Specialized Courses
Mat 226.1 (.2), 227.1 (.2), 308.1, 309.2, 325.0, 326.0, 335.0, 408.1, 409.2, 480.1 (.2)–489.1 (.2) are intended for students interested in computer science, operations research, and numerical analysis.

Mat 314.0, 415.1 and 416.2 are intended for students interested in probability and statistics.

Other applied mathematics courses include Mat 401.1, 402.2, 405.1, 406.2, 456.1 and 457.2.

Pure mathematics courses include Mat 420.1, 421.2, 435.0 and 440.0.

Mathematics majors who wish to study more specialized topics may, with consent of the instructor, enrol in Directed Study under one of the numbers Mat 490.1 (.2) to 499.1 (.2).

Requirements for Majors (effective September 1978)
A major in mathematics is offered for students working towards the degrees of B.A. and B.Sc., and for students of above average ability working towards the degrees of B.A. (Honors) and B.Sc. (Honors).

The entering student without advanced placement in mathematics should complete Mat 100.0 in the first year.

In addition to the requirements of the student's faculty (either Arts or Science), the requirements for a major in mathematics are:
(1) Mat 200.0
(2) Mat 300.0
(3) Mat 320.1 (.2) and 321.1 (.2)
(4) A minimum of four additional credits in mathematics, from courses chosen by the student in consultation with the department. At least two credits must be on the 400 level or above; the remaining courses must be numbered 210 or above.

Requirements for Honors
The honors program is designed for mathematics majors of above average ability. Mathematics majors in their sophomore year with an overall quality point average of at least 2.5, and with a quality point average of at least 3.0 in their mathematics courses, should consider enrolling in the honors program, and are advised to consult with the department before making a final decision. The requirements for honors in mathematics are:

(1) Mat 200.0
(2) Mat 300.00
(3) Mat 320.1 (.2) and 321.1 (.2)
(4) Mat 401.1 (.2) and 402.1 (.2)
(5) Mat 420.1 (.2) and 421.1 (.2)
(6) Mat 440.0
(7) A minimum of five additional credits in mathematics from courses chosen by the student in consultation with the department. These courses must be numbered 210 or above.

Credit for Duplicate Courses
No student may receive credit for both Mat 100.0 and Mat 113.0, nor for more than one of Mat 200.0, 201.0, or the pair 210.1 (.2) and 211.1 (.2), nor for more than one of Mat 300.0, 310.0 or 311.0. No student who has received credit for an advanced mathematics course may later receive credit for a mathematics prerequisite to the course without permission of the department.

100.0 Algebra and Trigonometry
Prerequisite: Grade XI Mathematics.

Elementary logic. Set theory and operations on sets. Real numbers and the real number 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. Sequences and series. Mathematical induction. Permutations, combinations and the binomial theorem. Matrices, determinants, and systems of linear equations.

Classes 3 hrs. plus recitation sessions $1^1/_2$ hrs. a week. 2 semesters.

113.0 Mathematics for Commerce and the Social Sciences
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.

118.1(.2) Remedial Mathematics
Prerequisite: none.

This course is designed for students with weak mathematical backgrounds. It reviews most topics usually covered in high school algebra and may be taken concurrently with Mat 100.0 or Mat 113.0.

Credit for this course may be obtained simultaneously with or prior to credit given for Mat 100.0 or Mat 113.0 but **not** subsequent to credit given for Mat 100.0 or Mat 113.0.

Classes 3 hrs. plus 1 hr. tutorial a week. 1 semester.

125.1 (.2) Basic Programming and Computer Concepts
Prerequisite: none.

An elementary introduction to computer programming intended for the student with no previous experience. Study of the BASIC computer language with practice in writing and running several programs. Discussion of the capabilities and applications of modern computers.

No credit will be given for this course simultaneously with or subsequent to credit given for Mat 225.0 or Mat 226.1 (.2) or Mat 227.1 (.2).

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

200.0 Calculus I
Prerequisite: Mat 100.0 or Grade XII Mathematics.

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, including work, density, mass and moments. The Mean Value Theorem. The extended Mean Value Theorem and l'Hopital's Rule. Parametric equations, derivatives and integrals. Vector algebra in the plane. The scalar product. Vector functions of one variable and their derivatives. Vector velocity and acceleration.

Classes 3 hrs. plus recitation sessions $1^1/_2$ hrs. a week. 2 semesters.

205.1 (.2) Survey of Matrix Methods
Prerequisite: Mat 113.0 or Grade XII Mathematics.

Elementary properties of matrices and the solution of systems of linear equations. Introduction to linear programming. Applications chosen from a broad variety of subjects. This course is not allowed toward departmental requirements for a major or concentration in mathematics.

No credit will be given for this course simultaneously with or subsequent to credit given for Mat 320.1 (.2).

Classes 3 hrs. plus tutorial 1 hr. a week. 1 semester.

206.1 (.2) Survey of Calculus
Prerequisite: Mat 113.0 or Grade XII Mathematics.

This course provides an overview of the differential and integral calculus, with applications chosen from a wide variety of subjects. This course is not allowed toward departmental requirements for a major or concentration in mathematics.

No credit will be given for this course simultaneously with or subsequent to credit given for Mat 200.0.

Classes 3 hrs. plus tutorial 1 hr. a week. 1 semester.

207.1 (.2) Survey of Statistics
Prerequisite: one of Grade XII Mathematics, Mat 100.0, 113.0 or 118.1 (.2).

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, discrete distributions; normal distributions; sampling theory; estimation of mean and standard deviations; tests of significance; elementary treatment of linear regression, correlation and analysis of variance. This course is not allowed toward departmental requirements for a major or concentration in mathematics.

No credit will be given for this course simultaneously with or subsequent to credit given for Mat 314.0.

Classes 3 hrs. plus tutorial 1 hr. a week. 1 semester.

226.1 (.2) Introduction to Computer Programming
Prerequisite: One of Mat. 100.0, 113.0, Grade XII Mathematics or permission of instructor.

An introduction to the BASIC language and to programming principles. Topics include: Arithmetic, statements, functions, strings, algorithms, flowcharts and information processing.

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

227.1 (.2) Applications of Computers to Problem Solving
Prerequisite: Mat 226.1 (.2) or permission of instructor.

An introduction to the development of algorithms and their translation into FORTRAN computer programs. Topics include elements of problem solving, the design and efficiency of algorithms, and program and control structures. Applications include numerical procedures and data processing.

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

300.0 Calculus II
Prerequisite: Mat 200.0.

Solid analytic geometry, cylindrical and spherical coordinate

systems. Functions of several variables, partial differentiation and differentials. Infinite series, convergence tests, power series expansions of functions, Taylor's Theorem. Double and triple integrals with physical applications. Vector representation of space curves and vector calculus, dot and cross products, divergence, curl, and the integral theorems of Gauss and Stokes.

Classes 3 hrs. plus recitation sessions $1\frac{1}{2}$ hrs. a week. 2 semesters.

305.1 (.2)   Topics in Complex Variables and Differential Equations
Prerequisite: Mat 300.0 concurrently, or Mat 310.0 or 311.0.

Complex numbers, functions, derivatives, the Argand diagram, the Cauchy-Riemann equations. Elementary differential equations including first order, separation of variables, homogenous, linear and exact differential equations. Linear differential equations with constant coefficients. Applications to civil, chemical, mechanical and electrical systems.

Classes 3 hrs. plus tutorial 1 hr. a week. 1 semester.

308.1 (.2)   Numerical Analysis I
Prerequisite: Mat 200.0.

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.

309.1 (.2)   Numerical Analysis II
Prerequisite: Mat 308.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical procedures in functional approximations, interpolation, least squares and numerical integration.

Classes 3 hrs. a week. 1 semester.

314.0   Introduction to Statistics
Prerequisite: Mat 200.0.

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 of random variables, sampling distributions, chi-square, F and T distributions, 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.

320.1 (.2)   Linear Algebra I
Prerequisite: Mat 200.0.

This course is meant to equip the student with the minimal basic techniques of linear algebra. Topics to be covered include: matrix algebra, determinants, adjoints, inverses, rank, equivalence, elementary operations and normal forms. Vector spaces, bases,

dimensions, coordinates. Characteristic equation, eigenvalues and eigenvectors.

Classes 3 hrs. a week. 1 semester.

321.1 (.2)   Linear Algebra II
Prerequisite: Mat 320.1 (.2).

This course is a continuation of Mat 320.1 (.2) and presents further concepts and theory of linear algebra. Topics to be covered include: linear transformations and their representation by matrices, minimal polynominals and the Cayley-Hamilton theorem, canonical forms under similarity, inner product spaces, bilinear and quadratic forms.

Classes 3 hrs. a week. 1 semester.

325.0   Data Structures and Combinatorial Computing
Prerequisite: Mat 226.1 (.2) and Mat 227.1 (2).

Study of combinatorial structures for data representation and retrieval in computer systems, including linked lists, binary trees, directed graphs, hash tables, associative and virtual memories, together with the analysis of algorithms for searching and for sorting based on these structures.

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

326.0   Computer Organization and Assembly Language Programming
Prerequisite: Mat 226.1 (.2) and Mat 227.1(2).

Computer structures (hardware and software), data representation, assembly language programming, data manipulation and data structures, microprogramming, I/O programming, system software, operating systems.

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

335.0   Introduction to Operations Research
Prerequisite: Mat 200.0 and (or concurrently) Mat 320.1 (.2).

The course will discuss mathematical models of real world problems, together with a variety of recently developed mathematical programming techniques for their solution. Some theory will be presented but emphasis will be on the problem-solving approach and actual implementation of various problem-solving methods on the computer.

Classes 3 hrs. a week. 2 semesters.

370.1 (.2)   Problem — Solving Seminar
Prerequisite: permission of instructor.

A study will be made of advanced problem solving techniques and strategies. These will be applied to a wide variety of problems taken from several areas of mathematics.

Seminar 3 hrs. a week. 1 semester.

401.1 (.2)   Sequences, Series and Improper Integrals
Prerequisite: Mat 300.0.

Infinite sequences and series, convergence tests, grouping and rearrangements, sequences and series of functions, pointwise and uniform convergence, power series, double sequences and series, differentiation under the integral sign, improper single and double integrals, functions defined by improper integrals, Fourier series and transforms.

Classes 3 hrs. a week. 1 semester.

402.1 (.2)   Vector Calculus
Prerequisite: Mat 300.0 and 320.1 (.2).

Curves and surfaces, directional derivatives, gradient, divergence, curl, differentiable functions from R^n to R^m, Jacobians, change of variables in multiple integrals, inverse of transformations and the implicit function theorem, line and surface integrals, the integral theorems of Green, Gauss and Stokes.

Classes 3 hrs. a week. 1 semester.

405.1 (.2)   Differential Equations I
Prerequisite: Mat 300.0 or permission of instructor.

First order differential equations, linear differential equations with constant coefficients, Laplace transforms, linear differential equations with variable coefficients (series solutions), applications.

Classes 3 hrs. a week. 1 semester.

406.1 (.2)   Differential Equations II
Prerequisite: Mat 405.1 (.2) and Mat 320.1 (.2) or permission of instructor.

Systems of differential equations, boundary value problems, Sturm-Liouville problems, Fourier series, simple classical partial differential equations.

Classes 3 hrs. a week. 1 semester.

408.1(.2)   Advanced Numerical Analysis I
Prerequisite: Mat 309.1(.2) or permission of instructor.

Theoretical and practical considerations of numerical analysis in the eigenvalue-eigenvector problem and in the solutions of ordinary differential equations.

Classes 3 hrs. a week. 1 semester.

409.1(.2)   Advanced Numerical Analysis II
Prerequisite: Mat 408.1(.2).

Theoretical and practical considerations of numerical analysis in the solutions of ordinary and partial differential equations.

Classes 3 hrs. a week. 1 semester.

415.1 (.2)   Mathematical Statistics
Prerequisite: Mat 300.0.

This course studies mathematical foundations of statistics, including both parametric and non-parametric inference. Emphasis is placed on the properties of random variables and their distributions. The estimation of parameters by using sample statistics, and tests of related hypotheses are included.

Classes 3 hrs. a week. 1 semester.

416.1 (.2)   Mathematical Probability
Prerequisite: Mat 415.1 (.2).

The aim of the course is to introduce students to mathematical (nonmeasure theoretic) foundations of probability theory and elements of stochastic processes. The topics include conditional probabilities, conditional distributions, characteristic functions, limit theorems, Markov chains and Markov processes, birth and death processes and elementary queueing theory.

Classes 3 hrs. a week. 1 semester.

420.1 (.2)   Abstract Algebra I
Prerequisite: Mat 321.1 (.2) or permission of instructor.

The study of algebraic structures, such as groups, rings, fields, posets, graphs, or universal algebras. The major emphasis will be on derivation of theory, with inclusion of applications and examples.

Classes 3 hrs. a week. 1 semester.

421.1 (.2)   Abstract Algebra II
Prerequisite: Mat 420.1 (.2) or permission of instructor.

The further study of algebraic structures and their applications.

Classes 3 hrs. a week. 1 semester.

435.0   Theory of Functions of a Complex Variable
Prerequisite: Mat 300.0, 310.0 or 311.0.

The complex plane. Elementary transformations and mappings, 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.

440.0   Real Analysis
Prerequisite: Mat 300.0.

Sets, functions, and relations, the real number 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.

456.1 (.2)   Introduction to Applied Mathematics I
Prerequisite: Mat 300.0 and 305.1 (.2) or permission of instructor.

Leibnitz rules for repeated derivatives of a product, differentiation under the sign of integration, Beta and Gamma functions, Hankel functions, Legendre polnomials, convolution theorem and singularity functions for Laplace Transforms, physical meaning and applications of curl, divergence and integral theorems.

