

DALHOUSIE

U N I V E R S I T Y

1997/98



GRADUATE STUDIES

Celebrating
**A Meeting
of Minds**

THE AMALGAMATION
OF DALHOUSIE UNIVERSITY
AND THE TECHNICAL UNIVERSITY
OF NOVA SCOTIA,
APRIL 1997

DALHOUSIE UNIVERSITY

1997/98 Calendar

Graduate Studies

*A
Tradition
of Excellence*



Amalgamation of Dalhousie University and Technical University of Nova Scotia

As of April 1, 1997, Dalhousie University and the Technical University of Nova Scotia (TUNS) will be amalgamated. TUNS will be a constituent college within Dalhousie and will comprise three faculties: Architecture, Engineering and Computer Science. The amalgamated institution will be known as Dalhousie University.

The Faculties of Architecture, Engineering and Computer Science are in the process of developing some new programmes. It is anticipated that more details on these programmes, e.g., admissions requirements for those entering directly from high school or from another university, length of programme, curriculum, will be known by late spring 1997. This information will be included in registration packages mailed to students in June and will also be available at that time on the World Wide Web: <http://www.dal.ca>

All students currently enrolled in the affected programmes will be permitted to complete their degrees under existing degree and programme regulations subject to a time limit. (Details will be included in the June registration material.) Students enrolled in TUNS programmes in the 1996/97 session will receive TUNS parchments, unless they request to receive their parchment in the name of the new college and the university. Students enrolled in Dalhousie computing science programmes (honours, advanced major, major, co-op) in the 1996/97 session will receive Dalhousie parchments, unless they request to receive their parchment in the name of the new college and the university. Dalhousie engineering students will receive parchments in the name of the new college and the university.

It should be noted that current TUNS and Dalhousie students are subject to all deadlines and regulations as outlined in their respective 1997/98 calendars, i.e., students may not choose which set of deadlines, degree regulations, appeals procedures to follow.

Table of Contents

Academic Dates	1
Admission Dates	2
Definitions	2
Class Codes	3
Dalhousie University	4
Executive Officers	4
Academic Programmes	6
Academic Regulations	6
Registration	6
Class Withdrawal	6
University Regulations	7
General	7
Official Examination Regulations	7
Release of Information About Students	7
Policy on Accessibility for Students with Disabilities	8
Procedures Regarding Students with Learning Disabilities	8
Intellectual Honesty	9
Discipline	10
Senate Discipline Committee	10
Code of Student Conduct	10
Guide to Responsible Computing	12
Faculty of Graduate Studies	14
Administrative Officers	14
Council and Standing Committees	14
Faculty Regulations	15
Degree Programmes	15
Admission Requirements	15
Departmental Listings	25
Agriculture	25
Anatomy and Neurobiology	27
Atmospheric Science	29
Biochemistry	29
Biology	32
Business Administration	36
Chemistry	41
Classics	43
Community Health and Epidemiology	45
Computing Science	46
Earth Sciences	47
Economics	49
Education	51
English	52
Environmental Studies	54
French	56
German	58
Health Services Administration	58
History	60
Human Communication Disorders	62
Interdisciplinary and Joint Programmes	64
International Development Studies	65
Law	67
Library & Information Studies	70

Marine Affairs Programme	72
Mathematics, Statistics, & Computing Science	73
Mathematics	74
Microbiology and Immunology	75
Neuroscience	77
Nursing	78
Oceanography	79
Oral and Maxillofacial Surgery	81
Pathology	82
Pharmacology	83
Pharmacy	85
Philosophy	85
Physics	87
Physiology and Biophysics	89
Physiotherapy	90
Political Science	91
Psychology	93
Public Administration	96
Recreation Physical & Health Education	99
Social Work	101
Sociology and Social Anthropology	105
Statistics	107
Women's Studies	108
Centres and Institutes	110
Resources and Services	112
Financial Aid	117
Government Student Loans	117
Dalhousie Graduate Bursaries	117
Fees	118
Miscellaneous Fees	120
Academic Fees 1996-97	121
Residence Fees	124
Awards	126
Graduate Scholarships and Fellowships	126
Bursaries	128
Teaching Assistantships	128
Research and Travel Grants	129
Awards on Graduate Transcripts	129
Index	131
Campus Map	134

Calendar Revisions

Students are advised that the matters dealt with in this Calendar are subject to continuing review and revision. This Calendar is printed some months before the year for which it is intended to provide guidance. Students are further advised that the content of this calendar is subject to change without notice, other than through the regular processes of Dalhousie University, and every student accepted for registration in the University shall be deemed to have agreed to any such deletion, revision or addition whether made before or after said acceptance. Additionally, students are advised that this calendar is not an all-inclusive set of rules and regulations but represents only a portion of the rules and regulations that will govern the student's relationship with the University. Other rules and regulations are contained in additional publications that are available to the student from the registrar's office, and/or the relevant faculty, department or school.

The University reserves the right to limit enrolment in any programme. Students should be aware that enrolment in many programmes is limited and that students who are admitted to programmes at Dalhousie are normally required to pay deposits on tuition fees to confirm their acceptance of offers of admission. These deposits may be either non-refundable or refundable in part, depending on the programme in question. While the University will make every reasonable effort to offer classes as required within programmes, prospective students should note that admission to a degree or other programme does not guarantee admission to any given class. Students should select optional classes early in order to ensure that classes are taken at the most appropriate time within their schedule. In some fields of study, admission to upper level classes may require more than minimal standing in prerequisite classes.

Dalhousie University does not accept any responsibility for loss or damage suffered or incurred by any student as a result of suspension or termination of services, courses or classes caused by reason of strikes, lockouts, riots, weather, damage to university property or for any other cause beyond the reasonable control of Dalhousie University.

Inquiries should be directed to:

The Registrar
Dalhousie University
Halifax, Nova Scotia
Canada B3H 4H6
Telephone: (902) 494-2450
Fax: (902) 494-1630
e-mail: Registrar@dal.ca

Dalhousie Calendars on the Web

The Dalhousie University calendars are available in electronic form on the World Wide Web. The primary access point is the Dalhousie University homepage at:

www.dal.ca

From the Dalhousie homepage, choose:

Academics

and then follow the appropriate navigation path.

Academic Dates

Classes offered at Dalhousie have one of the letters A, B or R following the number. A classes are given in the first term of any session, B classes are given in the second term of any session, and R classes are given throughout the entire session.

1997

May

- 7 Last day to register without late fee, Spring session
- 12 Classes begin, Spring session
- 16 Last day to register with late fee, Spring session
Last day to cancel registration in or to add A and R classes, Spring Session
- 19 Victoria Day - University closed
- 20-23 Spring Convocations
- 22 Last day to withdraw from A classes, Spring session

June

- 4 A classes end, Spring session
- 5 B classes begin, Spring session
- 6 Last day to withdraw from R classes, Spring session
- 11 Last day to cancel registration in or to add B classes, Spring session
- 16 Last day to withdraw from B classes, Spring session
- 25 Last day to register without a late fee, Summer session
- 27 Classes end, Spring session

July

- 1 Canada Day - University closed
- 2 Last day to apply to graduate in October
Classes begin, Summer session
- 8 Last day to cancel registration in or to add A and R classes, Summer session
Last day to register with late fee, Summer session
- 11 Last day to withdraw from A classes, Summer session
- 24 A classes end, Summer session
- 25 B classes begin, Summer session
Last day to withdraw from R classes, Summer session
- 28 Last day for those expecting PhD degrees in October to submit one unbound copy of completed thesis and submission form to Graduate Studies and four unbound copies of thesis to department
- 31 Last day to cancel registration in or to add B classes, Summer session

August

- 4 Halifax/Dartmouth Natal Day - University closed
- 5 Last day to withdraw from B classes, Summer session
- 19 Classes end, Summer session
- 25 Last day for those expecting Masters degrees in October to submit unbound theses to departments
- 27 MBA orientation begins
- 29 Last day to register without late fee, Regular session
First installment of fees due
Last day to have Leave of Absence approved by Graduate Studies

September

- 1 Labour Day - University closed
- 2 Classes begin, Library and Information Studies
- 3 Classes begin, Law
- 4 Classes begin, unless otherwise specified, Regular session
Last day for refund on first installment of fees - limited enrolment programmes
Orientation begins, Human Communication Disorders (first year)
Classes begin, Human Communication Disorders (first year)

- 15 Last day for those expecting to receive graduate degrees in October to submit approved unbound copies of theses to Faculty of Graduate Studies Office
- 19 Last day to cancel registration in or to add A and R classes, Regular session
Last day to register with late fee

October

- 13 Thanksgiving Day - University closed
- 17 Last day to withdraw from A classes
- 18 Fall Convocation

November

- 11 Remembrance Day - University closed
- 28 Last day to change degree or attendance status (PT to FT, or FT to PT), Graduate Studies

December

- 1 Last day to apply to graduate in May
- 3 Classes end
- 5 Examinations begin
- 15 Examinations end
- 19 Last day to submit theses for those registered in the fall term only
Last day to have Leave of Absence beginning in January approved by Graduate Studies

1998

January

- 1 New Year's Day - University closed
- 5 Classes resume, second term begins
- 19 Last day to cancel registration in or to add B classes
Last day to register without late fee winter term
Last day to withdraw from R classes
- 30 Last day for partial refund, regular session fees
Second installment of fees due

February

- 6 Munro Day - University closed
- 14 Last day for those expecting PhD degrees in May to submit one unbound copy of completed thesis and submission form to Graduate Studies and four unbound copies of thesis to departments
- 16 Last day to withdraw from B classes
- 23 Study break begins (does not apply to Medicine clerkship years)

March

- 2 Classes resume
- 13 Last day for those expecting Masters degrees in May to submit unbound theses to departments

April

- 9 Classes end, Regular session
- 10 Good Friday - University closed
- 14 Last day for those expecting to receive graduate degrees in May to submit approved unbound copies of theses to Faculty of Graduate Studies Office
- 15 Examinations begin, Regular session
- 29 Examinations end, Regular session

May

- 19-22 Spring Convocation

Admission Dates

Final Dates for Receipt of Applications for Admission

Regular Session

Graduate Studies ^{3,4} (except as below)	June 1
Non-Canadian Students (Graduate Studies)	April 1
Law (Doctoral level)	January 1
Environmental Studies and Social Work	February 1
Human Communication Disorders	March 1
Nursing	April 1
Health Services Admin. and Law (Master's level)	May 1
Oral and Maxillofacial Surgery	June 30

Dentistry

DDS	December 1
Dental Hygiene	February 1

Medicine

MD	November 15
Post-Graduate	December 1

Law ¹	March 1
------------------	---------

¹ Late applications may be considered up to August 1.

² Of year preceding commencement of programme

³ All supporting documentation must be submitted by the appropriate deadline.

⁴ For Graduate Studies Scholarship consideration applications must be complete (including application, fee and all supporting documents) by Mar 1.

Definitions

The following definitions are intended to facilitate an understanding of the calendar and not to define all words and phrases used in the calendar which may have specific meanings.

Academic sessions

Regular session	September - April
First term	September - December
Second term	January - April
Spring session	May - June
Summer session	July - August

Audit Classes

A student may be permitted to attend classes but not be expected to prepare assignments, write papers, tests or examinations. Credit is not given nor is a mark awarded for classes. Classes appear on the transcript with the notation "Aud". Audit students must apply, select classes and register in the normal way.

Class

A unit of instruction in a particular subject identified by a name and number.

Continuing Fees

The tuition fees charged to graduate students who have fulfilled their programme fee requirements but have yet to complete all their degree requirements. See Faculty Regulation 4.6.

Course

The term "class" is used in place of the word course.

Credit

A unit by which University class work is measured. A full year class is normally worth one credit.

Full-time Students

Those carrying more than two and one-half (2½) full-credit classes during the 12-month academic year of a student who has not yet completed the minimum number of years of full-time study required for a particular degree programme.

Graduate Student (Regular)

A student with a Bachelor's degree, usually with Honours or equivalent, enrolled in a Master's or Doctoral programme, or a graduate diploma programme.

Letter of Permission

A Letter of Permission authorizes a Dalhousie student to take a class(es) at another institution for credit towards a Dalhousie qualification. Such permission must be obtained in advance of taking the class(es).

Non-thesis Programme

A Master's programme of study based on class work which may also include a research project. This includes many of the professional graduate programmes. Some programmes offer a thesis option.

Part-time Students

Those carrying not more than two and one-half (2½) full-credit classes during the 12 months, September to August or a student who has not yet completed the minimum number of years of part-time study required to complete the residency requirement for a particular degree programme.

Prerequisite

Requirement which must be fulfilled prior to registering in a specific class.

Programme Fees

The tuition fees charged to graduate students completing a degree. The programme fee is based on total tuition for a specified number of years, varying according to academic programme. See Faculty Regulation 4.6 for more details. Students who have not completed their programme after the specified number of years are required to pay a thesis only or continuing fee.

Qualifying Students (Master's only)

A full-time or part-time student with a Bachelor's degree or its equivalent in whom a department has expressed an interest as a potential graduate student, but who is without a sufficiently strong academic background in a particular discipline to be enrolled directly in a Master's programme.

Required Withdrawal:

A student's required withdrawal from a programme due to unsatisfactory academic performance or failure to meet admission or programme conditions. See Faculty Regulation 2.5.

Residency

The period of time that students are expected to be on campus for fulfilment of their formal programme requirements. In some programmes, part of the residency period may, with permission, include some time off campus (e.g. for fieldwork or research).

Special Student: A student who is not registered in a graduate programme but is taking graduate classes.

Thesis Only Fees

The tuition fees charged to graduate students who have fulfilled programme fee requirements but have yet to complete all their degree requirements. See Faculty Regulation 4.6.

Thesis Program

A Master's or Doctoral programme of study involving a major research component in the form of a written thesis. Some programmes offer a non-thesis option.

Transcript

A transcript is a complete history of a student's academic record at Dalhousie. Partial transcripts, e.g. a portion of a student's record pertaining to registration in a particular degree or faculty only, are not issued.

Visiting Student

A person permitted to take classes at Dalhousie for transfer of credit to another university.

Class Codes

Numbers

1000-level classes are introductory
2000-4000 level classes are advanced
5000-9000 level are Graduate level (with some exceptions)

Term Codes

R - Sept. to April, Spring or Summer session
A - Sept. to ec or first half of a Spring or Summer session
B - Jan. to April or second half of a Spring or Summer session

Credit Hour Extension - examples only

0.06 credit hours = 1 full credit
0.03 credit hours = 1/2 credit
0.00 credit hours = no credit

Subject Codes

Four letter codes are used to describe the department offering a particular class as follows:

ANAT - Anatomy & Neurobiology
BIOC - Biochemistry
BIOL - Biology
BUSI - Business Administration
CH&E - Community Health & Epidemiology
CHEM - Chemistry

CLAS - Classics
COMP - Computing Science
DENT - Dentistry
ERTH - Earth Sciences
ECON - Economics
EDUC - Education
ENGL - English
ENVI - Environmental Studies
FREN - French
GERM - German
HEAS - Health Services Administration
HEED - Health Education
HIST - History
HUCD - Human Communication Disorders
INTD - International Development Studies
KINE - Kinesiology
LAWS - Law
LEIS - Leisure Studies
MARA - Marine Affairs
MATH - Mathematics
MEDI - Medicine
MICR - Microbiology & Immunology
NESC - Neuroscience
NURS - Nursing
OCEA - Oceanography
PATH - Pathology
PHAC - Pharmacology
PHAR - Pharmacy
PHIL - Philosophy
PHSE - Physical Education
PHYC - Physics
PHYL - Physiology
PHYT - Physiotherapy
POLI - Political Science
PSYO - Psychology
PUAD - Public Administration
RUSS - Russian Studies
SOSA - Sociology and Social Anthropology
SLWK - Social Work
STAT - Statistics
WOST - Women's Studies

Dalhousie University

Dalhousie University and its affiliated colleges and hospitals play a unique role in the Maritimes. Founded in 1818, the university offers a wide range of programmes, and provides professional and graduate education that is recognized around the world for its excellence. The University is very proud of its long tradition — its students go on to assume professional and leadership roles on both the regional and national stage — and it takes pride in its own leadership role. That special niche expands dramatically in 1997 with the amalgamation of Dalhousie and the Technical University of Nova Scotia (TUNS). This union helps position the Province of Nova Scotia as a leader in advanced technical education and research. It opens new doors to more students and faculty, and it establishes the new institution as a place where 179 years of history meld with exciting new learning opportunities for the 21st century.

Dalhousie's enrolment stands at over 11,500 students. To accommodate them, Dalhousie occupies more than 60 acres in a residential area of Halifax. University facilities include buildings for teaching and research, libraries, residential housing for students, a Student Union Building, an Arts Centre for music, theatre, and an art gallery and facilities for physical recreation. The Nova Scotia Archive building, the Atlantic Regional Laboratory of the National Research Council, major provincial hospitals, and the Dr. D.J. MacKenzie Laboratories are located close to the University. Dalhousie benefits from a variety of arrangements for teaching and research collaboration with hospitals and federal and provincial research laboratories.

The University of King's College, situated adjacent to Dalhousie campus, is an affiliated institution, and its students in Arts and Science receive Dalhousie degrees in the name of both institutions. By agreement with Mount Saint Vincent University students have access to various courses and services. Cooperation in a number of academic programmes, in administrative services, and in use of library resources is provided for in working arrangements with Saint Mary's University and other institutions in Halifax. Degrees in agriculture, awarded to students of the Nova Scotia Agricultural College, are awarded by Dalhousie in cooperation with the College.

Dalhousie University is a non-denominational co-educational university. The University is a member of the Association of Universities and Colleges of Canada, the Atlantic Association of Universities, and the Association of Commonwealth Universities.

Executive Officers

President and Vice-Chancellor

Thomas D. Traves, BA, MA, PhD

Vice-Presidents

Academic and Research

Deborah W. Hobson, BA, MA, PhD

Principal -

Edward Rhodes, BSc, MSc, PhD

Finance and Administration

Bryan G. Mason, BA

Student Services

Eric A. McKee, BA, MA

Development & Alumni Affairs

Dale A. Godsoe, BA, BEd, MEd

Associate Vice-President Research

Robert O. Fournier, BSc, MA, PhD

Executive Coordinator of Amalgamation

Julia A. Eastman, MA

Deans of Faculties

Arts and Social Sciences

Graham D. Taylor, BA, PhD

Dentistry

William A. MacInnis, DSc, DDS, MEd, F.I.C.D.