Classes 3 hrs. a week. 1 semester.

457.1 (.2)   Introduction to Applied Mathematics II
Prerequisite: Mat 300.0 and 305.1 (.2) or permission of instructor.

Orthogonal curvilinear coordinate systems and transformation of Laplacian to cylindrical and spherical polar coordinates. Method of residues for contour integration. Properties of orthogonal function and eigenvalue expansion. Derivation of Laplace equation, wave equation and heat equation. Methods of solution for various geometrical and boundary conditions.

Classes 3 hrs. a week. 1 semester.

480.1 (.2) to   Special Topics in Computer Science
489.1 (.2)
Prerequisite: permission of instructor.

This course covers advanced topics in computer science chosen according to the interests of the students and instructor, and

requires some measure of independence and initiative from the student.

Seminar 3 hrs. a week. 1 semester.

490.1 (.2) to Directed Study in Mathematics
499.1 (.2)
Prerequisite: permission of instructor.

This course is intended to supplement or provide an alternative to the regular mathematics courses in order to meet the special needs and interests of students. The course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.
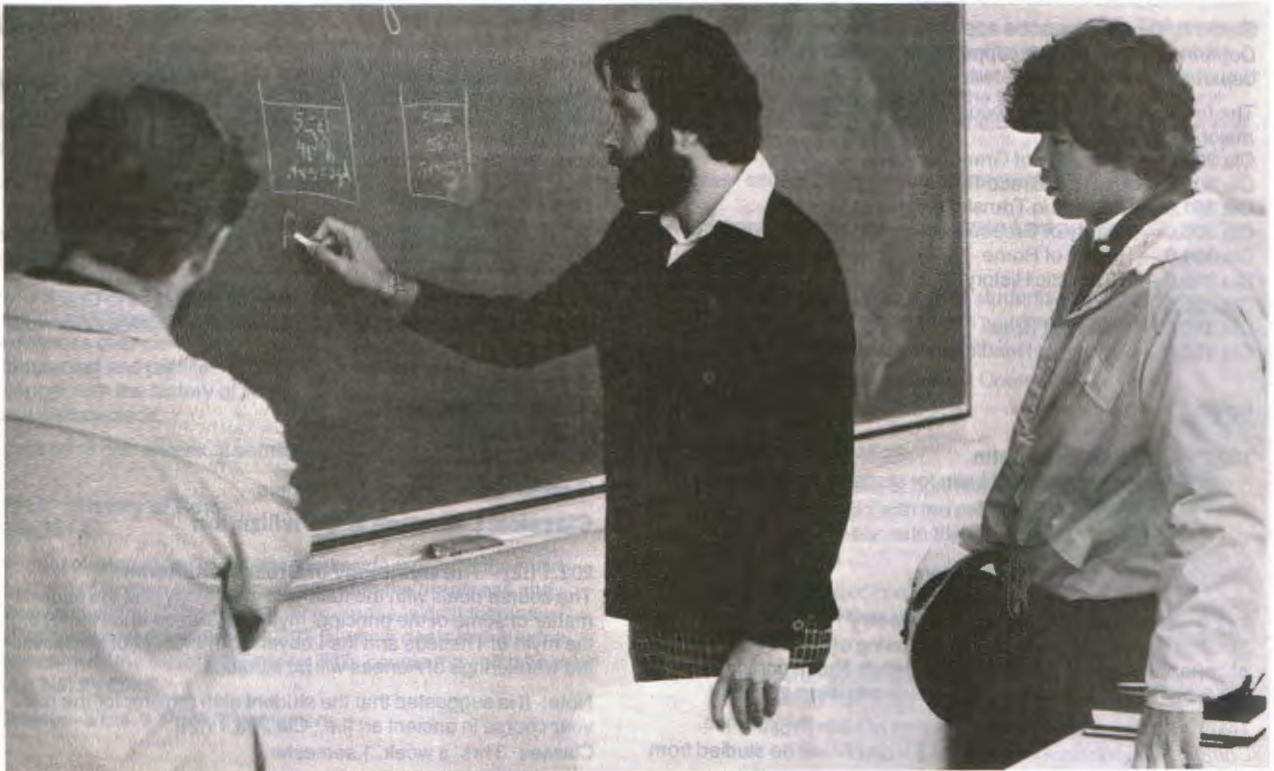
Modern Languages and Classics

Classics — Latin — Greek — French — German —
Spanish — Chinese

Chairperson, Associate Professor	A. J. Farrell
Classics	
Assistant Professors	G. T. Thomas
	V. McB. Tobin
French	
Associate Professors	F. Pepin, G. LePierrès
	J. Mackriss
Assistant Professors	P. Bernard, A. Murphy
German	
Associate Professor	R. Nahrebecky
Spanish	
Associate Professor	A. J. Farrell
Chinese	
Assistant Professor	M. Boyd

Departmental Policy — Classics
To obtain a major in classics students 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.

Students' 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 202.1 — Mythology of Greece and Rome
Cla 203.2 — Art in the Greco-Roman World
Cla 301.0 — Classics in Translation
Cla 303.0 — History of Greece
Cla 304.0 — History of Rome
Cla 305.0 — Hellenistic History
Cla 306.0 — The Epic
Cla 310.0 — History of Israel
Cla 405.0 — Advanced Reading and Tutorial

Latin

100.0   Introduction to Latin
A course in the essentials of Latin for students who have not completed matriculation Latin.

Text: DeWitt, *College Latin*.

Classes 3 hrs. a week. 2 semesters.

201.0   Introduction to Latin Epic Poetry
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
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.

303.0   Latin Prose Writers
Prerequisite: permission of instructor or Lat 201.0.

Students will be asked to translate and comment upon selections from different periods of Latin prose, e.g. Cicero's *Letters*, Apuleius' *Metamorphoses*, Latin Vulgate. Also continued study of Latin grammar.

Classes 3 hrs. a week. 2 semesters.

403.0   Advanced Reading
A tutorial course on Cicero *(De Amicitia. De Senectute)* and Lucretius *(De Rerum Natura)*.

404.0   Advanced Reading
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
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.

201.0   Second Year Greek
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.

Classical Literature and Civilization

202.1 (.2)   The Mythology of Greece and Rome
The course deals with the nature of mythology and the subject matter of some of the principal myths of Greece and Rome; e.g., the myth of Theseus and the Labyrinth, the labors of Hercules, the wanderings of Aeneas will be studied.

Note: It is suggested that the student also register for the half year course in ancient art [i.e., Cla 203.1 (.2)].

Classes 3 hrs. a week. 1 semester.

203.1 (.2) Art in the Greco-Roman World
By slides, films and reproductions of artistic pieces in addition to lectures, the class will examine the origins, developments and particular interests of artists in Mesopotamia, Egypt, Greece, Rome, and early Christian Europe.

Note: It is suggested that students also register for Cla 202.1 (.2) since each course tries to look at the development of the Greco-Roman world from different, but complementary sides.

Classes 3 hrs. a week. 1 semester.

301.0 Classics in Translation
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.

306.0 The Epic
(Egl 306.0)
Prerequisite: Egl 200.0 or equivalent.

A study of various major national epics with a view towards understanding the works themselves, the world views and cultures they represent, and the characteristics of the oral and written epic as art forms. Central to the course will be a detailed analysis of the *Iliad, Odyssey,* and *Aeneid.*

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

Ancient History

120.0 The Classical Civilizations of Greece and Rome
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.

303.0 History of Greece
(His 350.0)

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 Cla 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.

304.0 History of Rome
(His 351.0)

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 Cla 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.

305.0 Hellenistic History
(His 352.0)
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.

310.0 History of Israel
(Rel 309.0)
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.

334.0 Roman History: Primary Source Material
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.

Classics: Guided Study

405.0 Advanced Reading and Tutorial
Prerequisite: permission of the department.

A course based on directed readings and research. The contents of the course will be determined by the specific interests of the students involved. Students will have the opportunity to pursue in depth their individual interests in the field of Classics, and will meet regularly with a member of the Department to discuss their research.

Classes tutorial 3 hrs. a week. 2 semesters.

Departmental Policy — Modern Languages

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. For French majors consultation with the Chairperson is strongly recommended.

2. To obtain a major concentration in French, a student is required to have six university credits in French beyond Fre 200.0.

    For students declaring their major in French on or after 1 September 1977, both Fre 300.0 and Fre 301.0 are compulsory.

3. 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.

Modern Languages — French

General Course Descriptions

1. All courses in French on the 300 and 400 levels are taught in French.

2. All students with three or more years of formal training in French 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 five courses (Fre 100.0, 110.0, 200.0, 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.

100.0 Introduction to the French Language

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.

Classes 3 hrs. and lab three $1/2$ hrs. a week. 2 semesters.

110.0 Basic French
Prerequisite: Placement test.

An introductory course for students who have had some formal training in French but not enough to justify their admission to French 200.0. The aim of the course is to enable the students to progress more rapidly than would be the case if they took French 100.

Classes 3 hrs. and lab 1 hr. a week. 2 semesters.

200.0 Introduction to University French
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 students' oral proficiency and develop their reading ability. The course also includes the writing of short compositions.

Classes 3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

240.0 Intermediate University French
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.

Classes 3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

250.0 Advanced University French
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. Normal requirement for all majors.

Classes 3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

300.0 The Principal Themes of French Literature
Prerequisite: Fre 240.0 or 250.0 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 compulsory for all students who intend to major in French.

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.

301.0 Composition and Conversation
Prerequisite: Fre 240.0 or 250.0 or permission of the Department.

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 compulsory for all students who intend to major in French.

Classes 3 hrs. plus lab and/or tutorials three $1/2$ hrs. a week. 2 semesters.

303.0 Acadian Civilization
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.

320.1 French Phonetics
Prerequisite: Fre 240.0, 250.0, or equivalent, or permission of Department.

An introduction to articulatory phonetics with application to French. Standard (International) French will be used as a reference point. 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 hr. sessions a week. 1 semester.

321.2 French Grammar
Prerequisite: Fre 240.0, 250.0, or equivalent, or permission of Department.

An intensive course beginning with a review of elementary and intermediate French grammar and pursuing a study of advanced French grammar. This course emphasizes grammatical rules and applies these to the development of writing skills. Taught in English and French. Strongly recommended for French majors.

Classes 3 hrs. a week. 1 semester.

330.0 French for Business
Prerequisite: permission of instructor.

A course designed to familiarize students with the business vocabulary and commercial correspondence of French-speaking countries.

Classes 3 hrs. a week. 2 semesters.

413.0 French Civilization
Prerequisite: Fre 300.0 or 301.0 or permission of the Department.

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.

414.0 Evolution of the French Novel
Prerequisite: Fre 300.0 or permission of the Department.

An examination of the principal stages in the development of the French novel.

Summer reading is strongly advised.

Classes 3 hrs. a week. 2 semesters.

415.0 The French Theatre
Prerequisite: Fre 300.0 or permission of the Department.

A study of some of the major works of French dramatic literature.

Classes 3 hrs. a week. 2 semesters.

416.0 Poetry in France
Prerequisite: Fre 300.0 or permission of the Department.

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 o 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.

Classes 3 hrs. a week. 2 semesters.

417.0 French Canadian Poetry
Prerequisite: Fre 300.0 or permission of the Department.

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) Grandpré, Pierre de, Histoire de la littérature française du Québec, Tome III. (Beauchemin). (Analysis) Colin, M. and Théberge, J. V., Terre de Québec, Tome I and II (Renouveau pedagogique).

Classes 3 hrs. a week. 2 semesters.

418.0 The Civilization of French Canada
Prerequisite: Fre 300.0 or 301.0 or permission of the Department.

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.

Classes 3 hrs. a week. 2 semesters.

419.0 French Canadian Novel
Prerequisite: Fre 300.0 or permission of the Department.

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) Grandpré, Pierre de, Histoire de la littérature française du Québec (Beauchemin).

Texts: (Analysis), Guèvremont, G., Le Survenant (Fides), Roy, Gabrielle, La Montagne secrète (Beauchemin), Blais, M. C., Les Voyageurs sacrés (HMH), Martin, C., Doux-Amer (Cercle du Livre de France, Poche).

Classes 3 hrs. a week. 2 semesters.

420.0 20th Century Novel
Prerequisite: Fre 300.0 or permission of the Department.

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.

Classes 3 hrs. a week. 2 semesters.

421.0 Comparison of English and French Stylistics
Prerequisite: Fre 301.0 or permission of the Department.

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. This course will introduce the student to problems of English-French translation.

Classes 3 hrs. a week. 2 semesters.

422.0   Techniques of Essay Writing
Prerequisite: Fre 300.0, 301.0 or permission of the Department.

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.

423.0   Independent Study
Prerequisite: permission 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.

424.0   Special Author
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.

425.0   The French Short Story
Prerequisite: Fre 300.0 or 301.0 or permission of the Department.

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.

426.1   Epistolary Literature: Image and Mirror of the "Ancien Regime" in France
Prerequisite: Fre 300.0 or permission of the Department.

A selection and study of the form and content of private, official and unofficial letters as vehicles of gossip, rumor and fact reflecting the social, literary and religious aspirations of pre-revolutionary France.

Classes 3 hrs. a week. 1 semester.

427.2   Epistolary Literature: Image and Mirror of the "Ancien Regime" in France
Prerequisite: Fre 300.0 or permission of the Department.

Madame de Sévigné, a study of her thought as reflected in the Letters with special emphasis on her friend and correspondent, Madame de LaFayette, the ethic and ethics of "amour-passion" and marriage in the 17th century.

Classes 3 hrs. a week. 1 semester.

428.0   Literature with a Purpose: The French Renaissance and Fiction of the French Enlightenment
Prerequisite: Fre 300.0 or permission of the Department.

A study of the literary masterpieces of the 16th and 18th centuries. The course is designed to acquaint the student with the contributions of some world-renowned French authors and their persuasive, often humorous tactics for the expression of new ideas about man and the world in which he lives.

Classes 3 hrs. a week. 2 semesters.

430.0   Advanced French Grammar
Prerequisite: A 300-level course (French 321.2 is recommended) or permission of instructor.

A systematic study of French Grammar, involving both theory and application. Of particular interest to teachers of French.

Classes 3 hrs. a week. 2 semesters.

450.0   African Literature of French Expression
A survey of sub-Saharan African Literature of French expression designed to familiarize the student with traditional and modern African literature and culture. The approach in this course is both literary (i.e., to study fiction) and humanistic (i.e., to study a people through the writings of its gifted individuals). Lectures will be in English and assignments in French will be required of French majors. Students should consult with the professor before registering.

Classes 3 hrs. a week. 2 semesters.

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 Chairperson of the student's area of concentration, and the Chairperson of the Modern Languages and Classics Department. Usual registration procedures are to be followed, except that tuition fee payments are to be made directly to the University of the West. Students are urged to apply early for this program.

Modern Languages — German

100.0   Introduction to the German Language
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.) Third Edition.

Classes 3 hrs. a week. 2 semesters.

200.0   Intermediate German
Prerequisite: Ger 100.0.

This course presents an intensified study of grammar and syntax and the reading of German texts.

Texts: Kimberly Sparks/van Horn Vail, *German in Review*. Two short biographies by C. R. Goedsche and W. E. Glaettli, *Thomas Mann and Einstein* (American Book Co.).

Classes 3 hrs. a week. 2 semesters.

305.0   Introduction to German Literature
A study of texts representing the most important periods of German Literature since the 18th century. Summaries, compositions and short essays will be written.

Classes 3 hrs. a week. 2 semesters.

310.0   Modern German Literature
Prerequisite: Ger 305.0 or equivalent.

A study of trends in modern German literature (Naturalism, Impressionism and Expressionism).

Classes 3 hrs. a week. 2 semesters.

315.0   The Romantic Age
Prerequisite: Ger 305.0 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 3 hrs. a week. 2 semesters.

400.0   German Contemporary Literature
Prerequisite: Ger 305.0 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 3 hrs. a week. 2 semesters.

405.0   Independent Study
Prerequisite: consent of instructor.

This course is intended for advanced students who have a good working knowledge of German, a special interest in German Literature and who want to study a particular author through directed, independent readings.

Classes 2 hrs. a week. 2 semesters.

Modern Languages — Spanish

101.0   Introduction to the Spanish Language
Designed to offer a firm initial competency in speaking and writing Spanish. This course requires regular attendance and a willingness to participate.

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.

201.0   Intermediate Spanish
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.

Texts: 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.

300.0   Spanish Culture and Civilization
Prerequisite: Spa 201.0 or equivalent.

This course examines Spanish achievements in art, music, and literature from the earliest times to the present, and situates these achievements within their historical context. Reading, class discussions, and student participation in English.

Classes 3 hrs. a week. 2 semesters.

301.0   Representative Forms of Hispanic Literature
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.

302.0   Prose and Stylistics
Prerequisite: a 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.

Classes 3 hrs. a week. 2 semesters.

305.0   Cervantes and Pre-Cervantine Spanish Literature
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.

310.0   The Picaresque Novel
Prerequisite: Spa 201.0 or equivalent.

The study of a 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, Guzman 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
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, Ortega y Gasset, Unamuno; reference will be made to other writers.

Classes 3 hrs. a week. 2 semesters.

402.0   Contemporary Latin-American Literature
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
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
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.

Modern Languages — Chinese

100.0   Introductory Modern Chinese
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.

200.0   Intermediate Modern Chinese
Prerequisite: Chi 100.0.

A continuation of Chi 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.

Philosophy

Chairperson, Assistant Professor	W. Grennan
Professors	R. H. Beis, A. P. Monahan
Associate Professor	R. C. Marshall
Assistant Professor	R. N. Ansell

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 (345.1, 346.2), (440.1, 441.2), (442.1, 443.2), (444.1, 445.2)
Phi 306.0
Phi 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 Chairperson about admission to the program; after admission, the Chairperson 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, 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.

9. Graduate students should refer to the material entitled "Master's Degree" which is found in Section 3 of this Calendar.

200.0 Basic Logic
The aim of the course is practical rather than theoretical: to enable the student, in practice, to do such things as define terms accurately, construct sound arguments, identify fallacious thinking and adopt a scientific approach to problem solving. No special knowledge or abilities are presumed, and students should take the course as early as possible in their program.

Classes 3 hrs. a week. 2 semesters.

201.0 Introduction to Philosophy
Philosophy covers a wide variety of issues and questions with which any educated person will wish to be acquainted such as: law, morality, justice; the problems of freedom; the nature of what is mental, what physical; death; the nature of knowledge, scepticism, rationality; theism, agnosticism, atheism. Philosophy does, and ought to play an important role in the *education* of doctors, lawyers, scientists, statesmen, educators, writers, theologians and others.

The introductory course is designed to acquaint students with the field of philosophy by covering some of these problems, and to encourage them to develop their own critical intelligence through a study of major past and present contributions toward the solution of these problems.

Classes 3 hrs. a week. 2 semesters.

215.0 Introduction to Symbolic Logic
Prerequisite: Phi 200.0 or Mat majors.

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.

Classes 3 hrs. a week. 2 semesters.

220.0 Medieval Philosophy and Politics
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.

230.0 Philosophical Foundations and Methodology
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.

244.1 Human Freedom
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.

245.2 Philosophies of Life
An examination of the major philosophies of life and an assessment of the reasons for and against their adoption. Consideration will be given to various forms of collectivism and individualism and to various views of what is ultimately worth striving for.

Classes 3 hrs. a week. 1 semester.

246.0 Philosophical Issues in Feminism
The course will examine the nature of the contemporary movement of feminism, and examine and evaluate arguments for and against this movement within the major traditions of political and social philosophy. To this end it will examine such basic concepts as justice, equality, freedom, rights, power and happiness, and discuss some of the practical questions raised by feminists.

Classes 3 hrs. a week. 2 semesters.

300.0 (600.0) Hegel's Political Philosophy
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.

302.0 Ethics
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.

304.0 Logic, the Mass Media and Society
Prerequisite: Phi 200.0.

Most of our beliefs (and their justification) about important social issues are obtained — without critical reflection — secondhand, from various sources. Chief among these sources are the mass media: large-circulation magazines, newspapers, radio, and TV.

This course is intended to consolidate and enhance the skills in critical reflection acquired in Phi 200.0 (Basic Logic) by applying them to the important social and ideological issues of the day, as these are discussed in the media. Competent evaluation of such material requires, besides standard logical techniques, awareness of the factors that influence its content and reliability. These effects (e.g., self-censorship) will be identified and linked to the presuppositions and philosophies of those responsible for media output. Finally, these presuppositions and philosophies will themselves be scrutinized.

306.0 Epistemology
Freshmen may not enrol in this course.

This course attempts to answer three fundamental questions concerning the problem of knowledge: What am I doing when I am knowing? Why is *that* knowing when I am doing it? What do I know when I have done it? The answers present the position of Bernard Lonergan. Other (counter) positions will be examined, including empiricism, idealism, relativism, scepticism, rationalism, positivism.

Text: B. Lonergan, *Insight*.

Classes 2 hrs. a week and seminars. 2 semesters.

307.0 Science in the West Since 1500 A.D.
(His 307.0)

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.

310.0 Philosophical Foundations of Politics
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.

320.0 Aesthetics: The Philosophy of Art
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 are focal points for this course. 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
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.

325.0 Philosophy in a Canadian Key
The present search for, and struggle to achieve, a Canadian identity and unity has a philosophical background, knowledge of which is fundamental in achieving an understanding of the country which is Canada.

Insofar as the development of philosophy historically in some sense reflects the culture in which it functions, this course aims at an examination and understanding of the way philosophy has developed in the two cultures of English and French Canada. The different characteristics of philosophy in English and French Canada in the 19th and 20th centuries will be examined in terms of the differing philosophical traditions from which they derived, with particular emphasis on social and political philosophy.

Classes 3 hrs. a week. 2 semesters.

326.0 Philosophy of Mind
Prerequisite: 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.

329.0 Philosophy of Law
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.

333.1 (.2) The Ethics of Business and Public Administration
Prerequisite: open to majors in philosophy, economics, political science, and sociology, as well as students in the Faculty of Commerce.

An examination of the extent to which business and bureaucratic objectives can, must or do conflict with moral objectives, and of the extent to which such organizations as business and the civil service can be brought into harmony with moral objectives.

An examination of the aspects of ethical theory relevant to the above issues, and how theory needs to be developed to address them adequately.

Classes 3 hrs. a week. 1 semester.

340.0 Alienation and the Body Politic
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.

345.1 Greek Philosophy: The Presocratics and Plato
A brief examination of the origins of ancient Greek Philosophy in the works of speculative cosmologists and the subsequent shift in interest from nature to humanity as initiated by Socrates and developed in the works of Plato. Most of the course will consist of reading Plato's major dialogues, including his *Republic.*

Classes 3 hrs. a week. 1 semester.

346.2 Greek Philosophy: Aristotle, The Hellenists
A brief examination of Aristotle's views on drama, psychology, knowledge, ethics, and politics, to be followed by a brief study of Stoicism, Epicureanism, and Plotinus.

Classes 3 hrs. a week. 1 semester.

348.1 Aesthetics: The Work of Art, The Artist
This course considers works of art as the product of creative artists, and problems about the interpretation and criticism of works of art.

Classes 3 hrs. a week. 1 semester.

349.2 Aesthetics: The Aesthetic Experience
This course analyzes the concept of aesthetic experience and its relation to the appreciation and understanding of works of art.

Classes 3 hrs. a week. 1 semester.

351.0 (651.0) Philosophy of Science
An introduction to the main problems of the philosophy of science designed to familiarize students with some of the contemporary analyses of scientific concepts and methods.

Classes 3 hrs. a week. 2 semesters.

360.0 Philosophy in Literature
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.

370.0 Ethical Issues in Medicine

Advancing medical technology has created moral issues that cannot be settled on the basis of medical facts. Both the medical profession and society as a whole must make value decisions before life and death issues such as abortion, mercy killing, and treatment of the insane can be settled. This course is intended to help the student reach reasoned conclusions on these issues through clarification and appraisal of arguments.

Classes 3 hrs. a week. 2 semesters.

390.0 - 395.0 Reading Courses in Philosophy
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
Prerequisite: the student should be majoring in philosophy, political science, sociology, anthropology or psychology, or enrolled in the Faculty of Commerce.

An examination of the purpose and character of the social sciences (including courses in the Faculty of Commerce). Besides the general conceptual, logical and methodological problems which arise in the social sciences, topics of urgent regional interest will be studied. Among the latter topics are the following: the adaptation of the disciplines to serve local needs, the extent to which various standard approaches involve certain ideological, evaluative or other presuppositions, and the implications of these presuppositions in relation to local interests such as external domination and regional disparity.

Classes 3 hrs. a week. 2 semesters.

407.0 (607.0) Philosophy of Being
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.

440.1 Medieval Philosophy: Early Period to 12th Century
Prerequisite: a course in philosophy or consent of instructor.

An examination of the major philosophical doctrines and currents in Western Europe from the period of Augustine to the end of the 12th century.

Classes 3 hrs. a week. 1 semester.

441.2 Medieval Philosophy: 13th, 14th Centuries
Prerequisite: a course in philosophy or consent of instructor.

An examination of the major philosophical doctrines and currents

in Western Europe in the 13th and 14th centuries.

Classes 3 hrs. a week. 1 semester.

442.1 Early Modern Philosophy: The Rationalists
Prerequisite: a course in philosophy or consent of instructor.

A critical examination of works by Descartes, Spinoza and Leibniz with attention focused on their theories of knowledge and metaphysics.

Classes 3 hrs. a week. 1 semester.

443.2 Early Modern Philosophy: The Empiricists
Prerequisite: a course in philosophy or consent of instructor.

A critical examination of works by Locke, Berkeley and Hume with attention focused mainly on their theories of knowledge, meaning, and perception.

Classes 3 hrs. a week. 1 semester.

444.1 Later Modern Philosophy: Kant
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course dealing with Kant's epistemological and moral philosophy.

Classes 3 hrs. a week. 1 semester.

445.2 Later Modern Philosophy: The German Idealists
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course dealing with the works of some of the German philosophers characterized as "Idealists" in virtue of their similar reactions to Kant. Fichte and Hegel will receive special attention.

Classes 3 hrs. a week. 1 semester.

450.0 (650.0) Phenomenology
Prerequisite: one course in philosophy or consent 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.

453.0 Philosophy of History
Prerequisite: a course in philosophy or consent 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.

455.1 Existentialism: The 19th Century: Kierkegaard, Nietzsche
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course examining the 19th century origins of the existentialist movement in contemporary philosophy, with specific investigation of the writings of Kierkegaard and Nietzsche.

Classes 3 hrs. a week. 1 semester.

456.2 Existentialism: The 20th Century: Jaspers, Marcel, Camus, Sartre
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course examining 20th century expressions of the existentialist movement in philosophy through study of the writings of Jaspers, Sartre, Marcel and Camus.

Classes 3 hrs. a week. 1 semester.

465.0 (665.0)   Analytic Philosophy
Prerequisite: a course in philosophy or consent 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.