Graduate Studies

Peter J. Ricketts, BA, PhD

Health Professions

Lynn McIntyre, MD, MHSc, FRCP(C)

Law

Dawn A. Russell, BA, LLB, LLM

Management

Phillip J. Rosson, DAS, DM, MA, PhD

Medicine

John Ruedy, MDCM, FRCP(C), FACP

Science

Warwick C. Kimmins, PhD

Henson College of Public Affairs and Continuing Education

Mary Morrissey, BA, MSW, MPA

College of Arts and Science

Warwick C. Kimmins, PhD, Provost

Administrative Officers

University Secretary and Legal Counsel

Brian C. Crocker, QC, BA, LLB

University Librarian

William F. Birdsall, BA, MA, PhD

University Registrar

Gudrun E.L. Curri, MA

Executive Directors

Computer and Information Services

J. Morven Wilson, BSc, MSc

Instructional Development and Technology

W. Alan Wright, BA, MA, PhD

Lester Pearson Institute

William H. Montgomery, BA, LLB, LLM

Office of Institutional Affairs

Brian Christie, BSc, MA, Assistant to the President for Planning

Directors

Alumni Affairs (Acting)

Marian Gray, BRec

Arts Centre

Robert C. Reinholdt

Athletics and Recreational Services

F.A. (Tony) Martin, BSc, MA

Capital Campaign

William Stratton

Counselling and Psychological Services

Judith Hayashi, BA, MA

Development

Charlotte Sutherland, BA, MEd

Environmental Health and Safety

William J. Louch, PhD

Financial Services

Ian Nason, BCom

Health Services

Joyce Curtis, MD

Housing and Conferences

Heather Sutherland, BSc, MEd

Personnel Services

Michael J. Roughneen, CPIR, BA, MSc, FIPM

Physical Plant and Planning

William Lord, BASc, PENG

Public Relations

Michelle Gallant, BPR

Student Resources

A. Susan McIntyre, MPA

Board of Governors

Under the University's statutes, the Board of Governors is responsible for the operation of the University. The Board consists of representatives named by the Government of Nova Scotia, the alumni, the Student Union and certain other bodies. Internal regulation of the University is the primary concern of the Senate, subject to approval of the Board of Governors.

The President and Vice-Chancellor is the Chief Executive Officer of the University, responsible to the Board of Governors and Senate for supervision of the University's administrative and academic work.

Chancellor

Sir Graham Day

Chancellor Emeritus

H. Rueben Cohen, CM, QC, DCL, LL.D.

Officers

Dr. Thomas D. Traves, BA, MA, PhD

Mr. Allan C. Shaw, Chair

Mr. James S. Cowan, Vice-Chair

Mrs. Ann Petley-Jones, Honourary Secretary, Vice-Chair

Mr. John C. Risley, Honourary Treasurer

Mrs. Carol Young, Honourary Secretary

Members

Ms. Nancy Anderson

Mrs. Diane Bell

Mr. Curtis Cartmill

Mr. Gerald A. Clarke

Prof. Joan Conrod

Mr. Murry Coolican

Mr. Fred Fountain

Dr. Elaine Gordon

Mrs. Patricia Harris

Ms. Margaret Langley

Dr. Daurene Lewis

Dr. Frank Lovely

Ms. Bernadette Macdonald

Mr. George W. MacDonald

Mr. Brad MacKay

The Hon. Jacqueline R. Matheson

Dr. John T. O'Brien

Mr. Hugh Pierce

Dr. Edward Rhodes

Mrs. Patricia Roscoe

Mr. Kenneth C. Rowe

Mr. Peter Stuart

Dr. Colin Stuttard

Secretary

Joann Griffin

Observer for Faculty Association

Dr. E. Jane Fee

Senate

Senate consists of the President, Vice-President (Academic and Research), the University Librarian, Deans of Faculties, Dean of Henson College, thirty-nine elected Faculty members, four students elected by the Dalhousie Student Union, a representative of the University of King's College and a representative of the Nova Scotia Agricultural College.

Senate is the academic governing body of the University. Subject to the general approval of the Senate, faculties are responsible for supervision of programmes of study, of teaching and research, and for recommending candidates for degrees, diplomas, and university prizes. In addition, it is responsible for student discipline academic appeals, and faculty appointments, tenure and promotion.

Chair of Senate

Colin Stuttard, BA, PhD

Vice-Chair of Senate

Elizabeth Kay-Raining Bird, BA, MA, PhD

Secretary of Senate

Ruth Bleasdale, BA, MA, PhD

Academic Programmes

Degrees and Diplomas

Faculty of Graduate Studies

- **Master of Arts**
1 or 2 years with thesis in: Classics, Computing Science, Economics, English, French, German, Health Education, History, International Development Studies, Leisure Studies, Mathematics, Philosophy, Political Science, Psychology, Sociology, and Social Anthropology
- **Master of Science**
1 or 2 years with thesis in: Agriculture, Anatomy and Neurobiology, Atmospheric Science, Biochemistry, Biology, Chemistry, Community Health and Epidemiology, Computing Science, Earth Science, Human Communication Disorders (3 years) (Audiology or Speech Pathology), Kinesiology, Mathematics, Microbiology and Immunology, Oceanography, Oral and Maxillofacial Surgery (4 years), Pathology, Pharmacology, Pharmacy, Physics, Physiology and Biophysics, Physiotherapy, Psychology, and Statistics, also Neuroscience (combined with Anatomy and Neurobiology, Biochemistry, Pharmacology, Physiology & Biophysics, and Psychology).
- **Master of Science with Doctor of Medicine**
6 years - Master of Science thesis in: Anatomy, Biology, Microbiology, Oral and Maxillofacial Surgery, Pharmacology, and Physiology & Biophysics
- **Doctor of Philosophy**
2 or 3 years, with thesis in: Anatomy and Neurobiology, Atmospheric Science, Biochemistry, Biology, Chemistry, Classics, Earth Science, Economics, English, French, History, Interdisciplinary Studies, Mathematics, Microbiology, Oceanography, Pharmacology, Pharmacy, Philosophy, Physics, Physiology & Biophysics, Political Science, Psychology, Sociology and Statistics, also Neuroscience (combined with Anatomy and Neurobiology, Biochemistry, Pharmacology, Physiology & Biophysics, and Psychology)
- **Doctor of Philosophy with Doctor of Medicine**
7 years - Doctor of Philosophy thesis in: Anatomy, Biology, Microbiology, Pharmacology, and Physiology & Biophysics
- **Doctor in the Science of Law - 2 years, with thesis**
- **Master of Business Administration - 2 years**
- **Master of Business Administration with Bachelor of Laws - 4 years**
- **Master of Environmental Studies - 1 or 2 years**
- **Master of Health Services Administration - 2 years**
- **Master of Health Services Administration with Bachelor of Laws - 4 years**
- **Master of Health Services Administration with Master of Nursing - 3 years**
- **Master of Laws - 1 year**
- **Master of Library and Information Studies - 2 years**
- **Master of Library and Information Studies with Bachelor of Laws - 4 years**
- **Master in Marine Management - 1 year**
- **Master of Public Administration - 2 years**
- **Master of Public Administration with Bachelor of Laws - 4 years**
- **Master of Development Economics - 2 years**
- **Master of Nursing - 2 years**
- **Master of Nursing with Master of Health Services Administration - 3 years**
- **Master of Social Work - 1 or 2 years**
- **Graduate Diploma in Public Administration - 1 year**

Academic Regulations

Registration

Registration material will be sent to all eligible students. Students are strongly encouraged to register by mail. Students admitted late must register in person.

A student is registered only after financial arrangements have been made at the Student Accounts Office.

The final step is obtaining an ID or validating an existing ID from the Office of the Registrar. ID cards are mandatory and must be presented to write an officially scheduled examination. In addition, some services such as the issuance of bursary or scholarship cheques, library privileges and Dalplex require the presentation of a valid Dalhousie ID.

Class Withdrawal

Non-attendance does not, in itself, constitute withdrawal. Withdrawals are not effective until written notification is received at the Office of the Registrar.

University Regulations

General

1. The Senate is charged with the internal regulations of the University, including all matters relating to academic affairs and discipline, subject to the approval of the Board of Governors. Within the general policies approved by Senate, academic requirements are administered by the Faculty concerned.
2. All students must agree to obey all the regulations of the University already made or to be made; in addition to the above University regulations, students must also comply with the regulations of the Faculty in which they are registered, and pay the required fees and deposits before entering any class or taking any examinations. Additionally, students are advised that this Calendar is not an all-inclusive set of rules and regulations but represents only a portion of the rules and regulations that will govern the student's relationship with the University. Other rules and regulations are contained in additional publications that are available to the student from the Registrar's Office and/or the relevant Faculty, Department or School.
3. For the purpose of admission to the University, the place of residence of a student is the place of domicile. This is normally presumed to be the place (country, province, etc.) where the parents' or guardian's home is located. That place remains unchanged unless the Registrar is satisfied that a place of residence is established elsewhere. No person under sixteen years of age is admitted to any class except on the specific recommendation of the admissions committee of the relevant Faculty or School, which shall take into account all aspects of the applicant's preparedness for the class or programme involved, and which may attach such conditions to the applicant's admission as the committee judges appropriate.
4. All students must report their local address while attending the University to the Office of the Registrar, on registration or as soon as possible thereafter. Subsequent changes must be reported promptly.
5. Students who change their name while attending Dalhousie must provide proof of name change to the Registrar's Office.
6. Students taking classes in another Faculty as part of an affiliated course of study must conform to the regulations of that Faculty with respect to these classes. It should be noted, however, that regulations pertaining to the degree programme are those of the "home" Faculty.
7. In the interests of public health in the University, students are encouraged to have a tuberculin test. This is compulsory for Dentistry, Dental Hygiene, Physiotherapy and Nursing students. Facilities for testing are arranged by the University Health Services.
8. Except for university purposes, transcripts, official, or unofficial, will be issued only on the request of the student on payment of the required fee. A student may receive only an unofficial transcript. Official transcripts will be sent on a student's request to other universities, or to business organizations, etc.
9. Students withdrawing voluntarily from the University should consult the individual faculty regulations and the Fees section of this Calendar.
10. When the work of a student becomes unsatisfactory, or a student's attendance is irregular without sufficient reason, the faculty concerned may require withdrawal from one or more classes, or withdrawal from the Faculty. If a student is required to withdraw from a Faculty such a student may apply to another Faculty. However, in assessing the application, previous performance will be taken into consideration.

11. Any graduating student who is unable to appear at the convocation is expected to notify the Registrar in writing prior to May 1, for Spring convocations (or October 1 for Fall convocations), giving the address to which the degree/diploma is to be mailed. Students whose accounts are delinquent on May 1 will not receive their degree/diploma parchment nor their transcripts. For October graduation the date is September 1.
12. Students should be aware that certain classes at the University involve required laboratory work where radioactive isotopes are present and are used by students. Since there are potential health risks associated with the improper handling of such radioactive isotopes, Dalhousie University requires that, as a condition of taking a class where radioactive isotopes are to be used, students read and agree to comply with the instructions for the safe handling of such radioactive isotopes. In the event that students do not comply with the instructions for the safe handling of radioactive isotopes, students will receive no credit for the required laboratory work unless other acceptable alternatives are arranged with the instructor. In many cases, alternate arrangements are not possible and students should consider enrolling in a different class.

Official Examination Regulations

1. Candidates will not be admitted to the Examination Room more than thirty minutes after the beginning of the examination. Candidates will not be permitted to leave the examination within the first thirty minutes.
2. Candidates are required to present their valid Dalhousie ID card at all examinations scheduled during the official examination periods and sign the signature list.
3. No articles such as books, papers, etc. may be taken into the examination room unless provision has been made by the examiner for reference books and materials to be allowed to the students. All books, papers, etc. not specified on the printed paper must be deposited with the invigilator. Calculators may be used at the discretion of the instructor.
4. Smoking is not permitted in the examination room.
5. Candidates may not leave their seats during an examination except with the consent of the invigilator.
6. Answers to questions must be written on the right hand pages and properly numbered. The left hand pages may be used for rough work, but no sheets may be detached.
7. Each question should be started on a separate page.
8. If more than one book is used, the total number should be marked in the space provided above. The other books should be properly marked and placed inside the first book. All books supplied must be returned to the invigilator.
9. Candidates found communicating with one another in any way or under any pretext whatever, or having unauthorized books or papers in their possession, even if their use be not proved, shall be subject to expulsion.
10. After the first thirty minutes have elapsed, students may hand in their examination book(s) to an invigilator and quietly leave the examination room. Candidates may not leave the examination room during the last fifteen minutes of the examination.

Release of Information About Students

1. *Disclosure to students of their own records*
 - (a) Students have the right to inspect their academic record. An employee of the Registrar's Office will be present during such an inspection.
 - (b) Students will, on submission of a signed request and payment of the appropriate fee, have the right to receive transcripts of their own academic record. These transcripts will be marked "ISSUED TO STUDENT". The University will not release copies of transcripts if students owe monies to the University.
2. *Disclosure to Faculty, Administrative Officers, and Committees of the University.*

Information on students may be disclosed without the consent of the student to University officials or committees deemed to have a legitimate educational interest.

3. *Disclosure to Third Parties*

- (a) The following information is considered public information and may be released without restriction:
- Name
 - Period of Registration
 - Certificates, Diplomas, Degrees awarded
- (b) Information will be released without student consent to persons in compliance with a judicial order or subpoena or as required by federal or provincial legislation.
- (c) Necessary information may be released without student consent in an emergency, if the knowledge of that information is required to protect the health or safety of the student or other persons. Such requests should be directed to the Registrar.
- (d) Other than in the above situation, information on students will be released to third parties only at the written request of the student, or where the student has signed an agreement with a third party, one of the conditions of which is access to her/his record (e.g. in financial aid). This restriction applies to requests from parents, spouses, credit bureaus and police.

Policy on Accessibility for Students with Disabilities

1. Dalhousie University is committed to the goal of providing equal opportunity for qualified students with disabilities. To demonstrate full respect for the academic capacities and potential of students with disabilities, the University seeks to remove attitudinal and environmental restrictions which may hamper or prevent academically-qualified students with disabilities from participating fully in University life. The University understands that persons with disabilities may have different ways of doing things, recognizing that performance is not inferior merely because it is different.
2. The University recognizes, subject to its financial and other resource constraints, that qualified students with disabilities have a right to:
 - 2.1 full access to all educational programmes;
 - 2.2 full access to the educational process and learning environment (including but not limited to classes, laboratories, workshops);
 - 2.3 full access to the University campus; and
 - 2.4 full access to University facilities and services.
3. The University recognizes that qualified students with disabilities have a right to assistance that is individualized with respect to scope and pace, consistent with the student's needs, legitimate academic demands, and the University's capacity to respond.
4. To ensure that qualified students with disabilities may pursue quality post-secondary education, the University shall:
 - 4.1 be proactive in fostering, creating and maintaining a barrier-free environment, including:
 - (a) the provision of support services, within reasonable financial and resource limitations; and
 - (b) promoting an attitude of respect for persons with disabilities, and
 - (c) promoting sensitivity to the needs and abilities of persons with disabilities;
 - 4.2 inform the University community about the services available to qualified students with disabilities and seek to ensure that such services are delivered in ways that promote equity;
 - 4.3 where warranted and without compromising the academic standards, and through the relevant academic authority, modify:
 - (a) workload;
 - (b) examination procedures;
 - (c) other course requirements; and
 - (d) scholarship and other financial assistance requirements; and
 - 4.4 take all reasonable steps to consult students with disabilities as fully as possible about decisions relating to matters affecting them.

5. In accordance with provisions in the Human Rights Act, the University may also define essential requirements for professional performance for students in programmes, where these are appropriate, and this policy is not intended to replace or supersede these requirements.
6. Students with disabilities requiring assistance from the University shall:
 - 6.1 initiate contact with the Advisor to Students with Disabilities and make the nature of their disability and/or their needs known; and
 - 6.2 be expected to undertake a reasonable measure of self-advocacy to ensure they are provided with an equal opportunity by Dalhousie University.
7. The responsibility to implement these policies throughout the University rests on all members of the University community, including all faculty, administration, staff, students and the Advisor to Students with Disabilities.

Procedures Regarding Students with Learning Disabilities

Dalhousie University is committed to providing equal educational opportunities and full participation for students with learning disabilities. These procedures regarding students with learning disabilities derive from the University's Policy on Accessibility for Students with Disabilities as stated above. These students are intellectually capable and possess potential which may not be fully realized without a recognition of their special needs. We are both morally and legally required to supply such support consistent with the Policy on Accessibility for Students with Disabilities.

I. Admission

Students with diagnosed learning disabilities who meet the current admission requirements for Dalhousie University may follow the current admission procedures. All new Dalhousie students will receive in the offer of admission a statement indicating that, if they have a learning disability or any other disability for which they will require accommodations or special assistance, they should contact the Advisor to Students with Disabilities, in order to ascertain the degree to which their needs can be met.

Students with diagnosed learning disabilities who do not meet the current admission requirements or who otherwise wish to have their learning disability considered may apply for special consideration as may all other students who have extenuating circumstances. These requests will be made to the appropriate admissions committee, acting in consultation with the Advisor to Students with Disabilities and the other knowledgeable professionals.

The following documentation must be submitted by students who wish to apply for special consideration:

1. Letter(s) of recommendation from the individual(s) most familiar with the applicant's academic performance and/or potential for success at university;
2. A written, oral or electronic statement from the student. In this brief personal statement, students should describe their learning disability, how this affected their grades and the type of assistance they would require while at Dalhousie University;
3. A current (within three years) psychological assessment based on standard diagnostic instruments administered by a registered psychologist documenting the presence of learning disabilities. If a current report is not possible, Dalhousie University may accept an earlier report along with a current opinion (i.e., within the past year) expressed in a letter by a registered psychologist (or individual supervised by a registered psychologist) that the student has a learning disability. This letter should specify the nature, extent and rationale for programme modifications or accommodations that were deemed appropriate in the student's last two years of schooling.

II. Academic Accommodation for Students with Learning Disabilities

Students requesting academic accommodation will arrange a personal interview with the Advisor to Students with Disabilities. Schools and Faculties will provide relevant Faculty committees and individual Faculty members with fairly specific instruction as to the

circumstances in which certain types of accommodation are normally to be made (e.g., the language requirement of the Faculty of Arts and Social Sciences). The Advisor to Students with Disabilities will assist faculty and students in developing reasonable accommodations.

A. Documentation Required

The student will provide the Advisor with a current (within three years) psychological report documenting the presence of a learning disability as outlined in Section A. above.

B. Procedures Regarding Academic Accommodation

Students are expected to identify themselves as having a learning disability and inform the Advisor to Students with Disabilities as early as possible and preferably before the beginning of the term. They should make this initial contact during office hours and be prepared to discuss strengths, weaknesses and the types of accommodation that may be necessary.

The Dalhousie University Policy on Accessibility for Students with Disabilities will guide the Faculties and the relevant committees in their deliberations. That policy specifies three factors that must be taken into account when considering requests for accommodations from students with disabilities: the needs of the students; preservation of the academic integrity of the programmes; and the ability of the University to provide resources.

C. Types of Academic Accommodation

The types of academic accommodation provided for students with learning disabilities may vary depending on the nature of the learning disability and the class content. For example, a student may benefit from an oral exam in one subject area, but not in another. It is not unusual for there to be an initial trial-and-error period of finding the best way to evaluate a student's ability to demonstrate mastery of class material.

Accommodations for students with learning disabilities typically can include but are not necessarily limited to the following:

- a. Extend the time permitted for a student with a learning disability to earn a degree;
- b. Modify programme requirements (e.g., class substitutions);
- c. Permit examinations to be proctored, read orally, dictated or typed;
- d. Allow extra time for completion of examinations and extend the time for the examination period;
- e. Change the test format (e.g., multiple choice to essay);
- f. Provide alternative formats for class materials;
- g. Permit basic four-function calculators and standard desk dictionaries during examinations;
- h. Use alternative methods for students to demonstrate academic achievement (e.g., a narrative tape instead of a journal);
- i. Permit review of final drafts of term papers with a proof-reader and make changes without altering content; and
- j. Use computer software programs to assist in test-taking.

D. Appeals

Admission and programme appeals by students with learning disabilities will follow the usual procedures of the relevant Faculty at Dalhousie University.

E. Release of Information About Students

A student will be told before disclosing any information on learning disabilities that such information will be governed by the University Regulations on the Release of Information as indicated in this calendar.

III. Support Services

Dalhousie University endeavors to provide a broad range of support services to all of its students. Students wishing to obtain assistance from the University shall be expected to undertake a reasonable measure of self-advocacy to ensure that they are provided with the support services necessary. Such support services may include personal counseling, academic counseling, academic advising, and academic skill training.

NOTE 1: Accommodation of a student's needs due to disability will be facilitated if the student self-discloses and makes prior arrangements. Accommodation may be hindered if advance notification and/or prior arrangements have not been made.

Intellectual Honesty

A University should epitomize the quest for intellectual honesty. Failure to measure up to the quest for such a standard can involve either academic offenses at one end of the spectrum or substandard work warranting lowered or failing grades at the other. The seniority of the student concerned, the presence of a dishonest intent, and other circumstances may all be relevant to the seriousness with which the matter is viewed.

Examples of Academic Offences

1. Plagiarism or Self-Plagiarism

Dalhousie University defines plagiarism as the presentation of the work of another author in such a way as to give one's reader reason to think it to be one's own. Plagiarism is a form of academic fraud.

Plagiarism is considered a serious academic offence which may lead to loss of credit, suspension or expulsion from the University, or even the revocation of a degree.

In its grossest form plagiarism includes the use of a paper purchased from a commercial research corporation, or prepared by any person other than the individual claiming to be the author.

Self-plagiarism is the submission of work by a person which is the same or substantially the same as work for which he or she has already received academic credit.

2. Irregularities in the Presentation of Data from Experiments, Field Studies, etc.

Academic research is predicated on the presentation of accurate and honestly derived data. The falsification of data in reports, theses, dissertations and other presentations is a serious academic offence, equivalent in degree to plagiarism, for which the penalties may include revocation of degrees, loss of credits or suspension or expulsion from the University.

3. Inaccurate or Inadequate Attribution.

The University attaches great importance to the contribution of original thought to scholarship. It attaches equal importance to the correct attribution of authorities from which facts and opinions have been derived.

The proper use of footnotes and other methods of attribution varies from discipline to discipline. Failure to abide by the standards of the discipline concerned in the preparation of essays, term papers and dissertations or theses can result, at the discretion of the instructor or faculty member involved, in lowered grades. It can also lead to the requirement that an alternative assignment be prepared. Such grading penalties can be involved even in the absence of any INTENTION to be dishonest.

Students who are in any doubt about the proper forms of citation and attribution of authorities and sources should discuss the matter in advance with the faculty member for whom they are preparing assignments. In many academic departments, written statements on matters of this kind are made available as a matter of routine or can be obtained on request.

4. Irregularities in Admissions Procedures

A person who gains admission or assists any other person in gaining admission by any irregular procedure, for example, by falsifying an academic record or by forging a letter of recommendation or by impersonating any other person, commits an academic offence and is liable to a penalty (see Senate Discipline Committee).

5. Irregularities in Evaluation Procedures

A member of the University who attempts or who assists any other person in an attempt to obtain, by irregular procedures, academic standing in a course related to any degree, diploma or certificate programme, commits an academic offence and is liable to a penalty. Without limiting possible irregularities in evaluation procedures that may be considered by the Senate Discipline Committee, the following examples shall be considered irregular procedures:

- (a) arranging for or availing oneself of the results of any personation at any examination or test, or,
- (b) attempting to secure or accepting assistance from any other person at any examination or test, or,

- (c) having in one's possession or using any unauthorized material during the time that one is writing any examination or test, or
 - (d) without authorization procuring a copy of an examination, test or topic for an essay or paper, or,
 - (e) in the absence of any enabling statement by the Faculty member in charge of that course, submitting any thesis, essay, or paper for academic credit when one is not the sole author, or,
 - (f) without authorization submitting any thesis, essay or term paper that has been accepted in one course for academic credit in any other course in any degree, diploma or certificate programme.
4. conduct open hearings according to the rules of natural justice as such other procedures as the Committee may decide in advance, with due notice to all interested parties. A panel of three faculty and two students shall hear each complaint, including complaints made under the Code of Student Conduct. The Committee Chair or alternate chosen by and from the Committee shall chair each hearing;
 5. evaluate the evidence of innocence or guilt of an accused student. This evaluation shall include the premise that the more senior the student in terms of chronological age, year of university registration, extent of other exposure to university rules and regulations at Dalhousie University or elsewhere, the less credible are assertions of ignorance or innocence and the stronger is the case for a more severe penalty than would be imposed on a less senior student;
 6. report its findings, and any penalty imposed to the Secretary of Senate who shall forward a copy of the report to the student; if the alleged offender is not a student, a copy shall also be sent to the Vice-President (Academic and Research)

Discipline

1. Members of the University, both students and staff, are expected to comply with the general laws of the community, within the University as well as outside it.
2. Alleged breaches of discipline relating to student activities under the supervision of the Dalhousie Student Union are dealt with by the Student Union. Alleged breaches of discipline relating to life in the residences are dealt with by the appropriate Dean or Director of Residence in consultation with the relevant Residence Council. Senate is charged with the authority to deal with cases of alleged academic offenses, see examples above, (as delegated to the Senate Discipline Committee), as well as with certain other offenses that are incompatible with constructive participation in an academic community.
3. On report of a serious breach of the law, or a serious academic offence deemed by the President, or in his or her absence by a Vice-President or the Dean of a Faculty, to affect vital University interests, a student involved may be temporarily suspended and denied admission to classes or to the University by the President, Vice-President or Dean, but any suspension shall be reported to the Senate, together with the reasons for it, without delay.
4. No refund of fees will be made to any student required to lose credit for any course taken, required to withdraw or who is suspended or dismissed from any class or any Faculty of the University.

C. Appeals

An appeal from the decisions of the Senate Discipline Committee may be made to the Senate on such grounds as it determines are appropriate.

Where a Faculty, such as Health Professions, wishes to dismiss a student for their unethical conduct or unsuitability for any health profession, there is no appeal to the Senate Discipline Committee. Instead, an appeal may be made to a Senate *ad-hoc* committee.

D. Penalties

The range of penalties which may be imposed by the Senate Discipline Committee be circumscribed only by the requirement that such penalty or penalties be of an academic nature and, without restricting the generality of the foregoing, may include any one or more of:

- (i) notation of the fact of discipline on the offender's transcript for a period of one (1) or more years, but not exceed five (5) years;
- (ii) repeat of the assignment that triggered the discipline;
- (iii) a failing grade or mark or assessment in the piece of work triggering the discipline;
- (iv) failure of the class or seminar or programme;
- (v) failure of the academic year;
- (vi) suspension for an academic term or year (to a maximum suspension of three (3) academic years);
- (vii) expulsion from the University;
- (viii) loss of a current or continuing scholarship, or both, or loss of eligibility to receive or to maintain scholarships or prizes or bursaries; and
- (ix) removal from the Dean's List.

PLEASE NOTE: Transcripts will not be issued for a student while a Senate Discipline case is pending.

Code of Student Conduct

A. Definitions

1. In this Code, the word "premises" includes lands, buildings and grounds of the University, or other places or facilities used for the provision of the University's programs or services or for University-approved events and activities.
2. In this Code, "student" means a person:
 - (i) engaged in any academic work or placement which leads to the recording and/or issue of a mark, grade or statement of performance by the appropriate authority in the University or another institution; and/or
 - (ii) registered in, enrolled in, or attending any course or class, or otherwise participating as a learner in any activity which entitles the person to the use of a University library, library materials, library resources, computer facility or dataset.
3. In this Code, the words "Dalhousie University" refer to Dalhousie University and include any institutions affiliated with it, where such inclusion has been agreed upon by the University and the affiliated institution, with respect to the premises, facilities, equipment, services, activities, students and other members of the affiliated institution.

Senate Discipline Committee

A. Composition

The Committee comprises six representatives of the faculty elected by Senate for staggered three-year terms, one of whom shall be the Chair (chosen annually by the Committee), and four representatives of the student body. A student who is a member of the Judicial Board of the DSU may not at the same time be a member of the Senate Discipline Committee.

The Senate Nominating Committee shall arrange for nominations to fill casual vacancies for the remainder of the second term.

B. Functions

The Senate Discipline Committee shall:

1. consider all complaints or allegations respecting offenses or irregularities of an academic nature, including those relating to admissions procedures and evaluation procedures, and may impose penalties in cases where the Committee finds an offence or irregularity has occurred;
2. have the power to discipline a student who, before or during the course of the disciplinary process involving him or her but prior to adjudication, has:
 - (i) been compelled to withdraw academically;
 - (ii) chosen to withdraw from the University prior to being disciplined; or
 - (iii) chosen not to register at the University;
3. assume jurisdiction when a complaint or allegation respecting offenses or irregularities of an academic nature are brought to its attention by the Secretary of Senate; complaints or allegations may be made by faculty or other evaluators of academic work done by students; a panel of Student-Discipline Officers is available to assist and advise evaluators, and guidelines for evaluators are set out in the document entitled Guidelines for Academic Evaluators Regarding Violations of Academic Regulations by students;

4. Unless otherwise stated, a student will only be liable for conduct that she or he knew or ought reasonably to have known would constitute conduct prohibited under this Code.
5. Nothing in this Code shall be construed to prohibit peaceful assemblies and demonstrations, or lawful picketing, or to inhibit freedom of speech.

B. Offences

The following conduct shall be deemed to be an offence under this Code, when committed by a student of Dalhousie University, provided that such conduct:

- (i) occurs on premises of Dalhousie University or elsewhere in the course of activities sponsored by Dalhousie University or by any of its faculties, schools or departments; and
- (ii) is not specifically assigned to another disciplinary body within the University as in the case of sexual harassment as described in the Policy and Procedures: Sexual Harassment; and
- (iii) (a) has not already been dealt with as failure to meet standards of professional conduct as required by a college, faculty or school; or
 - (b) is not subject to the disciplinary authority of the Dalhousie Student Union; or
 - (c) is not subject to action under a residence discipline policy unless some non-residence University interests are deemed to be involved, in which case the President may specifically authorize proceedings under this Code.

1. Offences Against Persons

- (a) No student shall assault another person sexually or threaten any other person with sexual assault.
- (b) No student shall otherwise assault another person, threaten any other person with bodily harm, or cause any other person to fear bodily harm.
- (c) No student shall create a condition that unnecessarily endangers the health or safety of other persons.
- (d) No student shall threaten any other person with damage to such person's property, or cause any other person to fear damage to her or his property.

2. Disruption

No student shall undertake by action, threat or otherwise, to disrupt, obstruct or adversely affect any activity organized by Dalhousie University or by any of its faculties, schools or departments, or the right of another person or persons to carry on their legitimate activities, to speak or to associate with others.

3. Offences Involving Property

- (a) No student shall take without authorization, mis-use, destroy or damage the property or premises of Dalhousie University, or property that is not her or his own, or information or intellectual property belonging to Dalhousie University or to any of its members.
- (b) No student shall deface the property of Dalhousie University.
- (c) No student shall possess the property of Dalhousie University, property in the custody of Dalhousie University, or property that is not her or his own, if the student knows that property to have been appropriated without authorization.
- (d) No student shall create a condition that unnecessarily endangers or threatens destruction of the property of Dalhousie University or of any of its members.

4. Unauthorized Use of University Facilities, Equipment or Services

- (a) No student shall use any facility, equipment or service of the University, or enter or remain on any premises, to which he or she does not have legitimate access, or contrary to the expressed instruction of a person or persons authorized to give such instruction, unless the student has good reason for doing so.
- (b) No student shall gain access to or use any University computing or internal or external communications facility to which legitimate authorization has not been granted. No student shall use any such facility for any commercial, disruptive or unauthorized purpose, or in any other way that is incompatible with the principles in the Guide to Responsible Computing.

- (c) No student shall mutilate, misplace, misfile, or render inoperable any stored information such as books, film, data files or programs from a library, computer or other information storage, processing or retrieval system.

5. Aiding in the Commission of an Offence

No student shall encourage or aid another student in the commission of an offence defined in this Code, or encourage or aid behaviour by a non-student which, if committed by a student, would be an offence under this Code.

6. Alcohol and Drug Use

No student shall contravene the Liquor License Act of Nova Scotia or a provision of the Campus Alcohol Policy, nor shall any student possess, use or sell a drug to which access is restricted by the Narcotics Control Act.

7. False Information and Identification

- (a) No student shall knowingly furnish false information to any person or office acting on behalf of the University.
- (b) No student shall forge, alter or misuse any document, record or instrument of identification.

8. Unauthorized Possession of a Firearm or Weapon

No student shall possess a firearm or other weapon on the University premises without the specific written permission of the Chief of Security.

9. Contravention of University Regulations

When a rule, regulation or policy of the University prohibits or proscribes certain conduct but does not provide any penalty for breaches of the rule, regulation or policy, breaches shall be dealt with under this Code.

10. Other

No student shall contravene any provision of the Criminal Code or any other federal, provincial or municipal statute on the premises of the University or in the course of the University's programs or services, or University-approved events or activities.

C. Procedures

1. Whenever possible and appropriate, reason and moral suasion shall be used to resolve issues of individual behaviour before resort is made to formal disciplinary procedures.
2. Any person may make a complaint against any student for misconduct. A complaint shall be prepared in writing and directed to the Vice-President, Student Services. Any complaint should be submitted as soon as possible after the event takes place. All complaints shall be presented to the accused student in written form.
3. The Vice-President, Student Services, or designate shall conduct an investigation to determine if the complaint has merit and/or if it can be disposed of informally by mutual consent of the parties involved on a basis acceptable to the Vice-President, Student Services. The Vice-President, Student Services, shall invite the President of the Student Union or his or her designate to participate in any attempts to resolve the matter informally. If an informal disposition of the complaint results, such disposition shall be final and there shall be no subsequent proceedings.
4. If the complaint cannot be resolved informally through the procedures described in section 3, or if in the judgment of the Vice-President, Student Services, it is not appropriate for the complaint to be so resolved, the Vice-President, Student Services, shall refer the complaint to the Senate Discipline Committee for a formal hearing.
5. Hearings shall be conducted by the Senate Discipline Committee according to procedures determined by the Committee.
6. The President or designate shall appoint a person to present the complaint.
7. If a student fails to appear at a hearing, the hearing may proceed, provided that the student has been given adequate notice. Except in the case of a student charged with failing to obey the summons of the Committee or University official, no student may be found to have violated the Student Code solely because the student failed to appear before the Committee. In all cases, the evidence in support of the complaint shall be presented and considered.

D. Sanctions

1. In each case in which the Senate Discipline Committee determines that a student has violated the Student Code, the sanction(s) shall be determined and imposed by the Committee.
2. The following sanctions may be imposed upon any student found to have violated the Student Code:
 - (a) **Warning**—A notice in writing to the student that the student is violating or has violated institutional regulations.
 - (b) **Probation**—A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to be violating any institutional regulation(s) during the probationary period.
 - (c) **Loss of Privileges**—Denial of specified privileges for a designated period of time.
 - (d) **Fines**—Previously established and published fines may be imposed.
 - (e) **Restitution**—Compensation for loss, damage or injury. This may take the form of appropriate service and/or monetary or material replacement.
 - (f) **Discretionary Sanctions**—Work assignments, service to the University or other such discretionary assignments that are considered appropriate by the Discipline Committee.
 - (g) **Conditions**—Conditions may be imposed upon a student's continued attendance.
 - (h) **University Suspension**—Suspension of the student from the University for a specified period of time, after which the student is eligible to return. Conditions for readmission may be specified.
 - (i) **University Expulsion**—Permanent separation of the student from the University.
3. More than one of the sanctions listed above may be imposed for any single violation.
4. Other than expulsion from the University and suspension for the duration of its effect, disciplinary sanctions shall not be made part of the student's academic record, but shall be kept on file in the Office of the Vice-President, Student Services, for use in the event of further breaches of this Code.
5. No student found guilty of an offence under this Code shall refuse to comply with a sanction or sanctions imposed under the procedures of this Code. Such refusal will constitute grounds for the imposition of additional sanctions.
6. The Committee may direct that a sanction be held in abeyance if a student's registration at the University is interrupted for any reason.

E. Interim Suspension

In the following circumstances, the President of the University, or a designate, may impose an interim suspension prior to the hearing before the Committee.

1. Interim suspension may be imposed only: (a) to ensure the safety and well-being of members of the University community or preservation of University property; (b) to ensure the student's own physical or emotional safety and well-being; or (c) if the student poses a threat of disruption or of interference with the normal operations of the University.
2. During the interim suspension, students may be denied access to specified campus facilities (including classes) and/or any other University activities or privileges for which the student might otherwise be eligible, as the President or the designate may determine to be appropriate.
3. A student who is the subject of an interim suspension may request a hearing before the Senate Discipline Committee on the issue of the interim suspension itself. This request shall be submitted in writing, with reasons, to the Secretary of Senate. The Committee shall hear the matter, including submissions by the President or designate, within ten working days, and shall have the authority to confirm, negate, or alter the terms of the interim suspension.

Approved by Senate, March 13, 1995

Suspension or Dismissal from a Programme on the Grounds of Professional Unsuitability - Faculty of Health Professions

The Faculty of Health Professions, acting through its Committees on Studies at the School/College and Faculty levels, and in consultation with the Directors and Dean, may suspend or terminate a student from a programme if the student is judged to be unsuitable for the profession in which s/he is studying. Because of the nature of the study and practice of the various health professions, which places caregivers in a position of special trust, certain impairments or some types of conduct unbecoming to a member of a health profession may be grounds for suspension or dismissal.