466.0 (666.0)   Advanced Ethical Theory
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.

467.1 (667.1)   Augustine on Philosophy
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course which explores the meaning of philosophy and its relation to theology in the writings of the early great Christian thinker, Augustine of Hippo.

Classes 3 hrs. a week. 1 semester.

468.2 (668.2)   Aquinas on Philosophy
Prerequisite: a course in philosophy or consent of instructor.

A lecture and seminar course which explores the meaning of philosophy and its relation to theology in the writings of the dominant Christian thinker of the high medieval period, Thomas Aquinas.

Classes 3 hrs. a week. 1 semester.

469.0   Meaning and Truth
Prerequisite: a course in philosophy or consent of instructor.

First Term: What is the meaning of "meaning"? Is meaning: a particular kind of entity? a response to a stimulus? the thing to which an expression refers? How is it that certain sounds and certain marks convey meaning whereas other sounds and marks do not? *Second Term:* What is "truth"? Is truth: the correspondence of our thoughts to reality? what works out in practice? the proper fitting together of our ideas?

Classes 3 hr. seminar a week. 2 semesters.

490.0 - 495.0   Reading Courses in Philosophy
Prerequisite: consent 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.

690.0 - 695.0   Reading Courses in Philosophy
Prerequisite: consent 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.

696.0 - 697.0   Master's Thesis
These course numbers accommodate the thesis research and writing as required by the Department of Philosophy for any student proceeding to the Master of Arts degree in Philosophy.

Photography

200.0 Photography
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 2 hrs. a week. 2 semesters.

Physics

Chairperson, Associate Professor	W.Lonc
Professor	D. S. Murty
Associate Professor	U. S. Merdsoy
	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 x-ray and cobalt therapy equipment. 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

Third & Fourth Years

Any six half-courses (in accordance with Science Degree Requirements) from

321.1 (.2)	322.1 (.2)
331.1 (.2)	332.1 (.2)
350.1 (.2)	431.1 (.2)
432.1 (.2)	438.1 (.2)
439.1 (.2)	453.1 (.2)
471.1 (.2)	

An elective in physics, or mathematics, or astronomy

Note: Physics 260.0 is available as an elective.

b: Physics Major

First Year

Phy 111.0
a course in mathematics

Second Year

Phy 221.0	Mat 200.0

Third Year

Phy 321.1 (.2)	Phy 331.1 (.2)
Phy 322.1 (.2)	Phy 332.1 (.2)
Mat 300.0	

Fourth Year

Phy 431.1 (.2)	Phy 439.1 (.2)

Phy 432.1 (.2)	Phy 453.1 (.2)
Phy 438.1 (.2)	Phy 471.1 (.2)

Any departure from **A** or **B** schemes must receive departmental approval.

Students not majoring or concentrating in Physics may substitute alternative prerequisites for courses at the 300-level or higher at the discretion of the Physics Department.

111.0   General Physics
Prerequisite: Algebra and Trigonometry (concurrently).

Introduction to mechanics, sound, heat, electricity and light.

Text: Tilley and Thumm, *Physics for College Students.*

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

Recommend 111.0A for physics, chemistry, engineering and others.
111.0B for biology, psychology, geology and others.

221.0   University Physics
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, Zemansky, & Young: *University Physics* (5 ed.).

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

231.1 (2)   Physics for Engineers
Prerequisite: Phy 111.0 or equivalent; and introductory calculus taken concurrently.

This course is designed primarily for engineering students, dealing with topics of sound, light, electricity and magnetism.

Note: Credit will not be given for *both* Phy 221.0 and Phy 231.1 (2).

260.0   Electronics for Science
Prerequisite: Phy 111.0 and Mat 100.0 or equivalent, or permission of the department.

This course is a first course in electronics, and treats the following: characteristics of capacitors; resistors; sensors for light, temperature and sound; diodes; transistors; rectifier circuits; amplifier circuits; operational amplifiers in various configurations; digital circuits; introduction, including theory and experimentation, to the microprocessor. In general, the course introduces the student to electronics as a part of contemporary scientific activity.

Classes 4 hrs. a week including lab. 2 semesters.

Note: This course cannot be a substitute for Phy 111.0 or 221.0.

321.1 (.2)   Optics
Prerequisite: Phy 221.0; Mat 300.0 concurrently.

Geometrical Optics: image formation by spherical surfaces, thin and thick lenses, lens aberrations, telescopes, microscopes. Physical optics: speed of light, dispersion, interference,

diffraction, resolving power of optical instruments, polarization.

Text: Jenkins and White. *Physical Optics* (latest ed.).

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

322.1 (.2) Electricity and Magnetism
Prerequisite: Phy 221.0; Mat 300.0 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.

331.1 (.2) Classical Mechanics I
Prerequisite: Phy 221.0; Mat 300.0 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.

332.1 (.2) Classical Mechanics II
Prerequisite: Phy 331.1. (.2).

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 to Theoretical Mechanics*.

Classes 3 hrs. a week. 1 semester.

350.1 (.2) Physical Electronics
Prerequisite: Phy 221.0.

Solid state principles; atomic structure, energy levels and band structure, electron mobility and conductivity; semiconductors, intrinsic semiconductors; P-type and N-type material; PN-junction diodes; PNP and NPN junction transistors; diodes as rectifiers, power supplies; diode logic circuits and transistor amplifiers.

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

431.1 (.2) Electromagnetic Theory I
Prerequisite: Phy 321.1 (.2), 322.1 (.2), and Mat 300.0.

Development of the theory of electric and magnetic fields and Maxwell's equations in non-polarized media, leading to applications such as waveguides.

Text: Cook: *The Theory of the Electromagnetic Field*.

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

Note: A student with the approval of the chairperson of the department in which he is majoring and also the Physics Department may substitute non-laboratory projects (e.g. term papers) for the laboratory part of the course.

432.1 (.2) Electromagnetic Theory II
Prerequisite: Phy 431.1 (.2).

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: Cook: *The Theory of the Electromagnetic Field*.

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

Note: A student with the approval of the chairperson of the department in which he is majoring and also the Physics Department may substitute non-laboratory projects (e.g. term papers) for the laboratory part of the course.

438.1 (.2) Atomic Physics
Prerequisite: Phy 321.1 (.2), 322.1 (.2) and Mat 300.0.

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.

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

439.1 (.2) Nuclear Physics
Prerequisite: Phy 438.1 (.2).

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.

453.1 (.2) Thermophysics
Prerequisite: Phy 221.0, Mat 300.0.

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.
Classes 3 hrs. a week. 1 semester.

471.1 (.2) Introduction To Quantum Mechanics
Prerequisite: Phy 438.1 (.2); Mat 401.1 and 402.2 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.

Text: Dicke and Wittke: *Introductory to Quantum Mechanics*.

Classes 3 hrs. a week. 1 semester.

Note: All 500 level courses will be offered after consultation with the department.

500.0 Research Thesis
Prerequisite: Honors standing, fifth year.

Research project carried out by the student under supervision of a member of the Department. The student will submit a thesis and present it orally.

Directed study: 6 hours a week. 2 semesters.

550.0 Topics in Theoretical Physics
Prerequisite: Phy 332.1 (.2), Mat 401.1 and 402.2.

Fluid dynamics, elasticity, tensor calculus, the theory of relativity, etc. The areas of greatest concentration will be decided upon in consultation with the students.

Classes 3 hrs. a week. 2 semesters.

551.0   Thermodynamics and Statistical Mechanics
Prerequisite: Phy 453.1 (.2), Mat 401.1 and 402.2.

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.

Classes 3 hrs. a week. 2 semesters.

552.0   Quantum Mechanics
Prerequisite: Phy 471.1 (.2), Mat 401.1 and 402.2.

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.

553.1 (.2)   Upper Atmosphere
Prerequisite: Phy 432.1 (.2), Mat 401.1 and 402.2.

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.

554.1 (.2)   Introduction to Solid State Physics
Prerequisite: Phy 471.1 (.2).

Crystal structure, lattice vibrations, free electron Fermi gas, band structure, properties of simple metals, semiconductors and insulators, superconductivity.

Text: Blakemore, *Solid State Physics*.

Classes 3 hrs a week. 1 semester.

555.1 (.2)   Topics in Advanced Nuclear Physics
Prerequisite: Phy 439.1 (.2), Mat 401.1 and 402.2.

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.

605.0   Fundamental Astrophysics
(Ast 605.0)
Prerequisite: Phy 432.1 (.2) and 439.1 (.2), and Mat 401.1 and 402.2 (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.

Political Science

Chairperson, Assistant Professor   G. Chauvin
Professors   R. G. Boyd, T. B. Ciuciura
    D. H. Gillis
Associate Professors   D. J. Higgins, J. G. Jabbra
    R. G. Landes
    E. J. McBride

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: Pol 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
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
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.

302.0   Democratic Government
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.

303.0   Government and Politics In The Soviet Union
A study of the Soviet socio-economic and political system which constitutes the most serious and enduring challenge to Western democracy. It includes a survey of history 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).

Classes   3 hrs. a week. 2 semesters.

304.0   Canadian Government and Politics
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.

305.0   International Relations
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.

306.0   Government and Politics in Western Europe
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, with an

emphasis on both the long history of, and the recent changes in, the core area of Western civilization.

Classes 3 hrs. a week. 2 semesters.

307.0   Provincial Government and Politics
Prerequisite: Pol 200.0.

An analysis of the dynamics and structures of provincial government in Canada, with special reference to Nova Scotia. Provincial political parties, voting behavior, legislatures, bureaucracies and policy formulation constitute the core of this course. Inter-provincial and federal-provincial relations are examined, with particular reference to Maritime Union, Quebec, and the Western provinces.

Classes 3 hrs. a week. 2 semesters.

308.1 (.2)   Comparative Study of Governments: Eastern Europe
A survey of political and institutional developments from 1848 to 1918, with special attention to multi-national empires of Austria, Russia and Turkey; a comparative study of contemporary political institutions and processes in Communist party-states of Eastern (or East Central) Europe: Czechoslovakia, East Germany, Poland, Yugoslavia, and others.

Classes 3 hrs. a week. 1 semester.

309.0   The Political Dimensions of the Legal Process
Prerequisite: Pol 200.0 or permission of instructor.

An analysis of the theoretical and practical interrelation of law and politics from a instinctively legal perspective; including such areas of concern as law as an instrument of governance, law as a recourse of individual and interest groups, and law and liberal democratic values. The institutions, processes, traditions and theoretical underpinings of the Canadian legal system will be thoroughly examined, and a treatment of contemporary significant themes in the development of (English) common law included.

Classes 3 hrs. a week. 2 semesters.

312.0   Government and Politics In The United States
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 constitutional 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.

407.0   Government and Politics in The Middle East
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.

418.0   International Law
Prerequisite: Pol 200.0.

A study of the feature of public international law as they have developed and have been invoked in diplomatic practice,

international adjudication, and national courts.

Classes 3 hrs. a week. 2 semesters.

419.0   Comparative Constitutional Law
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 3 hrs. a week. 2 semesters.

420.0   Urban Government and Politics
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.

421.1 (.2)   International Organization
Prerequisite: Pol. 200.

A survey of the early designs for, and primary forms of, institutionalized international co-operation; a study of the structures and the processess of co-operation and conflict within the United Nations, the Commonwealth and other international organizations, both intergovernmental and non-governmental. Attention will be given to the growth and role of international civil service.

Classes 3 hrs. a week. 1 semester.

430.0   Introduction To Public Administration
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.

435.0   Political Thought To The French Revolution
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.

genetic and prenatal factors in development, early socialization, sexual differentiation, cognitive and intellectual development.

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

332.1 (.2)   Cognitive Development
Prerequisite: Psy 201.0, and 331.1 (which may be taken concurrently).

A survey of contemporary theory and research in the development of intelligence, memory, perception, and communication. Piaget's views and their application in education will be considered.

Classes 3 hrs. a week. 1 semester.

348.1   Psychology of Sex Roles
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.

349.2   Drugs and Behavior
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 humans.

Classes 3 hrs. a week. 1 semester.

402.0   Psychology of Sensation and Perception
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 3 hrs. and lab 3 hrs. a week. 2 semesters.

404.0   Introduction to Physiological Psychology
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. 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.

405.0   Human Neuropsychology
Prerequisite: Psy 301.0 and 305.0.

Conceptions of human brain-behavior relationships. The effects of various types of brain lesions on human behaviour. Implications for theories of higher mental functions. Study of neuropsychological assessment techniques.

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

406.0   Ethology
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 3 hrs. a week. 2 semesters.

410.0   Experimental Social Psychology
Prerequisite: Psy 301.0, 305.0, and either Psy 310.1 or 311.2.

The units of study in social psychology are the individual, the dyad (or pair relationship) and the primary group. For each of these units we shall study theories, research methods, and applications which are currently utilized. This takes us into questions about personal social skills, non-verbal communication, language, and wider problems of social conformity, aggression, and interpersonal "trading" in mixed-motive situations of cooperation or conflict. Students are introduced to laboratory experiments which illustrate both the classic and the most recent methods of social psychology.

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

411.0   Industrial Psychology
Prerequisite: Psy 305.0.

The application of psychological concepts to behavioral problems encountered in the work environment. Topics will include group socialization, organizational environments, communication, leadership, decision-making, why people work; job placement, training and performance; occupational health, accidents and safety, retirement and the problems confronting women, minority and unemployed workers.

Classes 3 hrs. a week. 2 semesters.

412.0   Human Information Processing
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. and lab 3 hrs. a week. 2 semesters.