The following list includes examples of behaviours that might indicate unsuitability for the various health professions. The nature of these behaviours is such that, should any of them ever be repeated, grievous harm could be caused to clients. This list should not be considered to be all inclusive:

- (i) a criminal act (e.g., assault, sexual assault, fraud; and drug trafficking) which according to established Faculty processes was determined to be of such a nature as to bring disrepute to the profession, or by which in the opinion of the Faculty, the student demonstrated poor judgement, lack of integrity or (other) unsuitability for the profession; or evidence that, on the balance of probability, the student had committed such an act;
- (ii) being under the influence of alcohol or drugs while participating in client care, any other professional activity, or any activity related to the practice of the health profession;
- (iii) in accordance with provisions of the Nova Scotia Human Rights Act, the occurrence of a health condition that impairs essential performance required for the health profession;
- (iv) unethical behaviour as specified by the code of ethics/standard of practice of the health profession.

The student's situation will be considered with discretion throughout the investigation of the allegation of unsuitability and these deliberations shall determine whether suspension, dismissal or neither is recommended. The principles of natural justice and due process will be observed in all investigations.

Any member of the University community can bring to the attention of the Director behaviours that are deemed unsuitable. These behaviours will be investigated and allegations heard.

Appeals will follow the appeal procedure for academic matters within the Faculty of Health Professions notwithstanding that the criteria are different. At the University level, appeals will require formation of an *ad hoc* Senate Committee.

Guide to Responsible Computing

In recognition of the contribution that computers can make to furthering the educational and other objectives of the University, this Guide is intended to promote the responsible and ethical use of University computing resources. It is in the best interests of the community as a whole that these resources be used in accordance with certain practices which ensure that the rights of all users are protected and the goals of the University are achieved.

This Guide applies to all computer and computer communication facilities owned, leased, operated, or contracted by the University. This includes word processing equipment, micros, mainframes, minicomputers, and associated peripherals and software, regardless of whether used for administration, research, teaching, or other purposes.

It should be noted that system administrators of various campus computing facilities and those responsible for the computer access privileges of others may promulgate regulations to control use of the facilities they regulate. System administrators are responsible for publicizing both the regulations they establish and their policies concerning the authorized and appropriate use of the publicly available equipment for which they are responsible.

A. Basic Principles

Individuals should use only those University computing facilities they have been authorized to use. They should use these facilities:

- (a) with respect to the terms under which they were granted access to them;
- (b) in a way that respects the rights of other authorized users;
- (c) so as not to interfere with or violate the normal, appropriate use of these facilities;
- (d) so as not to impose unauthorized costs on the University without compensation to it.

B. Elaboration

1. Individuals should use only those University computing facilities they have been authorized through normal University channels to use. They should use these resources in a responsible and efficient manner consistent with the objectives underlying their authorization to use them.
2. Individuals should respect the rights of other authorized users of University computing facilities. Thus, they should respect the rights of other users to security of files, confidentiality of data, and the benefits of their own work. Users should respect the rights of others to access campus computing resources and should refrain from:
 - (a) using the computer access privileges of others without their explicit approval;
 - (b) accessing, copying, or modifying the files of others without their permission; and
 - (c) harassing others in any way or interfering with their legitimate use of computing facilities.
3. Individuals should respect the property rights of others by refraining from the illegal copying of programs or data acquired by the University or other users or putting software, data files, etc. on University computers without the legal right to do so.
4. Individuals should not attempt to interfere with the normal operation of computing systems or attempt to subvert the restrictions associated with such facilities. They should obey the regulations affecting the use of any computing facility they use.

C. Disciplinary Actions

Reasonable suspicion of a violation of the principles or practices laid out in this Guide may result in disciplinary action. Such action will be taken through normal University channels.

Nothing in this Guide diminishes the responsibility of system administrators of computing services to take remedial action in the case of possible abuse of computing privileges. To this end, the system administrators with the approval of the President and with due regard for the right of privacy of users and the confidentiality of their data, have the right, to suspend or modify computer access privileges, examine files, passwords, accounting information, printouts, tapes, and any other material which may aid in an investigation of possible abuse. Whenever possible, the cooperation and agreement of the user will be sought in advance. Users are expected to cooperate in such investigations when requested. Failure to do so may be grounds for cancellation of computer access privileges.

Faculty of Graduate Studies

Location: Arts & Administration Building
Room 314, Halifax, NS B3H 4H6
Telephone: (902) 494-2485
Fax: (902) 494-8797
E-mail: graduate.studies@dal.ca
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Administrative Officers

Dean

Ricketts, P.J., BA (Nottingham), PhD (Southampton)

Associate Dean

Stewart, M., BScN (McM), MN, PhD (Dal), RN

Secretary

Folkins, L., BSc (Dal), MSc, PhD (UofT)

Office Administrator

Charles, C., BCom, MBA (Dal)

Admissions and Programme Officer

Maynard, B.A.

Assistant to the Deans

O'Grady, J.

Administrative Staff

Hagen, M., Front Counter Coordinator

Powell, T., Data Coordinator

Sanford, L., Thesis Coordinator

Council and Standing Committees

The figure following a member's name is that individual's year of completion of term.

Faculty Council

Anderson, D., '97 Agriculture

Bednarski, B., '98 French

Birdsall, W., University Librarian

Burford, N., '97 Chemistry

Egan, D., '99 Physiotherapy

Fooladi, I., '97 Business Administration

Horackova, M., '99 Physiology and Biophysics

Jamieson, R., '97 Earth Sciences

Jarman, J., '98 Sociology and Social Anthropology

Keast, P., '97 Mathematics, Statistics, & Computing Science

Kwak, J., '97 Chemistry

Lazier, C., '98 Biochemistry

McConnell, M., '98 Law

Neumann, P., '98 Anatomy and Neurobiology

Putnam, C., '99 Recreation, Physical and Health Education

Ricketts, P.J., Dean (Chair)

Ross, T., '99 English

Sawynok, J., '97 Pharmacology

Smith, J., '98 Political Science

Stewart, M., Associate Dean

Tamlyn, D., '99 Nursing

Willison, M., '99 Biology

Academic Planning Committee of Council

Jarman, J., '98 Sociology and Social Anthropology

McConnell, M., '98 Law

Ricketts, P.J., (Chair) Dean

Sawynok, J., '97 Pharmacology

Stephens, R., '99 Chemistry

Stewart, M., Associate Dean

Tamlyn, D., '99 Nursing

Curriculum Committee

Bednarski, B., '98 French

Fooladi, I., '97 Business Administration

Melanson, H., Killam Library

Stewart, M., Associate Dean

Willison, M., '99 Biology

Dalhousie and Killam Scholarship Committee

Brett, N., '97 Philosophy

Friedrich, R., '98 Classics

Murphy, P., '99 Physiology and Biophysics

Parpart, J., '97 History

Stewart, M., (Coordinating Chair) Associate Dean

Thompson, J., '99 English

White, T., '99 Pharmacology

White, M., '98 Chemistry

Killam Postdoctoral Fellowship Committee

Folkins, L., '98 Physics

Greenfield, B., '97 English

Grindley, T.B., '97 Chemistry

Klein, R., '98 Psychology

Lucky, C., '99 English

Pelzer, D., '99 Physiology and Biophysics

Renton, K., '99 Pharmacology

Srinivas, S., '97 Mathematics, Statistics, & Computing Science

Stewart, M., (Chair), Associate Dean

Tillotson, S., '97 History

Treves, N., '98 French

Wright, M., '98 Pharmacy

Research Development Fund Committee (Humanities & Social Sciences)

Barber, P., '98 Sociology and Social Anthropology

Burns, S., '97 Philosophy (Co-chair)

Curran, J., '99 German

Fee, E.J., '97 Human Communication Disorders

Gibson, E., '99 Law

Middlemiss, D., '99 Political Science

Ricketts, P.J. (Co-chair), Dean

Wood, S., '98 Resource and Environmental Studies

Research Development Fund Committee in the Sciences

Chairperson, Biology

Chairperson, Chemistry

Chairperson, Earth Sciences

Chairperson, Mathematics, Statistics & Computing Science

Chairperson, Oceanography

Chairperson, Physics

Chairperson, Psychology

Croll, R., '99 Physiology and Biophysics

Stewart, M. (Chair), Associate Dean

Walker, J., '99 Physiotherapy

Killam Lecture Committee

Clairmont, D., '98 Sociology and Social Anthropology

Coley, A., '97 Mathematics, Statistics and Computing Science

Leonard, M. (1997 Organizer), Biology

Palmer, F.B., '97 Biochemistry

Representative from Public Relations

Ricketts, P.J. (Chair), Dean

Stairs, D., '98 Political Science

Panel of PhD Defence Chairs

Arnold, D.R., Chemistry

Bowen, A.J., Oceanography

Cameron, D.M., Political Science
 Cross, M.S., History
 Fingard, J., History
 Gray, M.W., Biochemistry
 Hopkins, D.A., Anatomy & Neurobiology
 Huebert, R.M., English
 Jamieson, R.A., Earth Sciences
 Klein, R., Psychology
 Lazler, C.B., Biochemistry
 Renton, K.W., Pharmacology
 Robertson, H.A., Pharmacology
 Sherwin, S.B., Philosophy
 Stewart, M., Associate Dean, Coordinator
 Thompson, A.C., Mathematics, Statistics and Computing Science
 Wainwright, J.A., English
 Willison, J.H.M., Biology

Human Ethics Review Committee

Brett, N., '97 Philosophy
 Carlson, R., '98 Social Work
 Earhard, B., '97 Psychology
 Greenfield, B., '98 English
 Gregor, F., '98 Nursing
 Guernsey, J., '97 Human Communication Disorders
 Harbison, J., '97 Social Work
 McCabe, J., '97 Recreation, Physical and Health Education
 Murphy, H.J., '98 Education
 Sandhu, R., '97 Business Administration
 Sutherland, D., '98 History
 Stewart, M., (Chair), Associate Dean
 Stewart, S., '99 Psychology

Academic Appeals Committee

Arnold, D., '97 Chemistry
 Baxter, J., '98 English
 Trillo, A., '98 Pathology

Reserve Panel for Academic Appeals Committee

Archibald, B., '98 Law
 Geaner, B.E., '98 French
 LoLordo, V., '97 Psychology

Faculty Regulations

The complete details of the Faculty of Graduate Studies regulations are included in the Manual for Governance, Policies and Procedures, which is available in the faculty and departmental offices.

Detailed information about particular programmes will be found in the Departmental entries in the subsequent sections of this calendar or may be obtained from Departmental publications. It is the responsibility of graduate students to familiarize themselves with the regulations which govern the conditions of their programmes of study at the University. Except where noted, Faculty of Graduate Studies regulations take precedence over Departmental regulations.

I. Degree Programmes

Departments in the Faculty of Graduate Studies offer programmes leading to the following degrees and diplomas:

- Doctor of Philosophy (PhD)
- Doctor of Philosophy/Doctor of Medicine (MD/PhD)
- Doctor in the Science of Law (JSD)
- Master of Arts (MA)
- Master of Business Administration (MBA)
- Master of Business Administration/Bachelor of Laws (LLB/MBA)
- Master of Development Economics (MDE)
- Master of Environmental Studies (MES)
- Master of Health Services Administration (MHSA)
- Master of Health Services Administration/Bachelor of Laws (LLB/MHSA)
- Master of Health Services Administration/Master of Nursing (MN/MHSA)
- Master of Laws (LLM)
- Master of Library and Information Studies (MLIS)

- Master of Library and Information Studies/Bachelor of Laws (LLB/MLIS)
- Master of Marine Management (MMM)
- Master of Nursing (MN)
- Master of Nursing/Master of Health Services Administration (MN/MHSA)
- Master of Public Administration (MPA)
- Master of Public Administration/Bachelor of Laws (LLB/MPA)
- Master of Science (MSc)
- Master of Science (Oral and Maxillofacial Surgery)/Doctor of Medicine (MSc/MD)
- Master of Social Work (MSW)
- Graduate Diploma in Public Administration (GDPA)

II. Admission Requirements

The following are the minimum requirements for admission to the Faculty of Graduate Studies. Applicants who meet the minimum requirements are not guaranteed admission, and normally, successful applicants have academic records and qualifications which are well above the minimum required.

2.1 Admission Requirements

The Faculty of Graduate Studies sets the minimum admission standards that are required for entry into graduate programmes. Individual Departments may require additional qualifications of their candidates, and enrollment limitations usually mean that successful applicants possess qualifications that considerably exceed the minimum requirements. Final decisions on all admissions are made by the Faculty of Graduate Studies, and there are no appeals on admission decisions.

All graduate programmes at Dalhousie University have a minimum period for programme fee payment and residency requirements. At the master's level, students can be admitted into either a one year or two year programme. For example, a one year programme involves a programme fee requirement of one year, during which the student is expected to be on campus unless otherwise given permission to take courses or undertake research somewhere else. Doctoral programmes at Dalhousie are normally at least two year programmes (i.e. they have at least a two year programme fee and residency requirement). If students have to continue beyond the programme fee requirement period to complete their degree, additional continuing or thesis-only fees are required. Students in master's thesis programmes should normally expect to take 6 to 12 months beyond the programme fee requirement period to complete their studies. Students in doctoral programmes should expect to take 12 to 24 months beyond the programme fee requirement period to complete their studies.

2.2 Master's Degree Programme

For all programmes, candidates must hold at least a Bachelor's Degree with a minimum B average from a university of recognized standing, with the following conditions:

- a) For entry into a Master's programme with a thesis requirement or equivalent (these are normally one year programmes, as described above), candidates must hold a Bachelor's Degree with an honours or the equivalent of honours standing as granted by Dalhousie University in the area in which graduate work is to be done or an area which is relevant to the graduate work. A four (4) year Baccalaureate degree may be considered as equivalent of honours if there is significant evidence of independent research capacity. In those cases where a candidate has a three (3) year degree and an honours programme was not available to them, first-class candidates will be considered for admission to a two year programme.
- b) For entry into all other programmes (normally involving a programme fee requirement and residency period of more than one year), candidates must hold a Bachelor's Degree with at least four (4) classes, or their equivalent, taken at a senior undergraduate level in the area in which graduate work is to be done or an area which is relevant to the graduate work. Candidates must achieve an average of at least a B in those four classes, as well as the overall B average for their degree.

- c) Some professional programmes offer a one year Master's programme for which an honours degree or equivalent is not required for admission. See Departmental Listings for details of individual programme admissions.

2.3 Doctoral Degree Programmes

Candidates must hold:

- a first class Master's Degree, or its equivalent, from a recognized university, for entry into a Doctoral programme with a two (2) year programme fee requirement, or
- a Bachelor's Degree from a recognized university with a first class (i.e. a minimum of an A- average) honours standing as granted by Dalhousie University, for entry into a Doctoral programme with a three (3) year programme fee requirement.

A few departments will admit a Bachelor's graduate with a first class honours degree to the Master's programme and recommend them for transfer to the Doctoral programme within the first year of study. Students who wish to transfer from a Master's to a Doctoral programme must do so within the first 15 months of initial registration.

2.4 English Language Competency

Candidates whose native language is not English must demonstrate their capacity to pursue a graduate-level programme in English before admission. The standard test is the TOEFL. The Faculty sets a minimum acceptable score of 580 for the TOEFL, but some programmes within the Faculty set a higher minimum. Where TOEFL is unavailable, the following tests will be accepted with the following minimum scores: MELAB, 90; IELTS, 7.

Further information on the test may be obtained from Test of English as a Foreign Language, Box 899, Princeton, NJ, 08540, USA.

2.5 Conditional Admissions

If a conditional admission is approved, the condition (usually a language or other standardized test) must be met within the first year of the programme. If the condition is not met within 12 months of initial registration, the student's registration will be terminated.

2.6 Graduate Examination

Some departments require GRE or GMAT scores of applicants (check departmental listing).

2.7 Advanced Standing

Normally advanced standing cannot be given for classes already counted towards a previous degree but it can be used to reduce a master's programme from two years to one when the student's previous degree and standing markedly exceed the normal qualifications.

2.8 Students with Learning Disabilities

Dalhousie University is committed to providing equal educational opportunity and full participation for students with learning disabilities.

Students with diagnosed learning disabilities, who meet the current admission requirements for Dalhousie University may follow the current admission procedures. All new Dalhousie students will receive in the offer of admission a statement indicating that, if they have a learning disability or any other disability for which they will require accommodations or special assistance, they should contact the Advisor to Students with Disabilities, in order to ascertain the degree to which their needs can be met.

Students with diagnosed learning disabilities who do not meet the current admission requirements or who otherwise wish to have their learning disability considered may apply for special consideration as may all other students who have extenuating circumstances. Such requests for special consideration will be made to the appropriate admissions committee, acting in consultation with the Advisor to Students with Disabilities and other professionals as needed.

The following documentation must be submitted by students who wish to apply for special consideration:

1. Letter(s) of recommendation from the individual(s) most familiar with the applicant's academic performance and/or potential for success at university;

2. A written, oral or electronic statement from the student. In this brief personal statement, students should describe their learning disability, how this affected their grades and the type of assistance they would require while at Dalhousie University;
3. A current (within three years) psychological assessment based on standard diagnostic instruments administered by a registered psychologist documenting the presence of learning disabilities. If a current report is not possible, Dalhousie University may accept an earlier report along with a current opinion (i.e., within the past year) expressed in a letter by a registered psychologist (or individual supervised by a registered psychologist) that the student has a learning disability. This letter should specify the nature, extent and rationale for programme modifications or accommodations that were deemed appropriate in the student's last two years of schooling.

The policy on release of information about students with learning disabilities is consistent with the University Regulation on the Release of Information as detailed in this calendar.

Note 1. Where self disclosure or prior arrangements have not been made with the University, Dalhousie is not liable to accommodate special needs due to disability.

Note 2. Appeals for students with learning disabilities will follow the usual procedures of the relevant Faculty at Dalhousie.

3. Application

Application for Admission forms may be obtained from the Registrar's Office, Dalhousie University, Halifax, NS, B3H 4H6, and should be returned to that office along with the application fee. All supporting materials should be sent directly to the Department to which the student is applying. In the case of Interdisciplinary PhD applicants, the supporting material should be sent to the Office of the Faculty of Graduate Studies (FGS). Application deadlines for admission in September and, in exceptional circumstances, January, are April 1 for non-Canadian applicants and June 1 for applicants from Canada, except where special dates apply (see Admission Dates earlier in this calendar).

Applicants who wish to be considered for scholarship support are strongly advised to apply by January. All eligible Candidates should also apply for external awards. Consult with your chosen department to determine scholarship availability and eligibility.

Applicants who require a student visa and are not funded by the University or an officially recognized funding agency must provide proof of financial ability with their application.