413.0   Environmental Psychology
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 3 hrs. a week. 2 semesters.

415.0   Developmental Clinical Neuropsychology
Prerequisite: Psy 301.0 and 305.1.

Study of neuropsychological disorders in children. Topics include the hyperactive syndrome, disorders in language, in auditory and visual processing, and in attention. Study of tests for the assessment of the various disorders.

Classes 3 hrs. a week, 2 semesters.

421.1   History and Systems of Psychology
Prerequisite: Psy 301.0.

The development of the science of psychology from the ancient Greek philosophers to contemporary behaviorism. Recurrent themes and controversies in psychological theory and method will be examined in the major sub-disciplines, e.g., learning, perception, developmental and abnormal.

Classes 3 hrs. a week. 1 semester.

431.2   Child Psychology II
Prerequisites: Psy 301.0 and 331.1.

An examination of socialization and the development of individual differences in children and adolescents. There will be an emphasis on the development of prosocial behavior and attitudes, such as cooperation, altruism, and moral development. Other probable topics include aggression, egocentrism, television and the child, and child-rearing influences on development.

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

432.0   Abnormal Psychology
Prerequisite: Psy 301.0.

Examination of theoretical, research, and applied aspects of abnormal psychology. Consideration will be given to the description, origin, and planned change of maladaptive functioning. Topics may include the role of social, economic, and political factors in disorder, the history of the area, professional roles.

Classes 3 hrs. a week. 2 semesters.

433.0   Personality Theory and Research
Prerequisite: Psy 301.0 and 305.0.

Comparative analysis of fifteen or more contemporary theories of personality through intuitive, rational, and empirical methods with a view to determining the most promising direction of theorizing about the types, origins and effects of individual differences, in adult behavior and experience.

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

440.0   Educational and Psychological Tests and Measurements
Prerequisite: Psy 201.0 and 305.0.

Basic principles of statistical sampling, psychological measurement and the construction of scales. Test construction: standardization, evaluation of validity and reliability. Tests in common use: intelligence, aptitude, ability, personality, educational, and vocational tests. Special tests: language, clerical, perceptual and vocational selection tests. Clinical tests: personality, psychopathology, impairment and traditional psychiatric classification. Ethics.

Classes 3 hrs. and lab 1^1/$_2$ hrs. a week. 2 semesters.

449.0   Senior Seminar
Prerequisite: senior standing and permission of the Department. Applications for this course must be made in March of the junior year to the Chairperson of the Department of Psychology.

An individual research and/or readings course in psychology.

Classes and lab 6 hrs. a week. 2 semesters.

450.2   Behavior Problems of Children
Prerequisite: Psy 301.0 and 331.1.

A review of problems exhibited by children in home and educational settings, (e.g., autism, depression, hyperactivity, learning disabilities). Approaches to treatment will also be discussed.

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

460.2   Development in Human Infancy
Prerequisite: Psy 331.1 or permission of the instructor.

An examination of the development of behavioral processes of the human infant. Surveys of recent research in infant learning, visual and auditory perception, social and cognitive development.

Classes 2 hrs. and 1 hr. seminar a week. 1 semester.

485.1   Behavioral Analysis and Change
Prerequisite: Psy 301.0.

A review of learning theory as it applies to behavior therapy in man. Survey of behavior modification techniques including relaxation training, counter conditioning, assertive training, token economies, modeling, shaping, and aversive techniques.

Classes 3 hrs. and lab 1^1/$_2$ hrs. a week. 1 semester.

486.2   Advanced Behavioral Analysis and Change
Prerequisite: Psy 301.0 and 485.1.

Cognitive behavior therapy. Self-directed behavior therapy. Special topics in behavior therapy: smoking, alcoholism, drug addiction, obesity, mood change, and improving performance levels.

Classes 3 hrs. and lab 1^1/$_2$ hrs. a week. 1 semester.

498.0   Community Psychology
Prerequisite: Psy 301.0.

Delivery systems of psychological services: social services, agencies, institutions and private practicing professionals. Epidemiological surveys. Preventitive psychiatry. Community psychology. Interventions: individual-social-systems interventions and intersystem relationships.

Classes 3 hrs. a week. 2 semesters.

549.0   Honors Seminar
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.

601.1(.2)   Advanced Psychological Statistics
Prerequisite: graduate standing.

Statistics applied to psychological research, including the logic of statistical inference, hypothesis testing, assumptions underlying parametric and non-parametric tests, advanced univariate and multivariate methods, and various regression methods used by psychologists in applied research.

602.1(.2) Advanced Research Methods
Prerequisite: graduate standing.

The logic of experimental and quasi-experimental methods, including advanced experimental designs and naturalistic approaches to testing hypotheses. Topics may include observation techniques, evaluation research methods, and unobtrusive measures.

603.1(.2) Advanced Assessment
Prerequisite: graduate standing.

Study of the principles of psychological testing: reliability, validity, and interpretation of test scores. Analysis of these principles with respect to selected tests most frequently encountered in practical settings. Students are expected to become proficient in the use of these tests.

604.1(.2) Clinical Assessment
Prerequisite: graduate standing.

A study of assessment procedures commonly used in clinical and counselling settings for planning and evaluating case management. Students will acquire skills in the administration and interpretation of selected instruments, and will practice integrating results in the form of psychological report writing.

605.2(.1) Assessment of Work Behavior
Prerequisite: graduate standing.

A study of the assessment techniques used to select, place, evaluate, and counsel personnel. Procedures used to measure job satisfaction, motivation, and leadership are also discussed. Students are expected to become proficient in the use of the selected test instruments.

606.1(.2) Neuropsychological Assessment
Prerequisite: graduate standing.

Study of the most frequently used tests in the assessment of brain damage. Discussion of the validity of these tests for the different diagnoses of functional and organic disorders of patients encountered in neuropsychiatric settings. Concept of organicity. In addition students will acquire skills in administration and interpretation of currently used instruments.

615.1(.2) Applied Social Psychology
Prerequisite: graduate standing.

Behavior in groups. Social psychology of mental health, group therapy. Group dynamics and decision-making. Group selection procedures and leadership studies. Studying groups in the laboratory and in everyday situations. Social skills training: Its uses in occupational and clinical situations. Cases in social behavior in organizations, e.g., the nursing profession.

The course will utilize the influence of social psychological theory (e.g., field theory) on action research in applied situations.

620.1(.2) Topics in Engineering Psychology
Prerequisite: graduate standing.

Selected topics related to the application of experimental psychology to the study of human factors involved in work, e.g., the description, evaluation and/or design of jobs and equipment; the psychophysiology of human performance; system development; man-machine interactions; accidents and safety.

625.1(.2) Topics in Industrial Psychology
Prerequisite: graduate standing.

An intensive study of current theories and research on a topic selected from the following: employee selection, placement, and evaluation; applied motivation; leadership; communication; decision-making; training in industry.

630.1(.2) Architectural Psychology
Prerequisite: graduate standing.

A study of human behavior related to the design and function of the built environment. Personal space, territorial behavior, crowding, environmental-design guidelines, social institutions and environmental design, methods in environmental research and individual needs in the organization of environment.

640.1(.2) Field Research Methods
Prerequisite: graduate standing.

Research methods as currently applied to a variety of clinical and organizational problems. These methods consist of such special techniques as interviewing programs, their design and concentration, the analysis of interview material, questionnaire construction and administration, attitude surveys; non-participant and participant observational studies, naturalistic observations and field experiments.

Classes 3 hrs. a week. 1 semester.

650.1(.2) Community Psychology
Prerequisite: graduate standing.

A survey of the function of professional psychology in the community. Study of the design, implementation, and evaluation of programs; review of epidemiological research; study of social service agencies and clinical settings, institutions, alternative delivery systems. The ethics and politics of the mental health enterprise.

655.1(.2) Counselling and Psychotherapy
Prerequisite: graduate standing.

A study of short-term counselling and psychotherapy techniques. Emphasis will be placed on what the counsellor actually does. Single case methods for evaluating process and outcome will be reviewed. Consideration will be given to contemporary issues concerning values and ethics.

660.1(.2) Behavior Therapies
Prerequisite: graduate standing.

Study and training in the application of the principles and technology of behavior modification to a variety of human problems. Consideration will be given to biofeedback, modeling, contingency contracting, and token economies. Students will be expected to identify target behaviors and carry out modification procedures. The results of projects will be reported in suitable form for class presentation and discussion.

665.1(.2) Topics in Applied Child Psychology
Prerequisite: graduate standing.

Principles of development applied to children's behavior in community settings. Possible topics include methods of assessment and observation of children, psychological and educational counseling, behavior modification, and special

problems in conducting research with children. Course content will vary from year to year and will be guided by student needs and interests. May be repeated once for course credit.

90.0 Practicum and Directed Readings
Prerequisite: graduate standing.

Supervised training in the application of psychological principles, techniques, and instruments, in various practical settings. Students are expected to accumulate at least 300 hours of practicum training coordinated with relevant readings.

95.0 Thesis
Prerequisite: graduate standing.

Experimental research or field study conducted under the supervision of an advisory committee.
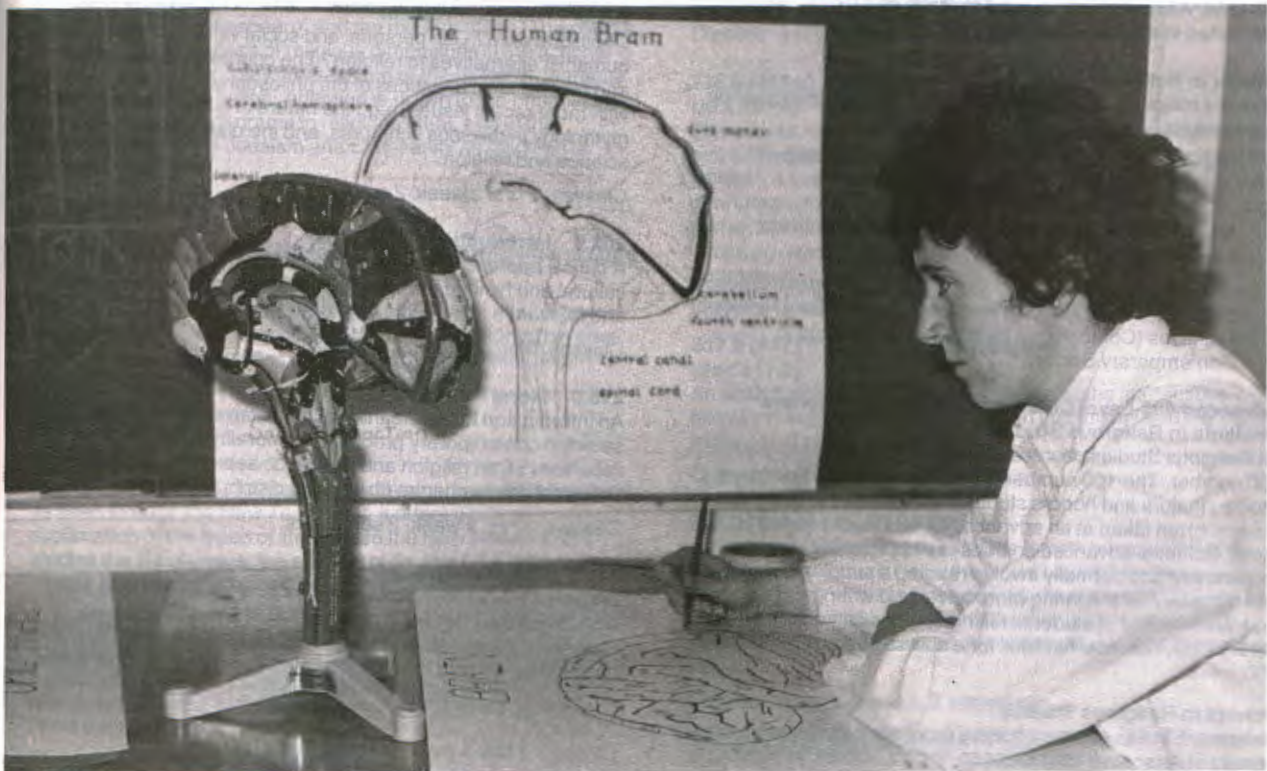
is suffering? Why does Lord Krishna in the *Bhagavad Gita* smile and tell his friend that he must fight in a war? Such questions will focus a survey of basic ideas in the Buddhist and Hindu traditions and an examination of a sacred text such as the Buddhist *Dhammapada*, or the Hindu text, the *Bhagavad Gita*.

Classes 3 hrs. a week. 2 semesters.

324.0 (424.0) Religions of China

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 té Ching*, The Buddhist *Platform Scripture* and selected writings of Chairman Mao.

Classes 3 hrs. a week. 2 semesters

330.0 (430.0) Other People: The Religious Significance of Human Relationships

Friends, acquaintances, strangers, enemies, fools — how are we to understand ourselves in relation to eech 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.

331.0 (431.0) Key Concepts of Christianity: God, Man, and Human Destiny

Stressing biblical sources, this comprehensive over-view traces the development of the dominant themes in Christianity and studies their relevance to present-day moral questions. Each of the two courses (see 332.0, below) is self-contained and may be taken independently. The first asks how a contemporary Christian conceives of God, of the Origins of nature and man, and a human destiny here and hereafter.

Classes 3 hrs. per week. 2 semesters.

332.0 (432.0) Key Concepts of Christianity: Christ, Sin, and Christian Life

Each of the two parts (see 331.0, above) of this comprehensive over-view of Christianity is self-contained and may be taken independently. Rel 332.0 asks how a contemporary Christian conceives of human evil, of human community and religious institutions, and of Christ. The course stresses biblical sources, traces the development of dominant themes, and studies their relevance to present-day moral questions.