4. Registration

4.1 Registration Procedures

Registration is the process by which the student officially establishes with the University (Office of the Registrar and Faculty of Graduate Studies Office) the degree programme (MA, MSc, PhD, etc.) and status (full-time, part-time, etc.) and pays the appropriate academic fees (Student Accounts). Both aspects of the process (programme/status and fee payment) must be completed before a student can be said to be registered. (Most fees may be paid in two (2) instalments.)

Canadian and continuing visa students should register by mail prior to the University's deadline. Such students are reminded that they must inform the Graduate Studies Office and the Registrar's Office of their current address so that forms can be sent to them. Students who do not register by mail (including all new visa students) must register in person on or before the day specified by the Faculty. Continuing students who require an extension to their programme or have an outstanding progress report will not be permitted to register until the extension progress report has been officially approved by the Faculty of Graduate Studies. Students who do not register on or before the university's last day to register must apply in writing to the Faculty of Graduate Studies for permission to register. A financial penalty will apply. Any student who fails to register in September will not be allowed to submit a thesis or obtain any service whatsoever from the University during that academic year.

Students who change their registration status by the addition or deletion of classes must report this to the Faculty Office. Changes in status, i.e. part-time to full-time or full-time to part-time, cannot be made after initial registration without permission of the Faculty of Graduate Studies. No changes will be allowed after 30th November. Withdrawal from a degree programme should be reported immediately to the Faculty Office since reimbursement of fees is calculated from the official date of withdrawal.

4.1.1 Late Registration

Registration after the university's deadline is normally only permitted in unavoidable circumstances such as illness or required absence for research at the beginning of the next academic year (in September), but in all cases the penalty fee must be paid. No registration for September start will be allowed after November 1 for continuing students. New students accepted to begin programmes in January must register no later than January 20.

4.1.2 Failure to Register

Students who fail to register within the appropriate deadlines will not be allowed to submit a thesis nor will they receive any services whatsoever from the University during that academic year.

4.1.3 Withdrawal

Students who withdraw from a programme should immediately inform the Graduate Coordinator for their programme. The immediacy of notification is important since the amount and speed of fee reimbursement is influenced by the date of withdrawal. A withdrawal is not official until it has been approved by the Faculty of Graduate Studies. Under no circumstances will the Faculty of Graduate Studies back date a withdrawal notice. In any programme designated as a "Limited Enrolment Programme", the first installment of the fee is not refundable except on compassionate grounds (e.g. illness).

4.1.4 Required Withdrawal

A student may be required to withdraw from a programme for academic reasons (e.g. resulting from course failure), or for breach of a university regulation (e.g. Code of Conduct). The student will be notified by the appropriate body of the reason for the required withdrawal (please refer to Senate Discipline Regulations).

4.2 Registration Categories

All students must register in September of each year of their graduate programme in one of the following categories:

4.2.1 Full-Time

A student who is carrying more than two and one-half (2 ½) full-credit classes during the 12-month academic year or a student who has not yet completed the minimum number of years of full-time study required for a particular degree programme. A student may register full-time and hold jobs simultaneously only if the job involves no more than 16 hours' work per week, including a maximum of 10 hours as a teaching assistant.

4.2.2 Part-Time

A Master's student who is carrying not more than two and one-half (2 ½) full credit classes during the 12 months, September to August or a student who has not yet completed the minimum number of years of part-time study required for a particular degree programme.

4.2.3 Continuing

A student who has completed the programme requirements (that is, years of residence) but has not yet finished all the degree requirements (usually the thesis). A term fee may apply during the final year in programme if all requirements can be met in the first term.

4.2.4 Qualifying (Master's only):

A qualifying student is a person with a Bachelor's degree or its equivalent in whom a department has expressed an interest as a potential graduate student, but who is without a sufficiently strong academic background in a particular discipline to be enrolled directly in a Master's programme. Qualifying students can be full-time or part-time; take as little as one half class or as many as ten half classes chosen from undergraduate classes or a mixture of undergraduate and graduate classes. If advanced standing for the graduate classes is anticipated, this information must be specified in the comments section of the application form. Because it is a

prerequisite, a qualifying programme cannot be used to reduce the length of a subsequent regular graduate programme. Qualifying students are not eligible for scholarship support and must apply for admission to the appropriate graduate programme in the usual way towards the end of the qualifying period. Qualifying students must pass all the classes with no grades below a B- and average of at least B, and fulfil any other requirements in order to be considered for admission.

4.2.5 Special

Students are sometimes permitted to take a graduate class outside of a programme. Such students, who have not been admitted to a graduate programme, may normally take a maximum of two full-year classes (four half classes) with the permission of the class instructor and the appropriate graduate coordinator. Non-programme students must have records which meet the minimum entrance requirements for a graduate programme and are ineligible to apply if they have been rejected from the programme on account of academic standing. The registration category for non-programme students taking graduate classes is Special Student-Graduate Studies. Students who register in this category do so normally as an enrichment to their professional fields. Students trying to qualify for entry to a graduate programme must follow a different route: either a qualifying programme, if eligible, or a programme of study as a Special Student in an undergraduate faculty. Classes completed under SSGS status may not be used for credits towards formal graduate programmes unless prior approval is granted by the Faculty.

4.2.6 Summer School

In cases where a student is required by his/her department to take classes offered only during summer school, the fee will be paid by the Faculty of Graduate Studies. One credit is allowed in each of the two Summer School sessions within the limits allowed by the student's programme. Recommendations should be submitted by the department before the beginning of the first summer session. Registration dates for summer school appear in the almanac in the Graduate Studies calendar. Any student who is entitled to have the summer school fee waived must report to the Graduate Studies office before registration.

4.3 Leave of Absence

Students who need to take leave from their programme of study because of illness or a serious problem outside the student's control, may apply in writing through their department or school for a "leave of absence". If the department or school recommends to the Faculty of Graduate Studies that leave of absence be granted, and if the Faculty of Graduate Studies is also satisfied that the need is justified, such leave will be granted for a period of between four and twelve months commencing September 1 or January 1. An official leave of absence does not count towards time in programme. Students may not hold any Dalhousie Scholarships during a leave of absence.

Applications for leave of absence (normally limited to one leave period) must be made by August 31 for a leave commencing September 1 and December 20 for a leave commencing January 1. If the leave is for four or eight months, the fees will be pro-rated accordingly. Any refund of fees will be governed by university regulations, see Fees Section Table III. During a leave of absence a student cannot study elsewhere for credit at Dalhousie. Leaves of Absence can be granted for the following periods: September to December; September to August; and January to August.

PLEASE NOTE: unexpected circumstances and emergencies can be accommodated through a suspension of programme but no fee rebate is possible in such cases.

A leave of absence not only frees you from the necessity of paying tuition fees, it also releases the university from the obligation to provide you with services. These include consultations with professors and student library privileges.

Under no circumstances will retroactive approval be given for leaves of absence.

4.4 Maternity Leave

Maternity leave of four or eight months will be granted without prejudice to academic standing or eligibility for financial support. Any refund of fees will be governed by university regulations, see Fees Section, Table III. In exceptional circumstances, paternity leave of 4 months may be granted.

4.5 Readmission of students

A student who voluntarily withdraws or whose registration has lapsed may apply for readmission within ten years of initial registration. Readmission is not automatic because of the competition for places with incoming students. Readmitted students must pay fees for the years they were not registered, at the current fee rate. Students in thesis programmes who have not maintained registration are normally required to have a satisfactory thesis in hand before they can be readmitted.

Students may be readmitted only once during the course of a programme. Application for readmission must meet normal September application deadlines.

4.6 Fees

Graduate students pay "programme fees" for fixed periods either as full-time or part-time students, regardless of the number of classes taken, followed by continuing fees until all requirements have been completed.

All graduate students must maintain their registration status at all times and pay all the required fees (programme and continuing fees). Failure to pay required fees will result in the cancellation of registration.

Full Time Graduate Students pay the programme fee for the periods stated below. The fee is based on the total programme years regardless of the number of formal classes. Payment is not by the class, unless specified.

- Bachelor's degree to Diploma: One year
- Bachelor's degree with Honours or equivalent to MA, MSc, MMM: one year; to MES: Two years
- Bachelor's degree without Honours to MA, MSc, MDE: Two years
- Bachelor's degree to MSc (Human Communication Disorders): Three years
- Bachelor's degree to MBA, MHSA, MPA, MLIS, MN: Two years
- Bachelor's degree in Law to LL.M.: One year
- Dental degree to MSc (Oral and Maxillofacial Surgery): Three years
- Bachelor's degree with Honours to PhD: Three years
- Master's degree to PhD or JSD (from LL.M.): Two years
- MBA (financial services) pay by class fee only.

Part Time Graduate Students pay the same programme fee as full-time students spread over a maximum of three part-time years of study for every full-time year, except for the LL.M. degree where the maximum fee period for a one-year part-time programme is two years. If a part-time student completes the requirements for the degree before the normal full programme fees have been paid, the balance of those fees must be paid prior to graduation. Part-time students may take up to two and one-half (2 1/2) full credit classes in a 12 month academic year.

NOTE: Under the programme or continuing fee, students may take only those classes specified by the department as requirements for the degree.

Differential fees for non-Canadian Graduate Students must be paid for:

- Full-time Master's student (except Oral Surgery) - 2 years (or equivalent)
- Full-time Master's student Oral Surgery - 4 years
- Part-time Master's student - 6 years
- Full-time PhD student (following a Master's degree) - 3 years
- Full-time PhD student (following a Bachelor's degree) - 5 years

4.7 Identification Cards

Full-time, part-time and continuing students in a degree programme, will receive ID cards entitling them to University services.

4.8 Notification of Address

Students are required to keep the Faculty Office, the Registrar's Office, the Payroll Department (for students on funding) and their Department office up to date on changes of address. Notifications from the University will be sent to the most recent address possessed by these offices; students will be held responsible for complying with these notifications, and non-receipt of material because of failure to report a change of address will not excuse students from such responsibility.

5. Conflict of Interest

Faculty members and students are expected to declare any conflict of interest of a personal or financial nature which may influence explicitly or implicitly their participation in graduate programmes and graduate administration. In a small community such conflicts are sometimes unavoidable. It should nonetheless be possible to avoid conflict of interest in the following cases:

Members of FGS committees shall refrain from voting on matters pertaining to their own departments.

No elected committee member shall serve on an award or grant committee (i.e. scholarship, postdoctoral fellowship, research development fund) for more than two consecutive terms.

No faculty member shall evaluate in a teaching context or supervise the thesis or project of a student who is a daughter, son, spouse, partner or other close relative, or a faculty colleague in the same department.

No student or supervisor shall have a financial or family interest in the industry or business in which the student is pursuing his/her thesis research. If a student is employed by the company in which the research is being conducted or the student's research is marketable under terms of the supervisor's grant or contract used to provide support for the student, protection must be given to the student's contribution to the research by means of an appropriate contract, finalized before the research for the degree is commenced and signed by all parties involved.

No graduate student can teach a graduate class without completing all the preliminary programme requirements and then only with the permission of the Dean of Graduate Studies and on the understanding that the graduate student is not the "professor of record". The class must not include any of the graduate students' peers (e.g. a PhD student can teach only Master's students).

All students should read and be familiar with the University policies on Intellectual Honesty, as described in the University Regulations section of this Calendar.

6. Degree Requirements

6.1 Length of Programme

The normal upper time limits for the completion of degrees are:

- One-year Master's, full-time: Three years
- One-year Master's, part-time: Four years
- Two-year Master's, full-time: Four years
- Two-year Master's, part-time: Seven years
- PhD and JSD, full-time only: five years

A first extension of one year may be granted on the recommendation of the department. Requests for further one year extensions, to a maximum of two, must include a report of progress in the previous year together with a detailed plan and timetable for completion of the thesis. The third extension will state clearly that this is a FINAL extension. The student is then expected to defend and submit the thesis within that academic year. Under no circumstances can a student be registered in a programme for more than 10 years.

6.2 Requirements for the Master's Degree

Two types of Master's degree are offered: one based on research and the other on formal classes. The course of study for the research degree (MA, MSc, MDE, MES, MN, LL.M.) may include graduate classes, seminars, preparation of fields of study, comprehensive examinations, demonstrations of foreign language proficiency, a thesis, and oral defence of the thesis. Requirements vary

considerably from programme to programme, and even within the same programme, depending upon students' previous experience. A thesis option is available in the MLIS and MSW.

Non-thesis Master's programmes include the MBA, MHSA, MLIS, MMM, MPA, MSc (Human Communication Disorders) and MSW. A non-thesis option is available in the LLM. The number of classes varies and a project is often required.

6.3 Requirements for the Doctoral Degree

A candidate must demonstrate the ability to carry out research of high quality leading to an advance of knowledge in his/her area of study. In general, at least two (2) years must be spent in full-time study on the Dalhousie campus. The candidate's course of study will be initiated with the advice of a supervising committee of at least three (3) members. The thesis and course of study will be directed by a committee consisting of the research supervisor and at least two (2) other members. The course of study must include a preliminary examination (to be taken not less than one (1) year before submission of the thesis) and preparation and oral defence of a thesis. The course of study may include classes, seminars, comprehensive examinations, qualifying examinations, preparation of fields of study, demonstrations of foreign language proficiency, and any other requirements considered necessary for the clear demonstration of post-Master's-level comprehension, scholarship, and ability in the candidate's particular area of study.

Candidates for graduate degrees frequently have teaching duties which are remunerated through the undergraduate and professional teaching faculties. The teaching duties of full-time graduate students must not exceed ten hours a week, including preparation.

6.4 Classes

Classes may be full or half year (full or half credit respectively) and may be designated by the candidate's committee as "Required" (pass mark B-) or "Ancillary" (normal undergraduate pass mark). Some departments cross-list postgraduate classes with senior undergraduate classes in which case the requirements for graduate students are more demanding than those for undergraduates.

6.4.1 Grading Policy

Faculty regulations stipulate that graduate students must achieve a minimum, or passing, grade of "B-" in all classes required as part of their degree programme. Any lower grade will be recorded as a failure. All instructors of graduate classes (i.e. designated 5000 and above), with the exception of a few classes for which a pass/fail grading scheme has been approved, will use the grading scheme A+, A, A-, B+, B, B-, FM (Marginal Failure), F.

6.4.2 Ancillary

Undergraduate classes which a department recommends as advisable additional background to the degree programme, but not specifically required for that programme, are termed ancillary classes and must be taken in a department other than the one in which the student is registered. The pass grade in these is the same as for the undergraduate faculty unless otherwise specified by the department. Ancillary classes must be listed on the Programme of Graduate Studies form but do not count towards the required number of classes. Normally students will be limited to one ancillary class (6 credit hours) in each year of their programme.

6.4.3 Letters of Permission for Classes Taken Outside Dalhousie

Classes approved by the department and faculty (after examination of class descriptions) can be taken at other universities on "Letter of Permission" as part of the graduate degree programme provided the class is not available at Dalhousie. The maximum number of classes taken outside Dalhousie University shall normally be confined to 25 per cent of the class requirements except in those cases where a university-level agreement, governing specific cooperative arrangements, has been negotiated.

Graduate Students must be registered at Dalhousie and have paid appropriate fees before letters of permission will be approved. Full and part-time students are eligible to apply to take a class on a letter of permission. Students may take no classes outside Dalhousie for graduate credit unless prior approval of a Letter of Permission has been received from the Faculty. Letters of Permission are not approved retroactively.

Dalhousie will normally pay for tuition for students to take classes by letter of permission that are offered at other Maritime universities, provided the class is not available at Dalhousie. Students who are required to take classes at other institutions outside the Maritimes will be considered on a case by case basis, e.g. if the class is a necessary component of a student's programme.

Students who wish to take classes at institutions within or outside the Maritimes for non-academic reasons may do so at their own expense.

Students who fail a class may not replace a class on a letter of permission.

6.4.4 Audits

Students may take one audit (equivalent of 6 credit hours) in each residency year of their formal programme. Audits must be listed on the Programme of Graduate Studies form. Only audits relevant to the student's programme will be approved. Audits will not be approved as part of a Qualifying programme.

6.4.5 Withdrawal From Classes:

The final date for withdrawal from classes shall be: for 'A' classes - 25 October, for 'R' classes - 15 January, for 'B' classes - 12 February; for summer session classes - the mid-point of the class. For withdrawals before these dates, the class and the withdrawal is not recorded on the academic record. After these dates, the student is responsible for the content of the class and receives a grade for it. Students must complete the appropriate registration change form, which must be approved by the instructor concerned.

6.4.6 Incomplete classes:

A student who fails to complete the required work for a particular class during the normal period of the class will receive a grade of "F." However, where circumstances warrant it, a grade of "Incomplete" may be assigned. Subsequent completion of the work following the end of the class may result in a change of grade by the class instructor, as long as the work is completed before the following deadlines:

- Full Year classes: May 31, or 8 weeks after the end of the class, whichever is the longer period.
- A or B classes: January 31/May 31, or 8 weeks after the end of the class, whichever is the longer period.
- Summer classes: July 31 (Spring session) and September 1 (Summer session), or 4 weeks after the end of the class, whichever is the longer period.

After these deadlines, an "Incomplete" grade cannot be changed without permission of the Dean and will appear on the official academic record of the student. A late class drop is recorded as a failure. No "W" (withdrawal) category exists for graduate students.

The grade of "In Progress" may be used only to report thesis classes, research project classes, and those designated as "open to independent completion of study." Final submission of grades for project and independent study classes is April 30 for A classes and August 31 for B and R classes.

7. Examinations

7.1 Class examinations

Examinations will normally be the method of grade assessment in graduate classes. There are no supplementary examinations for Graduate Students.

Pass Standard

- 1) Graduate students must achieve a minimum, or passing, grade of "B-" in all classes required of their degree programme, except those in programmes listed in 2) below. Students who receive an FM are not necessarily assured of readmission and students who receive an F can still be considered for readmission. Any lower grade will be recorded as a failure. A student who fails to meet these requirements in any year is automatically withdrawn (academically dismissed) immediately from the programme. However, such a student may apply, in writing, to the department for readmission. Readmission to a programme must be approved in writing by the Faculty of Graduate Studies.

- 2) In the following programmes—Business Administration, Health Services Administration, Library and Information Studies and Public Administration—students are allowed one failing grade. However, no credit will be granted for the failing grade and the class must be repeated and a grade of "B-" or better obtained. (Failed core classes must be repeated, electives may be repeated or replaced at the discretion of the department).

7.2 Qualifying Examinations

The PhD qualifying examination/s (variously called qualifying, preliminary, comprehensive) should be taken in the second year of the programme or not later than the beginning of the third year. The examination may be oral, written, or both and covers subjects relevant to the general area of the candidate's research and teaching competency. Departments are required to set out their rules on PhD examinations in writing and to give a copy to each PhD student on or before registration and to the FGS office if the Departmental handbook provides insufficient detail. Failure to pass may result in dismissal. However, the student may be permitted at the discretion of the department to repeat the examination (once) within twelve months. The FGS Office must be notified on the successful completion of the qualifying process.

7.3 Comprehensive Examinations

These examinations in the candidate's area of study are part of both Master's and PhD degree courses of study in some Departments. Refer to particular departmental entries for details. It is the responsibility of Departments to make the necessary arrangements for these examinations.

7.4 Academic Accommodation for Students with Learning Disabilities

Students are expected to self-identify that they have a learning disability with the Advisor to Students with Disabilities as early as possible and preferably before the beginning of the term and to provide the Advisor with a current (within three years) psychoeducational report documenting the presence of a learning disability. They should make this initial contact during office hours and be prepared to discuss strengths, weaknesses and the types of accommodation that may be necessary.

The types of academic accommodation provided for students with learning disabilities may vary depending on the nature of the learning disability and the class content.

It is not unusual for there to be an initial trial and error period of finding the best way to evaluate a student's ability to demonstrate a mastery of class material.

The policy on release of information about students with learning disabilities is consistent with the University Regulation on the Release of Information as detailed on page 7.

NOTE: Where self-disclosure or prior arrangements have not been made with the University, Dalhousie is not liable to accommodate your special needs due to your disability.

8. Thesis Supervisors and Supervisory Committees

8.1 Qualifications of the Supervisor

A thesis supervisor or co-supervisor must be a member of the Faculty of Graduate Studies.

Depending on the unit, experience on supervisory or examining committees, teaching graduate classes, or acting as a co-supervisor may be necessary before undertaking the role of thesis or project supervisor.

Most natural science departments require faculty research funding as a criterion for supervision.

A doctoral student must be supervised by a faculty member with a PhD or its equivalent. Equivalency must be based on a faculty member's record of research activity. In the case of co-supervision, one of the supervisors must have a doctoral degree or its equivalent. In the event of a dispute over equivalency, the FGS Academic Planning Committee will be the final arbiter.

Members holding post-retirement appointments or active in research in retirement cannot take on new students.

8.2 Co-supervision

The Faculty recognizes four types of co-supervision:

- that dictated by regulation above (A doctoral student must be supervised by a faculty member with a PhD or its equivalent. Equivalency must be based on a faculty member's record of research activity. In the case of co-supervision, one of the supervisors must have a doctoral degree or its equivalent. In the event of a dispute over equivalency, the FGS Academic Planning Committee will be the final arbiter);
- that which arises from the desire of a student to draw equally upon the expertise of two individuals;
- that which introduces a new faculty member to the standards of the department by providing an opportunity to work with an experienced supervisor;
- that which conforms to the Faculty practice regarding external supervisors. An honorary faculty member may be the academic supervisor of a Dalhousie student provided the student also has an internal advisor to handle the administrative details.

8.3 Internal Advisor

Not all units give the internal advisor the status of a co-supervisor. In those units where university-level agreements exist for the cooperative governance of the programme or where successful involvement of an external supervisor (honorary member of FGS) has occurred to the unit's satisfaction, the internal advisor is not necessarily a co-supervisor, the implication being that in a vote on a thesis, the external supervisor has an independent voice.

8.4 Supervisory Committees

Most departments maintain supervisory committees for graduate students. Committees should meet at least twice a year during the thesis research and writing stages of a student's programme. Normally the agreement of all committee members is required before a department brings forward a doctoral thesis for examination.

8.5 Guidelines for the Supervision of Graduate Students

These guidelines were developed in 1981 at a conference sponsored by the Faculty of Graduate Studies and the Dalhousie Association of Graduate Students. They were reviewed and endorsed by the Dean and Graduate Coordinators in January 1992. They were updated for inclusion in the Manual in 1995 and will be updated again as the need arises. Where appropriate, units can adopt these guidelines for project students and their supervisors but they are designed primarily for thesis students.

8.6 Difference between theses in the Sciences and the Humanities/Social Sciences:

In the Sciences, the MSc thesis may be regarded as a miniature PhD thesis, while in the Humanities and Social Sciences the MA thesis is considered as qualitatively different from the PhD thesis in degree of originality, sophistication of research, and the level of insights and interpretations expected.

In the Sciences a change of supervisor may be more difficult to arrange than it is in the Humanities/Social Sciences, as Science students are generally more dependent upon the research grants of their supervisors. However, every effort should be made to rectify unpleasant situations.

8.7 Selection of Supervisor

In the Sciences, where students are not normally admitted until their research areas have been identified and faculty members have agreed to supervise them, a potential difficulty should be drawn to the attention of new students: some restriction of students' freedom to follow their own lines of research may result from dependence upon supervisors' research grants for a significant portion of their income. In extreme cases, students may feel that they are being used by supervisors for their own ends. When such conflicts of interest arise, the graduate coordinator and the candidate's supervisory committee should play a significant role in overseeing the development of the research and in protecting the student against over-specialization.

In the other disciplines which do not assign supervisors at the time of admission, the selection of a supervisor should be based primarily upon competence in the field of the proposed thesis topic. Within this restriction, the department should seek to accommodate the

student's choice of supervisor, although it is not obliged to guarantee the choice. Departments are expected to maintain guidelines for determining the number of thesis supervisors a faculty member can concurrently undertake.

8.8 Responsibilities of Supervisors

When faculty members accept the supervision of graduate students, they assume several responsibilities:

- to provide reasonable access to students and to be available for consultation at relatively short notice;
- to be as helpful as possible in suggesting research topics and in assisting students to define their theses;
- to tell students approximately how long it will be before written work, such as drafts of chapters, can be returned with comments;
- to be thorough in their examination of thesis chapters, supplying, where appropriate, detailed comments on such matters as literary form, structure, use of evidence, relation of the thesis to published work on the subject, footnoting, and bibliographical techniques, and making constructive suggestions for rewriting and improving the draft;
- to indicate clearly when a draft is in a satisfactory final form or, if it is clear to the supervisor that the thesis cannot be successfully completed, to so advise the student;
- to know the departmental and University regulations and standards to which the writer of a thesis is required to conform, and to make sure that the student is aware of them;
- to continue supervision when on leave, possibly with arrangements also being made for members of the supervisory committee to assist the student for the leave period;
- to advise and help the student to approach other faculty members for assistance with specific problems or even to request the reading of a chapter or section of the thesis.

8.9 Responsibilities of Students

When graduate students undertake the writing of a thesis, they assume several responsibilities:

- To choose a topic (often with the supervisor's help) and to produce a thesis that is essentially their own work;
- To produce a thesis which meets the standards of scholarship required by the University and the department, including demonstration of their capacity for independent scholarship and research in their field;
- To acknowledge direct assistance or borrowed material from other scholars or researchers;
- To realize that the supervisor has undergraduate or other duties which may at times delay the student's access to the supervisor at short notice;
- To give serious and considered attention to advice and direction from the supervisor;
- To submit their work to the judgment of the department and to abide by its decision when any rights of appeal, if exercised, have been exhausted;
- To know the departmental and University regulations and standards to which the writer of a thesis is required to conform.

8.10 Rights of Supervisors

Supervisors have the following rights:

- To expect students to give serious and considered attention to their advice concerning what they regard as essential changes in the thesis;
- To terminate supervision and advise the student to find another supervisor if the student does not heed advice and ignores recommendations for changes in the thesis, or if the student is not putting forth a reasonable effort;
- To have their thesis supervision properly credited by the department as an intrinsic part of their workload so that, in the assignment of duties, they are not overburdened to the point of having their effectiveness impaired as supervisors;
- To have the thesis-writer acknowledge, by footnoting, all portions of the supervisor's own research over which the supervisor wants to retain future rights of authorship;
- To have thesis-writers give permission for the results of their research to be used for the benefit of a larger project when they are working as assistants with their supervisor on research that is part of such a project. This is always with the understanding

that students will retain scholarly credit for their own work and be given acknowledgment of their contribution to the larger project.

8.11 Rights of Students

- To have a clear understanding of what is expected in thesis writing (expected length, acceptable methodology, validity of topic, notification of progress);
- To expect help from their supervisor in establishing a feasible topic and in solving problems and assessing progress as the thesis is being written;
- To receive a fair assessment of the completed thesis and explanations of negative criticism;
- To be allowed to have a new supervisor when they can offer convincing reasons to the department for the change;
- To be protected from exploitation by their supervisor or other faculty members if the latter should
 - a) Intrude upon the student's right of authorship or fail to give a student authorship credit for team research (where applicable, the department's protocols on authorship should be provided to students before they embark on research), or
 - b) Divert the student's efforts from the timely completion of the thesis.
- To submit a thesis even if the supervisor is not satisfied, although such action should be taken only in extreme cases and after full consultation with the department.

8.12 Responsibilities of the Department

- To provide necessary facilities and supervision for each student admitted, and not to accept more candidates than can be offered effective supervision. Therefore departments should consider carefully such matters as faculty retirements, sabbatical leaves, teaching loads, and library resources before admitting each student with a declared research interest. When, as is often the case in many disciplines, applicants are unable to choose a field of research until they have had some experience in graduate study or in a particular department, the department should still regulate admissions according to the number of faculty members available for supervision.
- To uphold a high academic standard for theses;
- To provide adequate supervision at all times, so that, when a supervisor leaves the University for another permanent position, substitute arrangements are made as soon as possible;
- To allow students to change supervisors if their research interests shift or develop in a new direction and a change of supervisor will not deprive them of financial support;
- To provide procedures which assist and encourage students to complete the thesis, such as early review and approval of topic and methodology, guidelines on access and appeals, oversight of the students' schedule, and a clearly stated system of thesis review and evaluation;
- To regard supervision of graduate students as a major consideration in making replacement appointments for faculty;
- To encourage students to give papers as they proceed, so that they can test their ideas on a wider audience than the supervisory committee;
- To ensure that the graduate coordinator acts as a general overseer of students' progress.
- To instruct all students (or see that they attend Faculty-level workshops) on research ethics;
- To explain to students the University's policies on intellectual property rights.

9. Thesis Regulations

9.1 Ethical Review

All thesis research involving human subjects must be approved by the Human Ethics Review Committee of the Faculty of Graduate Studies. Application forms are available from the Faculty of Graduate Studies Office. Students should allow three weeks for processing during the regular school year, and at least four weeks in the summer months.

9.2 Preparation of Manuscript

Thesis manuscripts must be prepared in accordance with Faculty of Graduate Studies rules. Detailed instructions may be obtained from the Faculty Office (Room 314, Arts and Administration Building).

9.3 Master's Theses

Theses for the Master's degree must be presented to the Department for examination not later than March 14, for Spring Convocation, or August 25, for the Fall awarding of degrees. Five (5) unbound copies are required (original and four copies). The method of examination for a master's thesis is a matter left to departmental decision. However, the thesis must be examined and approved by at least two readers in addition to the thesis advisor. Not all departments hold oral defences for the examination of the master's thesis. A thesis will normally be graded "approved" or "not approved". A thesis may be accepted as submitted, accepted on condition that specific revisions be made, not accepted with permission to submit a revised thesis, or not accepted. In order to document the point at which a master's student passes or fails a thesis, dated readers' reports must be filed in the student's departmental file, and, where relevant, notification of the degree of failure (i.e. outright failure or failure with the right to resubmit by a specific date) must be sent to the Dean.

9.3.1 Supervision and Examination

IMPORTANT NOTE: This regulation applies only to master's students who officially start their programme on September 1, 1997 or thereafter. Students who are registered in a master's thesis programme prior to September 1, 1997 should consult Regulation 9.3 in the 1996-97 Graduate Studies Calendar.

The mode of supervision and examination of master's theses varies somewhat from department to department. This diversity recognises differences in the nature of theses within master's programmes (such as the differences between Sciences and the Humanities/Social Sciences) and differences in the culture of thesis examination within different disciplines at the master's level.

The Faculty of Graduate Studies requires the following minimum arrangements for the supervision and examination of master's theses:

Master's Thesis Supervisory Committee

Each master's thesis candidate shall have a Supervisory Committee, comprising at least two faculty members of the student's graduate department, one of whom shall be the supervisor. The supervisor may act as the Chair of the Committee, or an independent Chair may be appointed. Additional full or adjunct members of the Faculty of Graduate Studies may be appointed as appropriate. Additional members of the Committee who are not members of the Faculty of Graduate Studies, including members of the non-university community (such as a practising professional), may be appointed to the Supervisory Committee where their particular expertise makes it appropriate.

Master's Thesis Examination Committee

Each thesis shall be examined by an Examination Committee, which shall consist of:

1. A Chair, who shall be a department representative (either the Graduate Coordinator or their designate) who was not a regular member of the Supervisory Committee. If the Supervisory Committee had an independent Chair, that person may also Chair the Examination Committee. The main role of the Chair is to organise the examination of the thesis, inform the Faculty of Graduate Studies of the membership of the Examination Committee, ensure that the procedures are carried out in an appropriate manner, record the examiners' written comments and the results of the examination for inclusion in the student's file, and inform the Faculty of Graduate Studies of the outcome of the examination;
2. The Supervisory Committee or at least two members of the graduate faculty appointed by the department at least one of whom shall have not been involved with the supervision or direction of the thesis;
3. Where the Supervisory Committee is part of the Examination Committee, at least one additional member of the graduate faculty shall be appointed who may be from the candidate's graduate programme or department, but preferably should be from outside the involved programme or department. The additional examiner must not have been involved with the supervision and direction of the thesis and must be in a position to render an objective and impartial assessment of the quality of the work. Where appropriate, the additional examiner may be from a graduate faculty of another university.

With permission of the Dean, the additional examiner may be a non-faculty member (such as a practising professional who does not hold an Adjunct appointment with the Faculty) where it is deemed that they have the appropriate professional and academic qualifications and expertise to assess a graduate thesis. Departments may also use an External Examiner in a manner similar to that used for the examination of doctoral defences (i.e. the thesis cannot be approved without the agreement of the External Examiner).

4. The Dean of Graduate Studies may appoint a Faculty representative if it is deemed necessary, or at the request of the student or the Chair of the Examination Committee.
5. The examination of a master's thesis may be conducted either by use of an oral defence or by written submission of the thesis to the Examination Committee.

Oral Defence: In the case of an oral defence, it shall be public at least to the extent of being open to the faculty members and graduate students of the home department and any other departments that would be specifically interested. Where appropriate, interested members of the academic and non-academic communities beyond Dalhousie University should also be invited. A written description of the outcome of the defence, including written reports of the readers and any changes required, shall be included as part of the candidate's departmental file. The oral defence shall be carried out according to standard procedures, usually involving: a short presentation by the student; questions from the thesis committee (one or more rounds); in camera deliberation by the committee and agreement on the evaluation; presentation of the results of the exam to the student. Questions from the audience may be permitted before the in camera session if desirable.

Written Defence: Examination by written submission must provide for the candidate to be able to respond to the comments, criticisms and recommendations of the Examination Committee through the exchange of written commentary, and be required to make revisions as deemed appropriate by the Examination Committee. In the case of programmes that do not normally require an oral defence, the Dean of Graduate Studies may require such a defence if the circumstances warrant or if the Examination Committee or candidate requests it.

6. All theses are either approved or not approved. The categories are a) approved as submitted; b) approved upon specific corrections being made (a clear timetable for completion of the revisions must be presented to the student, normally with a maximum of one month to complete the revisions); c) rejected but with permission to re-submit a revised thesis for re-examination (a clear timetable for completion must be presented, normally with a maximum of one year to re-submit); and d) rejected outright. In all cases, all members of the Examination Committee must submit written examination reports, dated and signed, which shall become part of the candidate's departmental file. The Chair's written report shall summarise the outcome of the examination process, the final decision and any conditions attached. In the case of an outright failure or failure with a right to submit by a specific date, the Graduate Coordinator must send a written notification of failure to the Dean.

The above regulations are the minimum requirements of the Faculty of Graduate Studies, and some departments or programmes may exceed these requirements. Students must check with their Graduate Coordinator for details on how their department handles Master's thesis supervision and examination.

9.3.2 Thesis Submission Deadlines

Theses for the Master's degree must be presented to the Department for examination not later than March 15, for Spring Convocation, or August 25, for the Fall Convocation. Five (5) unbound copies are required (the original and four copies).

9.4 Doctoral Theses

Doctoral theses must display original scholarship expressed in satisfactory literary form consistent with the discipline concerned and be of such value as to merit publication. The subject of the PhD thesis must be approved by the Faculty at least twelve (12) months before the date of final examination.

9.5 Deadline for Graduation

For thesis students the published deadlines for the submission of the copies of the thesis to the Faculty of Graduate Studies in order to be eligible to graduate in May or October are final in all cases.

9.6 Regulations for the Defence of a Doctoral Thesis

All doctoral theses must be examined in a public oral defence, to be conducted by an examining committee appointed by the Chair of the department.

9.6.1 Procedures

1. The candidate shall register the proposed title of the thesis with the Faculty of Graduate Studies, no later than six months before submission of the completed thesis.
2. The Chairperson of the Department shall recommend to the Dean or Associate Dean of Graduate Studies one name (with c.v.), from a list of three names submitted by the thesis supervisor for the appointment of an external examiner at least three months before the anticipated date of completion of the thesis. The persons suggested should be acknowledged experts in the field or discipline of the research being examined in the thesis. Initial contact with the external examiner should be made by the Chairperson of the Department.
3. Of the five copies of the thesis required, the candidate shall submit one unbound copy of the completed thesis (the External Examiner's copy) to the Faculty of Graduate Studies, together with the Thesis Submission Form and a c.v.. The deadlines for submitting unbound PhD theses to departments (see the Almanac in the Faculty of Graduate Studies calendar under August, November and February) are also the deadlines for submission of the one unbound copy (with completed Thesis Submission Form) to the Faculty of Graduate Studies office (see also item 6 below). This copy is then sent to the External Examiner by the Graduate Studies office. At that time the candidate shall provide a copy of the abstract page from their thesis for publication in a public notice of the defence.
4. The other four copies of the thesis will be submitted by the candidate to the departmental graduate coordinator, who will distribute them immediately to local members of the examining committee. One copy may be held in the departmental secretary's office for use by other interested faculty and students.
5. No arrangements will be made for the oral examination until all of these requirements are fulfilled. The examination will be held no earlier than four weeks after submission of the thesis, thereby allowing adequate time for the thesis to be read by the external examiner.
6. The Dean or Associate Dean of Graduate Studies will issue a formal invitation to the external examiner and will send a copy of the thesis (see paragraph 3) to him/her at least four weeks before the examination.
7. In consultation with the Chairperson of the Department, the graduate co-ordinator, and the research supervisor, the Faculty of Graduate Studies office will establish a time and place for the examination.
8. The external examiner will normally submit by mail a constructively critical and analytical report to the Associate Dean of Graduate Studies, who will send a copy to the graduate co-ordinator. Normally the external examiner will attend the defence, but in the rare event of the external examiner not attending, the written report, accompanied by questions to be read at the defence on the examiner's behalf should be submitted to the Associate Dean one week before the defence.
9. Notice of the public defence of the thesis will be published and sent to all relevant departments by the Faculty of Graduate Studies. All interested faculty, students, and members of the public will be welcome to attend.
10. Variation of the regulations outlined above may be permitted only with the written permission of the Dean of Graduate Studies.