Classes 3 hrs. per week. 2 semesters.

335.0 (435.0) Religion in a Scientific Age

Science has been the most dramatically successful adventure of our age. What has been the effect of science on religious understanding? Is there still a conflict between science and religion? Can science disprove or prove religious claims? Can there be constructive conversations between scientists and humanists about ultimate issues? No previous understanding of scientific method is required for this course.

Classes 3 hrs. a week. 2 semesters.

338.0 (438.0) Problems in Contemporary Catholicism

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.

340.0 (440.0) Social Ethics: Man and Freedom in a Technological Society

What is human freedom? Does technology set us free to act creatively or does it impose a constraining boundary on our freedom? The course examines the relationship between Christian and other accounts of the idea of freedom and modern technological society. The purpose is to understand the problem of ethical choice in a pluralistic, Canadian setting.

Classes 3 hrs. a week. 2 semesters.

345.0 (445.0) Theology of Love and Sexuality

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.

346.1 (446.1) Religion and The Social Order

Employment opportunities frequently lead university graduates into business, into science and technology, or into careers associated with government — activities which society has traditionally linked to religion only in weak, external ways. In this course the student is led to work out an understanding of the relationship between these specific activities and ultimate human well-being. Two issues are studied: In what ways does religion influence one's attitudes to work? And, how does religion, which preserves society, become for some the force which must overturn the social order?

Classes 3 hrs. a week. 1 semester.

347.2 (447.2) Ecology and Religion

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.

348.1 (448.1) God in Human Experience

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.

350.0 (450.0)   Religion and Nationalism in Canada
(Soc 350.0)
What is a Canadian? How have the religious traditions of French
and English Canada helped shape Canadian identities? The
course examines the relationships between religion and
nationalism in the context of Canadian society and history.

Classes 3 hrs. a week. 2 semesters.

351.1 (451.1)   Love
Our culture has represented love, variously, as effecting
self-fulfillment, the affirmation of another personality, union with
deity, merit for a future life; or, as sex, a passing neurosis, an
unreasoned self-annihilation, or a social contrivance. This course
explores the assumptions and implications of these views,
particularly as they involve ultimate human concerns, that is,
religion. The course can be continued into Rel 352.2 where a
coordinate theme is studied in a similar manner.

Classes 3 hrs. a week. 1 semester.

352.2 (452.2)   Death
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.

490.0-495.0   Reading Courses in Religious Studies
Prerequisite: permission 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.

590.0-595.0   Honors Seminars in Religious Studies
Prerequisite: fifth-year honors status and permission of the
Department.

The three general areas in which the Department offers courses
are noted below together with the courses which fall into each
area:

Religion in Contemporary Society

201.0	330.0 (430.0)	347.2 (447.2)
215.0	335.0 (435.0)	348.1 (448.1)
230.0	338.0 (438.0)	350.0 (450.0)
315.0 (415.0)	340.0 (440.0)	351.1 (451.1)
316.0 (416.0)	345.0 (445.0)	352.2 (452.2)
317.0 (417.0)	346.1 (446.1)	

History of Religions (Comparative Religion)

100.0	240.0	324.0 (424.0)
235.0	323.0 (423.0)	

Religion in Western Civilization

202.0	307.0 (407.0)	318.0 (418.0)
255.1	309.0 (409.0)	331.0 (431.0)
305.0 (405.0)	310.0 (410.0)	332.0 (432.0)
306.0 (406.0)	313.0 (413.0)	

Sociology

Chairperson, Associate Professor	H. Veltmeyer
Associate Professors	L. Christiansen-Ruffman
	P. Connelly
	R. Cosper, S. Halebsky
	I. Okraku, M. Overington
Assistant Professors	D. MacInnes
	D. Perrier, H. Ralston

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 complete a core program of three required courses: Introductory Sociology (Soc 200.0), Research Methods (Soc 300.0), and Sociological Theory (Soc 301.0) and three electives one of which must be at the 400 level. All 400 level courses are taught on a seminar basis and apply questions of theory and method to the sociological analysis of a specific problem. Ordinarily the prerequisites are Soc 200, 300 and 301.

In addition, a sociology major must complete three courses from allied fields (anthropology, economics, political science, psychology) one of which must be at the 300 or 400 level. With the Department's permission, another field may be substituted. 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.

200.0   Introductory Sociology
An introductory study of sociological perspectives and concepts; human 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.

300.0   Research Methods
Prerequisite: a course in sociology.

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.

301.0   Sociological Theory
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.

302.0   Social Problems
Prerequisite: a course in sociology.

Major social problems affecting Canadians will be analyzed. These range from alcohol use and sexual behavior to poverty and mental health. The part played by interest groups and social movements in defining and reacting to these problems will be a focus of the course.

303.0   Criminology
Prerequisite: an introductory sociology course.

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.

304.0   Deviance
Prerequisite: a course in sociology.

This course attempts to explain how social disrepute can be attached to acts which deviants themselves might consider to be innocent or vicious. The course will establish that the method of defining deviance is essential for considering what types of deviants exist, how they might be enumerated, what life experiences they will enjoy or suffer, and how their behavior can be explained.

305.0   Social and Economic Development
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.

306.0   Sociology of Education
(Edu 507.0)
Prerequisite: a course in sociology or enrolment in Education.

A study of major sociological approaches (both conceptual and methodological) to education in different societies, with special emphasis on Canadian society. The course will focus on topics such as relationship between family, education and society; education and inequality; the social organization of knowledge; education and social change; the politics of education.

308.0   Urban Sociology
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.

311.1 (.2) Population
Prerequisite: a course in sociology.

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.

313.0   Sociology of Kinship and Family
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.

316.0   Organizations: A Sociological Approach
Prerequisite: a course in sociology.

This course will give some historical dimensions to the increasing complex organization of modern societies; it will examine some of the approaches to understanding the functioning of large government and corporate bureaucracies; it will survey the position of these instrumentalities of power in the social, political, and economic spheres. Particular attention will be given to the varieties of human action that constitute modern complex organizations.

317.0   Sociology of Religion
(Rel 317.0)

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.

318.0   Social Change
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.

320.0   Women in Canadian Society
Prerequisite: a course in sociology.

The analysis of the structural and cultural conditions which have determined the position of women at various stages in Canada's development, with particular emphasis on Atlantic Canada. The process of sex-related socialization will be considered as well as the consequences of sexual differentiation on the familial, educational, occupational, legal and political status of women. This course may be taken: in conjunction with the Atlantic Canada Studies Program; in conjunction with a concentration in sociology; as a social science elective.

321.0   Canadian Society
Prerequisite: a course in sociology or economics.

A political economy perspective on the conditions created by the regional and class structure of Canadian society. Emphasis is placed on problems of regional development, the role of business, and the corporate structure of the Canadian economy. Among the major problems to be considered are the relationship between Atlantic Canada and Central Canada; the Quebec question; native peoples and northern development.

322.0   Political Sociology
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.

323.0   The Individual and Society
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?"

324.0   Social Stratification
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.

325.0   Social Service and Welfare
Prerequisite: a course in sociology or related work experience.

In the context of sociological concepts and theory the course will examine the field of social welfare, income security, the organization and function of welfare systems, and the political and ideological implications of welfare organizations and regulations.

326.0   Sociology of Crisis Intervention
Prerequisite: Soc 300.0 or permission of the instructor(s).

Emphasis is placed on the understanding and the investigation of the social significance and impact of the Distress Center phenomenon within our society. The course itself provides students with two learning experiences. On one level it enables students (a) to gain practical experience working with a social agency, and (b) to make participant observations. On another level students will be sociologically investigating and reporting (in a theoretical or research paper) an aspect of Crisis Intervention.

327.0   Social Policy
Prerequisite: a course in sociology.

This course analyses the process by which public policies are formulated, the influence of particular social groups (politicians, bureaucrats, professionals, citizen interest groups) during the

policy formulation process, the social implications of public policies and the nature and purpose of social policy research. The lectures focus on policy-making as it affects Atlantic Canada and each student specializes in a policy area of his or her choice (e.g., welfare, education, rural or northern development, energy, employment, health planning, defence, etc.).

332.0 Sociology of Atlantic Canada
An in-depth study of the social organization, institutions and customs of the Atlantic Region of Canada with a concentration on those social movements, ethnic-religious groupings and patterns of socio-economic change that best characterize the life-style of Newfoundland, New Brunswick, Nova Scotia and Prince Edward Island. This course may be taken: in conjuction with the Atlantic Canada Studies Program; in conjunction with a concentration in sociology; as a social science elective.

333.0 Social Movements
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 a comparative focus, with attention to Canadian social movements in this century. Social gospel, agrarian socialism, trade unionism, social credit, cooperatives, and nationalism will be examined as diverse expressions of Canadian social life.

334.0 Studies in Selected Societies and Cultures: U.S.A.
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.

In 1980-81, this course will deal with the United States of America. The principle sociological properties of United States society will be described, and the major historical themes, values, and institutional structures defining and shaping American society will be considered. Some comparisons and contrasts with Canadian and other industrial societies will be made. Contemporary dilemmas and issues will be discussed.

335.0 (435.0) Quantitative Methodology
A second course in research methods which expands the treatment of quantitative analysis of sociological data initiated in Soc 300. Students engage in practice at actual sociological research using specially designed exercises and available tapes of survey data. The course covers sources of quantitative data in sociology, measurement of social variables, construction of scales, sampling techniques for interview studies in sociology, analysis of sociological data, introduction to computer use and presentation of results of quantitative research. The class work and exercises will form the basis of an individual research project which each student will complete as the major assignment.

336.1 (.2) Work and Occupations in Contemporary Society
Prerequisite: a course in sociology.

This course presents an overview of the work of sociologists on occupations. Occupations are studied as an important role in contemporary society. The professionalisation of occupations is treated as are other changes in occupational structure and work

conditions. The question of how people select or are selected for occupations is discussed. Other topics analysed are occupations and culture, learning work roles, identification with occupations, career patterns, change in occupational structure, work setting, occupational ideologies, and influences of occupational roles on other aspects of life.

337.1 (.2) Leisure in Contemporary Society
Prerequisite: a course in sociology.

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.

340.0 Ethnic and Minority Groups
Prerequisite: a course in sociology or anthropology.

An analysis of racial, ethnic, and minority group structure and of inter-group processes in different societies, with special emphasis given to Canadian society.

342.1 (2.) Social Interaction
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.

343.1 (.2) Society as Drama
Prerequisite: a course in sociology.

An effort to present a dramaturgical perspective on society is made. The scope and limits of this approach are explored and students introduced to its application through observational exercises. If "all the world's a stage", what's the play about?

344.0 Asylums, Prisons, and Other Total Institutions: The Inmates' View
Prerequisite: Soc 200.0.

The focus of this course is on institutional methods for the management and treatment of people classified as criminal or mentally ill and the consequences that these methods have for people who are institutionalized. It outlines the historical development of prisons and mental hospitals during the nineteenth century and before, and examines recent sociological studies of the inmate view of imprisonment and mental hospitalization. Attention will also be given to autobiographical accounts of ex-prisoners and mental patients and to the professor's own study of women's experiences in Canadian prisons. Finally, critiques of institutional methods for dealing with the criminal and the mentally ill will be discussed.

Seminar: 3 hrs. a week. 2 semesters.

348.0 Men and Women: Field Research on Sex Roles
Prerequisite: Soc 200.0.

This course gives an introduction to the main strands of sociological research on sex roles. Specifically, it covers research on the division of tasks and responsibilities within the

family, on the role of the housewife, and on women's position in the labour force, in the professions, and in education. Most of this research is concerned with women, but changes in women's role and in women's social position clearly have implications for men, too — for the way they view their own lives and members of the opposite sex. Class discussion will focus on the relevance of sex role research to men as well as women. Students will, in addition, be required to carry out a fieldwork research project of their own choosing that relates to the issues discussed in class.

Seminar: 3 hrs. a week. 2 semesters.

350.0   Religion and Nationalism in Canada (Rel. 350.0)
What is a Canadian? How have the religious traditions of French and English Canada helped shape Canadian identities? The course examines the relationships between religion and nationalism in the context of Canadian society and history.

351.1 (.2)   Contemporary Issues in Sociology
Prerequisite: a course in sociology.

The course will provide an opportunity for students to study contemporary substantive issues in considerable depth and detail.

401.0   Communication and Media
Prerequisite: permission of Chairperson.

The course will consider how communication shapes our human world. First, we shall lay a groundwork from which to understand society and individual persons within a communications framework. Second, we shall spend time on two important forms of communication — bureaucratic and political. Finally, we shall look at the influence of the media — print, audio and visual — in shaping us and our world. Students will examine and discuss a variety of materials and prepare a project.

402.0   Philosophy of the Social Sciences (Phl 402.0)
Prerequisite: permission of Chairperson.

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.

403.0   Selected Studies in Sociological Analysis: Third World Urbanization
Prerequisite: permission of Chairperson.

A survey of the major properties of urbanization in the developing nations. Topics to be covered include processes of urban growth, urbanization and underdevelopment, and urban migration, as well as urban life, proverty, housing settlements, and social policies, among other subjects.

405.0   Selected Topics: Sociology of Labor
Prerequisite: permission of Chairperson.

A seminar course which examines questions within an area of specialization and enables a student to study a particular sociological problem in detail. This course will analyze the changes in the occupational and industrial structure of Canadian society and the effects of these changes on the working population. Major themes of the course are the evolution of labor

processes within occupations, the shifts of labor among occupations, the increasing labor force participation of women, the role of trade unions, the underemployment and unemployment of Canadian workers.

407.0-408.0   Directed Reading in Sociology
Prerequisite: permission of Chairperson.

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.

420.0   The Political Economy of Regional Development
This course will examine sociological models and theories of economic development and apply them to a number of regional problems based on the social organization of economic production. Analysis will focus on various regional formations of the world capitalist system, with a case study approach to problems of Atlantic Canada. Such problems will include the sociology of rural decline and urban development, industrialization, single-industry dependence, industrial location, disparities of jobs and income, etc.

425.0   Ownership and Control: Corporate Power
This course will analyze the structure of economic and political power from a sociological perspective. Units of this analysis are the dominant corporations of the Canadian economy and, at the regional level, of the Atlantic provinces. Both theoretical and methodological issues of corporate research will be explored in some depth.

430.0   Modern Sociology
Prerequisite: permission of Chairperson.

The course examines the relationship between sociological theory and research in terms of specific theoretical propositions and related research findings. Students may be required to design and execute a research project, and their active participation in the course is stressed.

431.0   Selected Topics: Law in Society
Prerequisite: permission of Chairperson.

An in-depth study of the relationship between law and society. This course will examine law as a product of a social system and as an instrument of social change. Emphasis will also be placed on the social forces affecting judicial behavior and the determinants and purposes of legislation as the link between values and interests. Attention will also be directed to law as a profession, and jurisprudence as an evolving discipline with special emphasis on issues in the administration of justice.

450.0   Selected Topic: Society and Change in West Africa
In this seminar, an analysis of population, socio-economic and political changes in selected West African countries during pre-colonial, colonial and post-colonial times will be undertaken.

453.0   Seminar in Sociological Analysis: Citizen Participation in Community Planning
Prerequisite: permission of Chairperson.

A senior course which examines selected methods of analysis in sociology. This course will focus on citizen participation in community planning. It will combine the reading and discussion of

sociological works with an examination of case studies in citizen participation. These case studies will be supported by and based on first hand research in the Halifax/Dartmouth area and/or elsewhere in Atlantic Canada during the year. In these projects, seminar members will work independently and/or cooperatively on a series of agreed upon problems. Major topics involve historical and current perspectives on the issues in citizen participation.

455.0 Penology
Prerequisite: permission of Chairperson.

A seminar which examines selected topics within an area of specialization and enables a student to study a particular sociological problem in detail. This course traces the history of penal methods and the development of contemporary corrections. The Canadian correctional apparatus is examined in relation to current issues and proposals. Correctional methods, problems, and efficacy are considered in some detail, in institutional programs, and in community programs. Correctional processes as these related to typologies of offenders, and special problems of female, youthful, and persistent offenders will be examined.

530.0 Honors Seminar
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.

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.

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 specialized 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 Dean of Arts. Suggested courses are:

English
300.1; 301.0; 304.0; 413.0

Economics
101.0; 313.1; 314.2

Geography
320.0

History
200.0; 203.0; 204.0; 221.0; 304.0; 311.0; 315.0; 341.0; 501.0; 521.0

Modern Languages and Classics

Classics
120.0; 303.0; 304.0; and 305.0

French
100.0; 200.0; 300.0; 301.0

German
100.0; 200.0; 250.0; 301.0

Spanish
101.0; 201.0; 406.0

Philosophy
442.1; 443.2; 444.1; 445.2

Political Science
306.0; 553.0

Religious Studies
202.0

Sociology
301.0

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

Section 6

Financial Information

Financial Information

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.

> **Note:**
> **Because this Calendar was compiled prior to the announcement of fees for the 1980-81 academic year, the information contained in this section refers to 1979-80 and is therefore subject to revision prior to 1 September 1980.**

1. Fees

Fees indicated here are those for the 1979-80 academic year and are subject to change.

a) Tuition Fees
Full-time students —

University Fee	$835.00
Students' Association Fee	62.00
(see note)	
	$897.00

Part-time students —

Each full-credit course	$180.00
Each half-credit course	90.00

b) Special Fees

Graduation:	Degree or Diploma	$20.00
	Binding of 3 copies of Master's Theses	20.00
Official transcript		1.00
Special examination		10.00

Note: By authority of the Students' Council all non-Canadian students who are not eligible for medical coverage under Nova Scotia Medical Services Insurance will be assessed a fee to provide them with a medical insurance. In 1979-80, this fee was $97.92.

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 plus a supervisory fee of $70.00, if under a thesis supervisor at the commencement of each academic year until the thesis is completed.

4. Residence Accommodation and Fees 1979-80

Residence Fees cover accommodation for two full semesters.

a) Food Service

The University provides food service at two campus locations during the academic year: the Students' Centre Cafeteria, open Monday to Friday from 8 a.m. to 6 p.m., and the Residence Dining Hall, where breakfast, lunch and dinner are served Monday to Friday inclusive, and brunch and dinner are served on Saturday and Sunday.

b) Meal Plans

Residents of Vanier House and the Loyola Residence are required to purchase meal plans. The following meal plans are available for 1979-80.

(1) Coupon Plan

The Coupon Plan is the basic meal plan for Residence students. Under this plan students are required to purchase a minimum of 1,344 coupons per semester at a cost of $510.00. Additional coupons can be purchased at a 28% reduction from the base plan.

The coupons can be used at any food outlet at the University for food only during the following periods: from the first day of residence registration, September 4, to the final day of examinations in the first semester, December 18, and from the first day of classes in the second semester, January 7, to the final day of examinations in the second semester. In 1980-81 the Residence Dining Hall will offer an unlimited-seconds menu for all meals for a thirty-week period (September 5 to December 16 in the first semester, and January 7 to April 22 in the second semester). An à-la-carte service will also be offered at lunch in this dining hall during the thirty-week period and at other periods during the academic year. Coupon costs for meals on an unlimited-seconds basis are as follows:

Breakfast:	6 coupons
Lunch:	9 coupons
Dinner:	12 coupons

Students on the Coupon Plan may use their food coupons in the Students' Centre Cafeteria, University Food Store, canteens at various events and for special events or meals provided during the academic year.

(2) 14 Meal Plan

The University will offer, as an option, a Fourteen (14) Meal Plan which entitles a boarding student to any fourteen (14) meals chosen by him during any calendar week for a period of thirty weeks (September 5 to December 16 and January 7 to April 22). All meals on this plan are on an unlimited-seconds basis and restricted to meals served in the Residence Dining Hall only. For additional information on this plan, please contact the Director of University Residences.

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 University Residences in writing.

c) Edmund Rice Residence (High Rise I)

Furnished apartments (four students to each) for unmarried students contain living room, kitchen, two double bedrooms and bathroom.

...ority.

...olarship Eligibility — The formula used by the Senate
...olarship Committee to determine scholarship eligibility. The
...mula is arrived at annually from the academic performance of
...top 10% of full-time students carrying five courses during the
...ceding year.

...monstrators and Teaching Assistantships — In some
...partments positions as laboratory demonstrators or
...earch/teaching assistant are available for Saint Mary's
...dents. For more information please contact the appropriate
...artment.

...nds Administered by Saint Mary's University, ...0-81

...pecial Entrance Scholarships
...nditions: A limited number of special entrance scholarships
...available to students from Nova Scotia who live beyond
...mmuting distance from the University. To be eligible students
...st be in Grade XII and must have maintained the highest
...umulative scholastic average.

...ue: The cost of tuition and fees as well as a single room with
...ard. Equal in value to $2,700.00 to $3,000.00.

...ation: One year. Renewable for up to two further years (three
...Commerce) providing the holders maintain high academic
...ndings at Saint Mary's. Recipients are not required to reapply
...h year.

...ther Entrance Scholarships
...ndition: Candidate must be a resident of Canada.

...ue: $200.00 to $1,500.00.

...ation: One year. All of these other entrance scholarships are
...ewable up to a maximum value of $1,000.00. Students are
...ised that they must apply before May 31 for consideration of
...ewal of the award for the following academic year.

...Achievement Scholarships
...nditions: Candidates must qualify according to the Regulations
...Scholarship Holders.

...ue: $200.00 to $1,000.00
...ation: One year. Renewable each year the student
...gresses satisfactorily towards a first degree while attending
...nt Mary's University.

...gulations for Undergraduate Scholarship Holders at
...nt Mary's University
  By 31 May candidates for scholarships must apply each
  year to the Financial Aid Officer.
  Each award is granted for one year only. However,
  scholarships may be renewed each year on a competitive
  basis, providing the students apply and qualify.
  Students are responsible for notifying the Financial Aid
  Officer of late course completions and grade changes which
  were not recorded at the time when scholarship applications
  were filed. These must also reach the Financial Aid Officer
  by 31 May.
  In order to be considered for an achievement scholarship
  students must have completed at least five full courses (or

other institutions during the regular academic year and
accepted as transfer credits at Saint Mary's University will
be considered by the Senate Scholarship Committee.
Courses taken in summer sessions will not be considered.
5. Students who receive scholarships from Saint Mary's must
register in at least five full courses (or the equivalent in half
courses) in order to be eligible for the scholarships for that
academic year. An exception will be made for graduating
students who require only three or more full courses(or the
equivalent in half courses) to complete their degree
program.
6. Students will lose their scholarships should they change
their status from full-time to part-time or withdraw from the
University. Students who are full-time in one semester and
part-time in another will receive only half of their
scholarship.
7. Students who receive scholarships and fail to qualify for a
renewal may reenter the competition for scholarships
should they subsequently qualify.

Included in the Scholarships and Bursaries 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.

William J. Dalton Memorial Scholarship
Established in 1976 through the contributions of his former
students, colleagues, and friends, the interest from the memorial
fund will be used to provide a scholarship each year. Applications
for this award are to be forwarded to the Director of Financial Aid,
Saint Mary's University.

Eleanor M. Florian Scholarship ($300)
Open annually to all students.

*Ford Motor Company of Canada Engineering
Scholarship ($700)*
Open annually to a second year engineering student.

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.

Barbara Flanders Goldberg Memorial Scholarship ($500)
Established in 1977 by Jon and Victor Goldberg in memory of
their mother. Open to a student in the Commerce Faculty who
has expressed an interest in pursuing a career in Public
Administration.

Regis College Prize
Established in 1977 by Regis College, on the occasion of Saint
Mary's 175th Anniversary. To be awarded each academic year to
a student in Religious Studies, according to criteria and
procedures to be determined by that Department.

Saint Mary's Faculty Women's Association Scholarship ($500)
Established by the Faculty Women's Association in order to

provide scholarship money for a student enrolled in a degree (or diploma) program beyond the first year of study. This scholarship will be awarded annually and will be based on academic achievement.

IV. Bursaries:
A small number of bursaries are awarded on the basis of financial need. Included in the bursaries administered by Saint Mary's University are the following endowed gifts:

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.

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.

V. Funds Administered by the Donor
For information regarding this type of award, students are asked to contact the Financial Aid Officer, 4th floor, Student Centre, Saint Mary's University, (902) 422-7361, extension 126.

VI. Funds 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
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 $1,800, 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 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 B3H 1P9
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 Fredericton, 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

Student Services

Student Services
At Saint Mary's University the Student Services area encompasses Chaplaincy, Counselling, Health Services, Cultural and Recreational Activities (including Athletics and the Art Gallery), Financial Aid, the Canada Employment Centre, and Student Discipline.

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.

The Roman Catholic Chaplaincy is found in Room 200 of the Loyola Residence; weekday Mass is provided in the two chapels of the residence complex. In addition, a special University Mass is held every Sunday in Canadian Martyrs' Church located on the edge of campus. Protestant and Jewish services are available in nearby churches and synagogues.

Pastoral guidance is available from the University Chaplain and from clergymen of all major denominations.

Counselling Services
Counsellors (located on the 4th. floor of the Student Centre) are available at all times to provide free, confidential, individual assistance to any registered student. Their services include:

Personal Counselling — Help with social, family and emotional problems, adjustment conflicts, interpersonal difficulties, and problems associated with drug and alcohol use. Medical and professional referral is available when necessary.

Freshman Orientation — New students are offered assistance in planning courses, making adjustments to residence living, obtaining accurate information on entry into professions, occupations, etc.

Career Information and Vocational Counselling — University calendars, occupational-vocational monographs, application forms for admission tests to graduate schools are kept on file, and assistance is offered to facilitate course selection and career decision-making.

Handicapped Students — A service for disabled students is offered out of the counselling service. Much of this work involves helping blind students with their special problems of study methods and mobility as well as helping any student with a physical disability requiring special consideration or special attention.

Study Skills Program — Consists of a series of videotaped and sound-slides presentations covering such topics as student efficiency, self-control strategies, notetaking and outlining skills and essay writing. Assistance is available to help students with this program.

Student Health Services
The Health Services Department is located on the 4th. floor of the Student Centre. It provides the students with the same service they would receive from their family doctor. Referrals to specialists may be made through the clinic.

Office hours are 9 a.m.-12 noon and 1:30-4:30 p.m. Monday through Friday. A nurse and secretary are in the office during the day. Students are welcome to visit the nurse anytime during office hours. The Doctor's office hours are 1:30-4:30 in the afternoon only. It is preferable that students make an appointment to see a doctor.

Students are required to submit a completed medical report to Health Services at the time of first registration. This report is treated confidentially and will not be available to anyone else without the students' written permission. It is the responsibility of all students to see that they have adequate medical coverage.

To make an appointment at Health Services call 422-7361, Ext. 137. During the evening or night a physician may be reached at 425-6230. For emergency service call 428-2042 or go directly to the Victoria General Hospital Emergency Department, 1278 Tower Road. Emergency services are also available at the Halifax Infirmary, 1335 Queen Street, telephone: 428-2784.

Medical Insurance
Each year the Students' Representative Council decides which insurance company will carry the health plan and they, along with the insurance company, are responsible for the administration of the plan.