9.6.2 Oral Examination

The oral examination of a doctoral thesis is the culmination of the candidate's research programme. It exposes the work to scholarly criticism and gives to the candidate the opportunity to defend the thesis in public. The Examination is chaired by the Dean, the Associate Dean of Graduate Studies or a member of the Panel of PhD Defence Chairs. The examining committee consists of the chairperson of the department (or a designate), the research supervisor or supervisors, and at least three additional members, one of whom shall be the external examiner from outside the University.

The candidate is questioned on the thesis following a summary presentation no longer than 20 minutes. The Chairperson will give priority to questions from the external examiner and from the other members of the examining committee in some pre-arranged order. The audience will then be invited to ask questions. The Chairperson adjourns the examination when the examining committee decides that further questioning is unnecessary. He/she then chairs the examining committee during its deliberations *in camera*. The decision of the examining committee is based both on the thesis and on the candidate's ability to defend it.

No thesis shall be approved without the agreement of an external examiner, except that a negative opinion of an external examiner who does not attend the examination should not prevail over the unanimous opinion of the other examiners present and voting. The thesis is graded "approved" or "not approved". A thesis can be accepted by the Examining Committee as submitted; accepted on condition that specific corrections are made; rejected with permission to submit a revised thesis; or rejected. It should be stressed that theses can be rejected on grounds of form as well as content.

If specific corrections are required, the thesis will be returned to the candidate and a time limit during which the corrections must be completed will be decided upon by the examining committee. Specific corrections will normally be left to the satisfaction of the local committee and research supervisor.

If the thesis is rejected with permission to submit a revised thesis (within 12 months of the first defence), the revised thesis will be re-read by an examining committee, at least two of whose members were on the original committee. The thesis shall be submitted to an external examiner who may be the original external examiner if the Associate Dean of Graduate Studies considers this to be desirable. The candidate shall defend the thesis before an examining committee in the usual way. There are no third chances.

The recommendation for degree must be approved by the Faculty of Graduate Studies and by the Senate.

Variation of the procedures stipulated above may be permitted only with the written permission of the Dean of Graduate Studies.

9.7 Regulations for Submission of Theses

All thesis students must obtain a copy of the Faculty of Graduate Studies Regulations for Submission of Theses. These regulations are available from the Office of the Faculty of Graduate Studies. The regulations give details on:

1. Manuscript Originality
2. Preparation of Manuscript
3. Order of Contents
4. Submission Deadlines
5. Mailing Costs

All thesis students must refer to the Schedule of Academic Dates in this calendar for submission deadlines.

Students must be registered for the year in which they present their approved unbound theses to the Faculty of Graduate Studies.

It is the responsibility of the student to ensure that all regulations have been met. Failure to comply with the regulations can result in delay in graduation.

9.8 Binding

At the time of submitting unbound thesis (original and four copies) to the Graduate Studies Office, students will present a cheque for \$85.00* payable to the Faculty of Graduate Studies, Dalhousie University. This sum will cover the cost of binding. An additional charge will be made (where appropriate) to cover mailing costs.

The Faculty Office will arrange for the binding and subsequent distribution of theses as follows:

- (a) One (1) copy is sent to the author.
- (b) Two (2) copies are sent to the student's Department.
- (c) Two (2) copies are sent to the University Library which arranges for the production of microform copy to be retained in the National Library, Ottawa and listed in *Dissertation Abstracts International* or *Masters Abstracts International*. The National Library can then circulate such copy according to the International Inter-Library Loan Code, with full copyright protection; it also guarantees a permanent record of the thesis. The University Library retains one (1) bound copy in the University Archives.

* Subject to change without notice

10. Convocation

Convocation ceremonies are held in May and October. When a student has fulfilled all the requirements (including payment of all programme fee requirements and any continuing fees), for the degree in advance of the official graduation date, a letter to that effect can be obtained from the Faculty of Graduate Studies Office. An administrative fee of \$5 will be charged.

10.1 Conferring of Degrees

Successful candidates for degrees are ordinarily required to appear at Convocation in the proper academic costume to have the degree conferred upon them. By special permission of the Senate, degrees may be conferred *in absentia*. Any graduating student who is unable to appear at the convocation is expected to notify the Registrar in writing prior to May 5, or October 11 for Fall convocation, giving the address to which the diploma is to be mailed.

10.2 Academic Costume

Graduates of the University are entitled to wear gowns and hoods of black stuff. The distinctive part of the costume is the lining of the hood, which for the various degrees currently offered are as follows:

MA: Crimson silk

MBA: Turquoise silk

MDE: Medium blue/scarlet border

MBS: Brown silk

MHSA: Sky blue silk/white border

LLM: Purple silk

MLIS: Mid-forest Green silk

MMM: Navy silk/seagreen border

MN: Apricot silk

MPA: Sky Blue silk

MSc: Scarlet silk

MSc (Agriculture): Scarlet silk/gold chevron

MSW: Citron silk

PhD: Black gown faced with yellow silk; black hood with a lining of yellow silk; birretum is the doctor's bonnet of black velvet with yellow cord.

JSD: Black gown faced with olympic blue silk bordered with yellow silk; black hood with a lining of olympic blue silk bordered with yellow silk; birretum is the doctor's bonnet of black velvet with yellow and blue cord.

11. Awards on Graduate Transcripts

A select number of Dalhousie Scholarships/Awards are recorded on the students official Dalhousie transcript. They are:

- Killam and Honorary Killam Scholarships,
- Eliza Ritchie and honorary Eliza Ritchie Scholarship,
- J. R. Johnston and honorary J. R. Johnston Scholarship,
- Governor General's Gold Medal.

An official letter confirming other Dalhousie scholarships (e.g. Dalhousie Graduate Scholarships) can be obtained upon request from the Faculty of Graduate Studies Office. An administrative fee of \$5.00 will be charged.

12. Appeals

Faculty decisions are subject to the normal appeals procedures which begin with the Department, School or College, then, if necessary, the Dean. If still unresolved, the student may appeal to

the Academic Appeals Committee of the Faculty of Graduate Studies. There are no appeals on admission decisions, or decisions on scholarships or bursaries.

13. Policy on Integrity in Scholarly Activity

In accordance with the Senate Policy on Integrity in Scholarly Activity, the Faculty of Graduate Studies has adopted guidelines which focus upon the involvement of graduate students in research and scholarly activity. Copies of the guidelines are available from the Faculty of Graduate Studies, from Graduate Coordinators, and from the Faculty World Wide Web page.

Departmental Listings

The following entries are designed to provide general information about particular graduate programmes. Although general Faculty of Graduate Studies requirements apply to all graduate programmes, the methods of fulfilling these requirements vary considerably among Departments. Detailed, up-to-date information is located in departmental publications.

Each Departmental entry includes the following information:

1. A list of faculty members engaged in the teaching of graduate classes and/or the direction of graduate research. Faculty members whose major appointments are in other Departments are so indicated. In addition, the names of other researchers in the Department and honorary appointees may be listed.
2. A description of facilities available may be included. Some general regulations may be described.
3. A list of admission requirements in addition to those of the Faculty of Graduate Studies. In some cases the minimum requirements outlined in Section 2 are not sufficient for entry into a particular programme. Other particular requirements may be listed.
4. A description of degree programme requirements includes:
 - (a) Minimum time required to complete the programme
 - (b) Course work required
 - (c) Other academic requirements
 - (d) Thesis requirement
 - (e) Other requirements
5. A representative list of class offerings. Not all of the classes will necessarily be offered in a given year.
6. An extensive list of areas of specialization.

Agriculture

Location: Nova Scotia Agricultural College
Truro, NS B2N 5E3
Telephone: (902) 893-6360
Fax: (902) 897-9399

Professors

Adsett, J., BSc (McG), MScE (UNB), PhD (Saak)
Anderson, D.M., BSA, MSc (Man), PhD (Saak)
Asiedu, S., BSc, MSc, PhD (McG)
Burnside, E.B., BSA, MSA (UofT), PhD (N Carolina)
Caldwell, C.D., BSc (MtA), MSc (Dal), PhD (East Anglia)
Crober, D.C., BSc (Agr), MSc (McG), PhD (UBC)
Eaton, L.J., BSc (Acadia), MSc, PhD (Dal)
Farid, A., BSc, MSc (Shiraz), PhD (Alta)
Fredeen, A.H., BSA (Saak), MSc (Guelph), PhD (Davis)
Gray, A.B., BSc (Bishops), MSc, PhD (McG)
LeBlanc, J.-P., BSc (Quebec), BA (Mont), PhD (McG)
Ju, H.Y., BSc (Seoul), MSc, PhD (McG)
Madani, A., BSc (Pahlavi), MSc (UBC), PhD (Wash)
Nowak, J., MSc, PhD, PhD Hab (Olsztyn)
Stratton, G.W., BSc (Agr), MSc, PhD (Guelph)
Tennessee, T., BSc, MSc, PhD (Alta)
Warman, P.R., BSc (Rutgers), MSc, PhD (Guelph)

Associate Professors

Brewster, G., BA (Hon), MSc, PhD (Western)
Lirette, A., BScS (Medicine), BScA, MSc (Laval), PhD (Alta)

Assistant Professor

Atlin, G., BSc, MSc (Guelph), PhD (Iowa)
Crowe, N.L., BSc (Agr), MSc (McG), PhD (Guelph)
MacLaren, L.A., BSc, MSc (Alta), PhD (Calif)
Martin, R.C., BA, MSc (Carleton), PhD (McG)
Nams, V.O., BSc (UofT), MSc (Alta), PhD (Victoria)

The above NSAC faculty hold adjunct appointments at Dalhousie

Honorary Adjunct Professors

Boiteau, G., BSc, MSc (Laval), PhD (N.Carolina)
Christie, B.R., BSA, MSA (UofT), PhD (Iowa)
Doohan, D.J., BSc (Agr) (Guelph), MSc, PhD (NC State)
Gordon, R.J., BSc, MSc (McG), PhD (Guelph)
Lall, S.P., MSc, PhD (Guelph), Fisheries and Ocean
Papadopoulos, Y.A., BSc, MSc, PhD (Guelph), Agriculture Canada
Singh, R.P., BSc (Agr), MSc (Agr) (Agra Univ), PhD (N. Dakota)

Honorary Research Associates

Prange, R.K., MSc (UBC), PhD (Guelph), Ag. Canada

The above hold adjunct appointments at NSAC

I. Admission

The Nova Scotia Agricultural College has facilities for advanced study and research leading to an MSc in Agriculture.

The Master of Science degree is granted by Dalhousie University in cooperation with the Nova Scotia Agricultural College.

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. All inquiries for admission should be addressed to: The Research & Graduate Studies Office, Nova Scotia Agricultural College, P.O. Box 550, Truro, Nova Scotia B2N 5E3

Please refer to the Admission Dates section for final dates for receipt of application for admission.

A. MSc Degree Programme

Formally approved in the Spring of 1993, the Master of Science in Agriculture represents a unique co-operation between Dalhousie University and the Nova Scotia Agricultural College.

The Master of Science degree is granted by Dalhousie University in association with the Nova Scotia Agricultural College, the only educational institution in the Atlantic Region with the faculty and facilities capable of providing such a programme of study.

Graduate students attend classes at the Nova Scotia Agricultural College and, on occasion, supplement their programme with courses at Dalhousie University. Students may choose to concentrate their studies in any of the following areas:

Agribiology: Waste Management, Environmental Microbiology, Ecology, Pest Management, Sexual Reproduction of Angiosperms

Agricultural Chemistry: Food Science, Agricultural Chemistry
Soil Science: Soil Chemistry, Nutrient Management, Soil Physics, Soil Fertility, Soil and Water Interactions

Animal Science: Nutrition, Animal Behaviour, Genetics and Breeding, Animal Product Technology, Physiology, Animal Management

Plant Science: Crop Physiology, Crop Breeding, Plant Biotechnology, Crop Management

The MSc in Agriculture programme is research centred. All students must complete a research thesis embodying original contribution in the thesis field of study. The thesis is defended at an oral examination.

Required classes include AGRI 5700.03R Communication Skills for Scientists and AGRI 5710.03R Graduate Module Class, the content of which is influenced by specific student needs.

In addition, each student demonstrates in the laboratory of at least one undergraduate course in order to gain knowledge and experience in classroom instruction.

II. Classes Offered

Classes marked with an asterisk (*) are offered in alternate years. Please check the current timetable to see whether a particular class is being offered.

AGRI 5210.03: Special Topics in Environmental Microbiology.

INSTRUCTOR: G. Stratton
FORMAT: Lecture 3 hours

AGRI 5220.03: Special Topics in Weed Science.

INSTRUCTOR: D. Doohan
FORMAT: Lecture 3 hours

AGRI 5240.03: Special Topics in Environmental Impact.

INSTRUCTOR: G. Stratton
FORMAT: Lecture 3 hours

AGRI 5250.03: Soil Microbiology.

INSTRUCTOR: G. Stratton
FORMAT: Lecture 3 hours, lab 4 hours

AGRI 5260.03: Special Topics in Plant Pathology.

INSTRUCTORS: A.B. Gray, R.P. Singh
FORMAT: Lecture 3 hours

AGRI 5270.03: Economic Entomology.

INSTRUCTOR: J.-P. LeBlanc
FORMAT: Lecture 3 hours

AGRI 5310.03: Special Topics in Applied Ethology.

INSTRUCTOR: T. Tennesen
FORMAT: Lecture 3 hours

AGRI 5320.03: Special Topics in Animal Nutrition.

INSTRUCTORS: D. Anderson, A. Fredeen

FORMAT: Lecture 3 hours

AGRI 5340.03: Special Topics in Animal Physiology.

INSTRUCTOR: L. MacLaren
FORMAT: Lecture 3 hours

AGRI 5350.03: Animal Research Methods.

INSTRUCTOR: A. Fredeen
FORMAT: Lecture 3 hours

*AGRI 5360.03: Protein Nutrition.

INSTRUCTOR: D. Anderson
FORMAT: Lecture 3 hours

AGRI 5370.03: Special Topics in Animal Breeding and Genetics.

INSTRUCTOR: D.C. Crober
FORMAT: Lecture 3 hours

AGRI 5380.03: Quantitative Genetics.

INSTRUCTOR: D. Patterson
FORMAT: Lecture 3 hours

AGRI 5390.03: Molecular Genetic Analysis of Populations.

INSTRUCTOR: A. Farid
FORMAT: Lecture 3 hours, labs 4 hours

AGRI 5410.03: Special Topics in Soil Fertility.

INSTRUCTOR: P. Warman
FORMAT: Lecture 3 hours

AGRI 5430.03: Special Topics in Environmental Analysis.

INSTRUCTOR: J. Hoyle
FORMAT: Lecture 3 hours

*AGRI 5440.03: Organic Environmental Analysis.

INSTRUCTOR: J. Hoyle
FORMAT: Lecture 3 hours, labs 4 hours

*AGRI 5450.03: Environmental Soil Chemistry.

INSTRUCTOR: P. Warman
FORMAT: Lecture 3 hours, labs 4 hours

AGRI 5460.03: Special Topics in Soil and Water Management.

INSTRUCTORS: R. Gordon, A. Madani, P. Havard
FORMAT: Lecture 3 hours

AGRI 5470.03: Special Topics in Analytical Instrumentations for Researchers.

INSTRUCTORS: N. Crowe, G. Stratton
FORMAT: Lecture 3 hours

AGRI 5510.03: Special Topics in Plant Breeding.

INSTRUCTORS: G. Atlin, Y. Papadopoulos
FORMAT: Lecture 3 hours

AGRI 5520.03: Plant Breeding Methods.

INSTRUCTORS: G. Atlin, Y. Papadopoulos
FORMAT: Lecture 3 hours, labs 2 hours

AGRI 5530.03: Nitrogen in Crop Production.

INSTRUCTOR: R.C. Martin
FORMAT: Lecture 3 hours

AGRI 5540.03: Special Topics in Crop Physiology.

INSTRUCTORS: C.D. Caldwell, S.K. Asledu, N. Goodyear, R.C. Martin
FORMAT: Lecture 3 hours

AGRI 5560.03: Advanced Crop Physiology.

INSTRUCTOR: C.D. Caldwell

FORMAT: Lecture 3 hours

AGRI 5570.03: Special Topics In Agricultural Biotechnology.

INSTRUCTOR: J. Nowak
FORMAT: Lecture 3 hours

***AGRI 5580.03: Plant Biotechnology.**

INSTRUCTOR: J. Nowak
FORMAT: Lecture 3 hours, labs 4 hours

AGRI 5610.03: Special Topics In Animal Product Technology.

INSTRUCTOR: N.L. Firth
FORMAT: Lecture 3 hours

***AGRI 5620.03: Ruminant Digestive Physiology & Metabolism.**

INSTRUCTORS: A.H. Fredeen, A. Lirette
FORMAT: Lecture 3 hours, labs 4 hours

AGRI 5700.03: Communication Skills for Scientists.

INSTRUCTOR: L.E. Haley
FORMAT: Lecture 2 hours

AGRI 5705.03: Graduate Module Class II.

INSTRUCTOR: Staff
FORMAT: Lecture 2 hours

AGRI 5710.03: Graduate Module Class I.

INSTRUCTOR: Staff
FORMAT: Lecture 2 hours

AGRI 5720.03: Applied Statistics & Experimental Design for Agriculture.

INSTRUCTOR: T. Astatide
FORMAT: Lecture 3 hours

AGRI 9000.00: MSc Thesis

Anatomy and Neurobiology

Location: Sir Charles Tupper Medical Building, 13th Floor
Halifax, NS B3H 4H7
Telephone: (902) 494-2052
Fax: (902) 494-1212
e-mail: anatomy@is.dal.ca
WWW: <http://www.dalgrad.ca/homepage.htm>

Head of Department
Hopkins, D.A.