(1) **Full-Time Students (Canadian and Non-Canadian)**
An extended health care plan arranged by the Students' Representative Council is compulsory for all full-time students. This plan includes such benefits as prescription drugs, ambulance service, accidental dental, private duty nursing, private or semi-private hospital not covered by provincial plans. The premium for a single student is $10.18 and is included in the Student Council fee which is paid by all full-time students.

Full-Time Canadian Students
All Canadian students — with the exception of those residing in the Yukon or North West Territories — are either covered or have access to basic hospital and medicare coverage *in their province of domicile*. It is the students' responsibility to see that they are in good standing with the Provincial Hospital Insurance Commission in the province of origin. If the province requires monthly payments, the students must make certain they are properly enrolled and maintain payments.

Full-Time Non-Canadian Students
Students not eligible for basic Canadian hospital and medicare coverage *must* be insured by the Blue Cross comprehensive health and hospital plan which has been arranged through the Students' Representative Council. The premium is $97.92 (1979-80 fee, subject to change) and is payable with the first installment of tuition fees.

Students who provide proof at the time of registration that they have comprehensive medical coverage with another company are exempt from the compulsory comprehensive coverage with Blue Cross.

(2) **Part-Time Students**
Part-time students are not eligible for either the extended or the comprehensive health plan.

Art Gallery
Designed and constructed to National Gallery of Canada standards, Saint Mary's University gallery is located on the ground floor of the Ignatius Loyola Building.

Opened in October, 1971, the gallery was the first University Art Gallery in Halifax. The initial exhibition consisted of sculptures and graphics by Eskimo artists and since then approximately 150,000 visitors have attended 700 exhibitions and other cultural events.

The Gallery also sponsors lectures and slide demonstrations on the history of Canadian Art, and life drawing and painting classes by the University Artist-in-Residence.

The Halifax public as well as the University community has been able to view the work of internationally known artists at Saint Mary's University; for example: an exhibition of works by George Roault, Wilhelm Webels, Otto Dix and Harold Town; an exhibition of contemporary Christian Art, Ars Sacra '77, which included works by Graham Sutherland, Bernard Buffet, Salvador Dali, Carol Fraser, and Bruno Bobak; an exhibition, *In Memoriam,* of the works of Miller G. Brittain; for the first time in Canada, an exhibit by Friedensreich Hundertwasser, the Austrian Master of Ornamentalism; and, more recently, a display of primitive art and artifacts from Papua New Guinea.

A permanent collection of Nova Scotia Pottery exists at Saint Mary's University Art Gallery in which potters such as Alma and Ernst Lorensen and Max Roulston are represented. The University Art Collection has been made possible through the generosity of private donors and organizations who have enjoyed the facilities of the Art Gallery.

Music at Saint Mary's
The Saint Mary's University Concert and Stage Bands provide an opportunity to develop musical talents. Under the direction of award-winning Bandmaster, Ron MacKay, group instruction in brass, woodwind and percussion instruments is offered. The program covers a period of twenty-seven weeks with one hour of group instruction prior to each band rehearsal. This group instruction is provided at no cost for those participating in the band.

Students from other universities and musicians from the community are invited to join Saint Mary's University students and staff and should contact the Music Coordinator for further information. (Phone 422-7361, ext. 120).

Recreation and Athletic Programs
The Department of Athletics organizes a variety of athletic activities on a number of different levels, providing an opportunity for students at Saint Mary's University to participate in some aspect of the total program. The Intramural and Recreational Programs are designed to promote fun, recreation, and sportsmanship by encouraging students to compete on a friendly basis. Emphasis is placed on participation.

The Representative Program offers competition at a high level of excellence and, as a member of the Atlantic Universities Athletic Association and the Canadian Interuniversity Athletic Union, Saint Mary's participates in regularly scheduled and tournament sports with other universities in the Atlantic region and non-conference competitions arranged with teams across Canada and the United States.

Representative (Men)
Soccer
Football
Ice Hockey
Basketball
Rugby
Broomball

Tournament
Volleyball
Tennis
Golf
Skiing
Badminton
Curling
Fishing
Wrestling
Bowling

Recreational
Table Tennis
Swimming
Keep-fit Classes
Badminton
Scuba Diving
Skating
Dancing
Judo
Yoga
Karate

Representative (Women)
Field Hockey
Basketball
Ice Hockey

Intramural
Softball
Football
Volleyball
Basketball
Broomball
Floor Hockey
Ice Hockey
Soccer
Badminton

On Campus Facilities
Alumni Arena
Huskies Stadium
Gymnasium
Swimming Pool
Tennis Courts
Combatives Room
Recreation Room
Weight Room
Practice Field
(Golf, Curling, and
Skiing facilities are
available off-campus)

Activities and Facilities

Centres and Institutes

Student Organizations

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' Association

Incorporated in 1966, the Saint Mary's Students' Association is the official representative organization of the students of Saint Mary's University. Every full-time student is a member of the Association.

The goal of the Association is to promote and represent the interests of its membership. The Association seeks to foster understanding and fellowship between all sectors of the university community as a whole. It also coordinates artistic, literary, educational, social, and recreational activities for Saint Mary's students.

The Journal

The Journal is the official undergraduate newspaper of the Saint Mary's University Students' Association, providing coverage of campus and community events which are of concern to students. Through its membership in the Canadian University Press co-operative the Journal gives a national perspective of student issues.

Journal staff members are full and part-time students who contribute their time at their own level of commitment. Anyone may become a staff member and the paper is always in need of interested people. You can become involved in any facet of the newspaper from photography and newswriting to design and advertising sales. No skills are necessary. The Journal is a good opportunity to acquire new skills and experience. The Journal is located on the fifth floor of the Student Centre.

Radio CFSM

Radio CFSM can be heard in the cafeterias and the Student Centre by carrier current. Students living in the on-campus residences can pick up the station at 660 on the AM dial.

The station will require staff for the upcoming year if the station is to be successful. The purpose of the Radio CFSM is not to turn you into a top-notch disc jockey or a technical engineering master. It is more interested in giving people an insight into the world of radio and an opportunity to develop their own ideas and concepts.

There will be a recruitment drive during September so if you are interested, watch for signs.

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 Anthropology Society is open to all students interested with the majority of its members being Anthropology majors. Activities include guest speakers and the seeking of pertinent summer employment. A collection of material pertaining to graduate study programs and career options was started in 1974 and will be expanded this year.

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.

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.

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.

The Chinese Christian Fellowship

The Saint Mary's Chinese Christian Fellowship, made up mostly of students and alumni, is open to all Saint Mary's University students. The major purpose of the Fellowship is to foster relations between Chinese students and other sections of the University community, through Christian fellowship and study.

Chinese Students Association

The CSA is an informal society which is open to all students. Its prime goal is to facilitate social interactions among students and to promote Chinese culture. Many social gatherings are scheduled each year such as barbeques, skating parties and the annual Chinese New Year celebration.

CIC-Chapter of Chemistry Institute

The Student Chapter of the Chemistry Institute of Canada at Saint Mary's University is affiliated with the parent organization which is the professional organization uniting chemists across Canada and which has ties with similar organizations world wide.

The Society serves a varied purpose and sponsors social and educational functions as well as acting as a liaison between students and faculty-administration by electing two student members to departmental committees.

Under the educational functions, the Society sponsors tours to places of interest to chemists such as Bedford Institute of Oceanography, local oil refineries and local breweries. Throughout the year speakers are invited to lecture on topics of current interest. In addition to the educational services the society

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.

Artist-in-Residence

The artist-in-residence program is designed to cover the spectrum of the Arts with the intention of developing a varied program for both the University and the community at large. Not necessarily limited to musicians and the Fine Arts, the program is designed on a broad scale and intended to enrich the lives of both students and citizens.

Saint Mary's artist-in-residence program has included such outstanding artists as Israel-born pianist Shulamit Ran; bassoonist George Zukerman; Halifax painter C. Anthony Law, and Cape Breton native and New York based vibrophonist Warren Chiasson.

In the past the artists have conducted instructional sessions with the University's music program, workshops for community musicians and artists, the local school music program, and various performing sessions including public concerts.

Facilities

Library

A new $3,000,000 library was officially opened on campus in June 1976 and named in honor of the late Patrick Power, a generous benefactor of Saint Mary's since its early years as a college.

In 78,000 square feet of space, the three storey structure provides seating capacity for 25% of the current student body and accommodation for 300,000 volumes. In addition, it houses the periodical collection, rare books, journals, newspapers, the reference collection and microforms. Annual reports of major corporations are also available, as well as telephone directories, academic calendars of universities in Canada, the United States and abroad, texts of important speeches, and various press releases and brochures.

The library subscribes to a number of information retrieval systems including CAN/OLE, DIALOG, ORBIT, and QL. These systems provide access to a large number of computerized data bases covering a wide range of subject areas in science, technology, the social sciences, business and economics. From these data bases one can generate a list of recent references on almost any topic. These references are usually to periodical articles on research reports.

The Multi-Media Centre is the central area of Audio Visual Services and is located on the third floor of the library. All requests for services and equipment are funneled through the Multi-Media Centre. It consists of staff offices, equipment storage room, and provides playback facilities for audio and video cassettes, slides, films, filmstrips, film loops, recorded plays and classical music selections, as well as a previewing service. A Study Skills program is also available in cooperation with Student Services.

The Language Laboratory, located on the second floor of the Ignatius Loyola Building, provides individual carrels where students may listen to a variety of language tapes at a speed suitable to the student's requirements.

The Video Room, located on the second floor of the Archbishop McNally Building, has facilities to playback video cassettes or reel to reel tapes for groups of up to 50 people. Small productions may be undertaken here.

Audio Visual Services is an up-to-date facility of the Patrick Power Library.

To assist students in making the most efficient use of library facilities, instruction at beginner and advanced levels is offered to groups and individuals. Students are informed of optional use of other libraries in the Halifax area and, through inter-library borrowing, those in other parts of Canada.

A conference room and discussion rooms are available for groups of varying sizes, and typewriters and photocopying services are also provided.

Computing Services

Faculty and students may use the in-house computer (a P.D.P. 11/70 running under the RSTS/E operating system). Authorized faculty and students may also use outside computers (Dalhousie University and Maritime Computer Limited) by remote job entry (R.J.E.) through the P.D.P. 11/70 or by means of several slow speed terminals located on the Saint Mary's University campus.

The Computing Centre staff conducts seminars on topics in computing and provides 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 (scientific, commercial, engineering and statistical packages). Computer program and reference library facilities are maintained, and research groups may either program their own work or avail themselves of the programming services provided by the Computer Centre.

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 0.4-metre 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 the late Professor Emeritus, Rev. Michael W. Burke-Gaffney, astronomer, engineer, and educator who was at Saint Mary's University from 1940 until his death in 1979.

Centres and Institutes

International Education Centre

The International Education Centre was established at Saint Mary's University in 1972. The Centre's princlpcal activities revolve around research, education, and community service programs relative to multicultural studies and Third World development activities.

Research

Research interests of the Centre are both local and international. Local interests include the historical, economic, social, and political background of Nova Scotia ethnic groups and the educational problems associated with ethnicity, poverty, and traditional sex roles. Through these activities, the Centre aspires to make a significant contribtion to understanding Canadian society and culture.

Education

The Centre plans and arranges courses and programs for educators. In cooperation and consultation with the Department of Education, the Centre plans to develop teaching materials and to undertake curriculum development for the schools in the area of ethnic and multicultural studies.

The Centre also has a strong program designed to promote awareness of the international development of countries and cultures of the Third World. This program is designed to meet the increasing desire of Canadians in schools, in universities, and in the community at large for information and understanding of the problems of developing societies.

Slide shows, films, video tapes, and other materials necessary for an intelligent perspective on world issues are among the frequently used facilities of the Centre. Some three hundred names of people from many parts of the world, now resident in Nova Scotia, make up a list of qualified individuals who have expressed their willingness to travel on behalf of the Centre. They make presentations to schools, churches, business and labor organizations, and to other individuals or groups interested in obtaining a better understanding of Canada's multicultural heritage and its relationship to other peoples and their cultures.

Community Service

The Centre promotes cooperation and interaction between the academic community and ethnic minority groups by helping to make the resources of each available to the other. The Centre makes its facilities available to ethnic organizations of the area, and frequently hosts meetings and conferences. The Halifax-Dartmouth branch of the United Nations Association makes its home at the Centre. Information and services are available to international students.

Organization

A fifteen member Board oversees the activities of the Centre. The Board is mainly drawn from the faculty at Saint Mary's University who are professionally involved in international education. In addition, there is representation from the Nova Scotia Department of Education, the Multiculturalism Association of Nova Scotia, representatives of local organized ethnic groups, and from the community at large. The Centre is administered by a full-time Director and an Administrative Assistant.

Facilities

The International Education Centre is located in the Burke Education Building at Saint Mary's University. The main hall is 50 by 40 feet and serves as a display, assembly, and administrative centre. Adjoining the main hall is a foyer space of 40 by 40 feet that is used for assembly, performances, refreshments, and displays. On both sides of the foyer there are theatres, one accommodating 175 persons and the other 275 persons.

The International Education Centre has slide projectors, cassette recorders, an overhead projector, 16 mm projector, video tape equipment, screens, earphone junction boxes, some 15 films and over 2,000 slides. In addition, it has pictures, maps, artifacts and literature on the international community.

Some of this material is located in the Multi-Media Room of Saint Mary's University. The equipment, amenities, and services of the Audio-Visual section of Saint Mary's University are also available to the International Education Centre. The extensive holdings of the University Library complement the printed materials of the Centre.

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 in 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.

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