Professors

Currie, R.W., BSA, MSc, PhD (Man)
Dickson, D.H., BA, MSc, PhD (Western)
Hopkins, D.A., BSc (Alta), MA, PhD (McM)
Neumann, P.E., MD (Brown)
Rutherford, J.G., BA (Cornell), MS (Syracuse), PhD (SUNY)
Semba, K., BEd, MA (Tokyo), PhD (Rutgers)
Walker, J.M., BPT, MSc (Man), PhD (McM), major appointment in
Physiotherapy
Wassersug, R.J., BSc (Tufts), PhD (Chicago)

Associate Professors

Ellenberger, H.H., BA, MSc, PhD (Miami)
Hagg, T., MD (Leiden), PhD (UCSD), Graduate Studies Co-ordinator
Hansell, M.M., BSc (UofT), PhD (Calif)
Mobbs, I.G., BSc (Aberdeen), MSc (McM), PhD (Western)

Assistant Professors

Allen, G.V., BSc, PhD (Dal)
Darvesh, S., MD (Dal), PhD (UNB)
Mathieson, W.B., MSc (Carleton), PhD (Ottawa)
Mendez, L., MD, PhD (Western)
Morris, S.F., BSc (Victoria), MD (Ottawa), MSc (UofT)
Smith, F.M., BSc, PhD (UBC)

Honorary Adjunct Professors

Taaker, R.A.R., BSc, MSc, PhD (Queen's)
Toews, D.P., BSc, MSc (Alta), PhD (UBC)

The Department of Anatomy and Neurobiology provides facilities for advanced study and research in Neuroscience, Histology, Embryology, Cell Biology, Neuroendocrinology and Evolutionary Biology.

I. Admission Requirements

All general requirements for admission to the Faculty of Graduate Studies must be fulfilled. In addition, applicants are expected to have received a sound training in biology and chemistry.

A. Honours degree holders in Biology

Apply for MSc programme, with option to transfer to PhD programme after one year, contingent upon the recommendation of student's advisory committee.

The content of this year of study will be recommended by the Department of Anatomy and Neurobiology Graduate Studies Committee.

B. Master's degree holders in a biological science
May apply for direct admission to PhD programme.

C. Medical graduates

Individuals showing an aptitude for research may apply for admission to either the MSc or PhD programme.

All students entering the MSc programme are expected to advance to the PhD programme.

II. Degree Programmes

A. Master of Science (MSc)

The minimum residency requirements for the MSc degree are as indicated in Section 4.6 of the Faculty of Graduate Studies Calendar.

A minimum of five graduate-level credits is required. A written thesis reporting original research must be submitted and defended orally. The MSc thesis (ANAT 9000.00) may count for up to three of the five graduate level credits required for the degree. All MSc candidates must participate in the departmental seminar programme during each year of training. Classes are determined by consultation between the student, research supervisor and the Department of Anatomy and Neurobiology Graduate Studies Committee. For each candidate, classes will be selected from those listed below or, where appropriate, from those offered by other Departments. Consent of the instructor is required for admission into each class. Normally, 24 months (2 years) are necessary to complete all requirements for the MSc degree.

The acquisition of teaching skills is an integral part of the programme. Therefore, all MSc candidates must assist in laboratory teaching or an equivalent (approximately 30-40 hours) during each year of residency.

Financial assistance is available for qualified students for no more than two full years.

B. Doctor of Philosophy (PhD)

Residency requirements for the PhD degree are summarized in Section 4.6 of this calendar.

The class requirements for each PhD candidate are determined by consultation between the student, the research supervisor and the Department of Anatomy and Neurobiology Graduate Studies Committee. All PhD candidates must participate in the departmental seminar programme during each full year of training. The acquisition of teaching skills is an integral part of the programme. Therefore, the student is also required to assist in laboratory teaching (approximately 30-40 hours per year for at least two years) and to deliver 2-4 hours of lectures during the course of his/her training.

A written thesis (ANAT 9530.00) based on original research of a high calibre must be submitted and defended orally.

Financial assistance is available for qualified candidates for no more than four years.

Preliminary Examination

All PhD candidates must pass a preliminary examination no later than 1 full year prior to the submission of a thesis. The examination will include material related to the general and specific areas of research. The examining committee will be selected by the Department of Anatomy and Neurobiology Graduate Studies Committee after consultation with the candidate's research supervisor and will conduct the examination in accordance with the regulations established by the Department of Anatomy and Neurobiology.

Thesis Examination

MSc and PhD theses will be defended in accordance with the regulations of the Faculty of Graduate Studies.

C. Doctor of Philosophy, Anatomy/Neuroscience (PhD)

Anatomy and Neurobiology also offers a PhD in Anatomy/Neuroscience through the Interdisciplinary Neuroscience programme.

D. Doctor of Philosophy with Doctor of Medicine (combined MD/PhD)

For information on the combined MD/PhD programme see "Interdisciplinary and Joint Programmes".

III. Classes Offered

ANAT 5030.06: Human Histology.

COORDINATOR: M.M. Hansell

ANAT 5041.03: Light Microscope Techniques.

COORDINATOR: W.B. Mathieson

ANAT 5042.03: Electron Microscope Techniques.

COORDINATOR: D.H. Dickson

ANAT 5050.03: Anatomy Research Seminar. (required)

COORDINATOR: T. Hagg

ANAT 5060.03: Neurobiology of Neurological Disorders.

COORDINATOR: T. Hagg
CROSS-LISTING: NESC 5060.03

ANAT 5062.03: Autonomic Regulation: Central Mechanisms

COORDINATOR: H.H. Ellenberger
CROSS-LISTING: NESC 5062.03

ANAT 5063.03: Neurobiology of the Peripheral Autonomic Nervous System.

COORDINATOR: F. Smith
CROSS-LISTING: NESC 5063.03

ANAT 5070.03: Chemical Neuroanatomy.

COORDINATOR: K. Semba
CROSS-LISTING: NESC 5070.03

ANAT 5090.03: Cellular Development in the Nervous system.

COORDINATOR: TBA

ANAT 5100.06: Human Neuroanatomy.

COORDINATOR: K. Semba

ANAT 5120.06: Human Embryology.

PREREQUISITE: ANAT 5150.03 and 5160.09, an equivalent or the consent of the instructor.
COORDINATOR: M.M. Hansell

ANAT 5160.09R: Human Gross Anatomy.

COORDINATOR: Staff

ANAT 5170.03: Special Topics.

COORDINATOR: Arranged according to research topic

ANAT 5609.03: Anatomical and Molecular Neuropharmacology of the Basal Ganglia

The Scientific basis for Grafting and Neural Transplantation.
COORDINATOR: I. Mendez

ANAT 9000.00: MSc Thesis

ANAT 9530.00: PhD Thesis

Atmospheric Science

Location: Physics Department
Sir James Dunn Building
Halifax, NS B3H 1Z9

And: Oceanography Department
Life Sciences Centre, Third Floor
Halifax, NS B3H 4J1

Professors

Chylek, P., Diploma (Physics) (Charles, Prague), PhD (Calif)

Assistant Professors

Fu, Q., BSc, MSc (Peking), PhD (Utah)
Folkina, L., BSc (Dal), MSc, PhD (UofT)

Honorary Adjunct Professors

Hertzman, O., MSc (UBC), PhD (Wash)
Isaacs, G., PhD (McG)
King, M., PhD (Az)

Graduate Degrees

Graduate degrees in Atmospheric Science may be taken through either the Physics or the Oceanography departments.

A. MSc Degree Programme

Minimum course requirements are a total of five half-credit classes. Each student must take three core half-credit classes including PHYC 6570.03/OCEA 5570.03; PHYC 6580.03/OCRA 5580.03; and one of PHYC 5520.03/OCEA 5520.03, PHYC 5411.03/OCRA 5411.03, OCEA 5595.03. Classes may be taken through Physics or Oceanography.

Research and Thesis are required.

B. PhD Degree Programme

Prospective graduate students should refer to the class requirements for the Departments of Physics or Oceanography. The classes required in the chosen department must include three core half classes described under the MSc programme.

If the student is registered in Oceanography, he or she must write and defend a proposal for thesis research; if in Physics, a preliminary oral examination must be taken in the first year.

All candidates must prepare, research and orally defend a thesis.

Biochemistry

Location: Sir Charles Tupper Medical Building, 9th Floor
Halifax, NS B3H 4H7

Telephone: (902) 494-2480
Fax: (902) 494-1355
WWW: <http://www.biochem.dal.ca>

Head of Department

Breckenridge, W.C., PhD, Carnegie and Rockefeller Professor

Professors

Breckenridge, W.C., BSc (Queen's) MSc, PhD (UofT)
Dolphin, P.J., BSc, PhD, DSc (Southampton)
Doolittle, W.F., AB (Harvard), PhD (Stanford)
Gray, M.W., BSc, PhD (Alta)
Lazier, C.B., BA (UofT), MSc (UBC), PhD (Dal)
Palmer, F.B.St.C., BSc, PhD (Western)
Singer, R.A., AB (Princeton), PhD (Harvard), Graduate Coordinator
(Telephone: 494-2306)
Tan, M.H., BSc, MD (Dal), FRCP(C), FACP, major appointment in Medicine
Wallace, C.J.A., MA, DPhil (Oxon)

Associate Professors

Byers, D.M., BSc, MSc (Dal), PhD (Alta), major appointment in Pediatrics
Cook, H.W., BSc, MSc (McG), PhD (Dal), major appointment in Pediatrics
Ridgway, N.D., BSc, MSc (Dal), PhD (UBC), joint appointment in Pediatrics

Assistant Professors

Bearne, S.L., BSc (Acadia), PhD (UofT), MD (McG)
Borden, K.L.B., BSc (Mich), PhD (Yale)
Dobson, M.J., BSc (Dal), DPhil (Oxon)
Liu, P.X.-Q., BSc (Wuhan), PhD (Cornell)
McMaster, C.R., BSc, PhD (Man), major appointment in Pediatrics
Ro, H.-S., BSc, PhD (McM)
Too, C.K.L., BSc, MSc (Malaya), PhD (Hawaii)

Lecturers

Riddell, D.C., BSc, PhD (Queen's), major appointment in Pathology.

I. Admission Requirements

General requirements for admission to the Faculty of Graduate Studies are given in section 2 of "Faculty Regulations". In addition, foreign applicants must submit the results of the Graduate Record Examination. A TOEFL score of at least 600 is required of applicants whose native language is not English (section 2).

II. General Regulations

The Department accepts applicants with degrees in Biochemistry and also those with training in related fields such as biology, chemistry and related biomedical sciences. Our programme is designed to ensure that all graduate students acquire a general background in biochemistry that will provide a solid foundation for career development. In addition, each student specializes in one of the following areas: gene expression and cell regulation; lipids, lipoproteins and membranes; molecular evolution; proteins. Advanced knowledge within a specialty is developed by formal classes and/or guided study arranged for each student through consultation with a supervisory committee. Students also participate in the Biochemistry seminar series (BIOC 5910.06-5913.06) and in teaching/laboratory demonstrating.

Entering graduate students are assessed with regard to their general background in biochemistry, in an open-book written fashion, to ensure that they have a grasp of the important principles in solving biochemical problems and have the background necessary for advanced classes. A preliminary examination related to the subject area of the thesis occurs at the end of the first year of study. Application may be made at that time for transfer from an MSc to a PhD programme. Scholarship support is available, and students are eligible for the Patrick Prize, awarded by the Department to recognize excellence in graduate research. Additional information can be obtained by contacting the Department for a copy of our booklet, *Research and Graduate Study in Biochemistry*.

III. Degree Programmes

A. Master of Science (MSc)

A thesis describing original research done by the candidate is prepared and defended orally. A Thesis Supervisory Committee consisting of the research director and two others is appointed to assist the candidate.

The minimum residence requirements for the two MSc programmes (see section 2.2) are 1 and 2 years, respectively. Experience has shown that most candidates require an additional 6-12 months to complete the thesis.

B. Doctor of Philosophy (PhD)

The preparation and oral defence of a thesis describing an extensive original investigation carried out by the candidate is the major requirement. A Thesis Supervisory Committee consisting of the research director and three others is appointed to oversee the research. The minimum residence requirements of the PhD are 2 years from the MSc and 3 years from the BSc (see section 2.3). Most students require an additional 1-2 years to complete the thesis.

C. Doctor of Philosophy in Biochemistry/ Neuroscience (PhD)

Biochemistry also offers a PhD in Biochemistry through the interdisciplinary Neuroscience programme.

D. Doctor of Philosophy with Doctor of Medicine (Combined MD/PhD)

For information on the combined MD/PhD programme see "Interdisciplinary and Joint Programmes" (page 64).

IV. Areas of Specialization

A. Gene Expression and Cell Regulation

Dobson, M.J. - Chromosome Structure and Function: yeast plasmid segregation, organization of human telomeric DNA, yeast artificial chromosome vectors, protein-DNA interactions.

Lazler, C.B. - Androgen Action: androgen regulation and gene expression in the prostate (with R.S. Rittmaster, Dept. of Medicine)

Riddell, D.C. - Human Molecular Genetics: tumor suppressor genes. Gene mapping.

Ro, H.-S. - Signal Transduction Pathway in Adipocyte Differentiation: gene expression, heterotrimeric G protein, MAP kinase, obesity, transgenic and knockout mice.

Singer, R.A. - Cell Growth Control: regulation of the eukaryotic (yeast) cell cycle and cell proliferation (with G.C. Johnston/Microbiology).

Too, C.K.L. - Prolactin Action: signal transduction, gene expression and regulation of lymphoid cell growth.

B. Lipids, Lipoproteins and Membranes

Breckenridge, W.C. - Lipoproteins and Atherosclerosis: structure and function of lipids and apolipoproteins in relation to lipoprotein metabolism.

Byers, D.M. - Membrane Proteins and Lipids: protein kinase C substrates and neural cell signalling; enzymology and regulation of cholesterol and fatty acid metabolism; acyl carrier proteins.

Cook, H.W. - Membrane Lipid Metabolism and Signal Transduction: protein kinase C isoforms and lipid turnover in neural cells; plasmalogens and peroxisomal disorders.

Dolphin, P.J. - Lipoprotein Metabolism: molecular enzymology of lipolytic enzymes; genetic defects in man and animal models; reverse cholesterol transport.

McMaster, C.R. - Fatty Acylation of Phospholipids: molecular genetics and biochemistry of enzymes affecting the fatty acyl composition of phospholipids and their role in human disease states.

Palmer, F.B.St.C. - Functions of Membrane Phospholipids: receptor-linked transmembrane signalling.

Ridgway, N.D. - Sphingomyelin and Cholesterol: metabolic and coordinate regulation.

Tan, M.H. - Dyslipidemias in Diabetes Mellitus: Fractional Esterification Rate of cholesterol in HDL particles in diabetic patients at risk for coronary heart disease.

C. Molecular Evolution

Doolittle, W.F. - Genome Evolution: genomics, molecular phylogeny, archaeobacterial genetics.

Gray, M.W. - Organelle Genome Structure and Evolution; Ribosomal RNA Structure and Function: plants and protists, transcription, RNA processing and RNA editing.

Liu, P.X.-Q. - Genome Evolution and Gene Regulation: evolution of plastid operons; organelle-nucleus interactions; protein introns and protein splicing.

D. Proteins

Bearne, S.L. - Enzyme Catalysis: transition state analogues; enzyme inhibition; bio-organic reaction mechanisms; biochemical recognition; protein modifications

Borden, K.L.B. - Structure Function Relationships of the Ring Zinc Finger-containing Protein Structures Determined by NMR Methods; studies of nuclear bodies and association with viral infections and leukemia

Wallace, C.J.A. - Protein Engineering: chemical and genetic remodelling of cytochrome *c* for studies of mitochondrial electron transport and protein structure-function relationships.

V. Classes Offered

Classes marked (*) are not offered every year; consult current timetable for changes.

BIOC 5000.06/5001.03: Special Topics in Biochemistry.

Students interested in topics not covered in formal classes may ask the department for special classes to meet their needs. The fields in which the department can offer instruction may be judged from the list of research topics.

BIOC 5300.03: Biochemical Communication: Membranes and Cell Signalling.

INSTRUCTORS: D.M. Byers, H.W. Cook, and C.B. Lazler.

FORMAT: Lecture 3 hours

CROSS-LISTING: BIOC 4301.03

BIOC 5301.03: Biochemistry of Lipids.

INSTRUCTORS: H.W. Cook and N.D. Ridgway

FORMAT: Lecture 3 hours

CROSS-LISTING: BIOC 4302.03

*BIOC 5302.03: Structure, Biosynthesis and Metabolism of Lipoproteins.

INSTRUCTORS: P.J. Dolphin and W.C. Breckenridge

FORMAT: Lecture 2 hours

*BIOC 5304.03: Integration and Control of Metabolism.

INSTRUCTORS: P.J. Dolphin and W.C. Breckenridge

FORMAT: Lectures, selected readings and seminars

CROSS-LISTING: BIOC 4304.03

*BIOC 5401.03B : The World of RNA.

INSTRUCTOR: M.W. Gray

FORMAT: Lecture/seminar, guided reading and discussion 2 hours

***BIOC 5402.03: Biochemical Evolution.**

INSTRUCTORS: W.F. Doolittle and C. J. A. Wallace
FORMAT: Weekly discussion/seminar and guided reading 2 hours

BIOC 5403.03: Genes and Genomes.

INSTRUCTORS: P. Liu and W.F. Doolittle.
FORMAT: Lecture 3 hours
CROSS-LISTING: BIOC 4403.03, BIOL 4010.03, MICR 4403.03

BIOC 5404.03: Gene Expression.

INSTRUCTOR: R.A. Singer
FORMAT: Lecture 3 hours
CROSS-LISTING: BIOC 4404.03, BIOL 4011.03, MICR 4404.03

BIOC 5603.03: Advanced Laboratory in Biochemical Techniques.

Biochemistry, Biology and Microbiology faculty members;
Coordinator: consult department. The class is a series of laboratory modules (each of 4 weeks' duration, 6 hours per week) organized collaboratively by the departments of Biochemistry, Biology, and Microbiology. A choice of modules is offered in 3 sections covering techniques used in the study of molecular biology, protein structure-function, and specific metabolic processes. Three modules are selected from any section or sections, subject to availability of space. Consult the coordinator regarding prerequisites and module selections.

FORMAT: Laboratory approximately 72 hours total.
CROSS-LISTING: BIOC 4603.03, BIOL 4012.03/5012.03, MICR 4601.03/5601.03

BIOC 5700.03: Proteins.

INSTRUCTOR: K.L.B. Borden
FORMAT: Lecture 3 hours
CROSS-LISTING: BIOC 4700.03

BIOC 5701.03: Enzymes.

INSTRUCTOR: S.L. Bearne
FORMAT: Lecture 2.5 hours, seminar/tutorial 0.5 hours
CROSS-LISTING: BIOC 4701.03

BIOC 5811.03: Biochemistry of Clinical Disorders I.

This class is an introduction to the pathophysiology of disease. It provides the clinical and biochemical background to disease groups and system disorders and the laboratory approach to their diagnosis. Topics include cardiovascular, renal, gastrointestinal and hepatobiliary disorders, in addition to acid-base, blood and immune abnormalities.

INSTRUCTOR: B.A. Nassar
FORMAT: Lecture 3 hours, case studies and assignments
PREREQUISITES: BIOC 3200.03, 3300.03 and 3400.03 or consent of instructor
CROSS-LISTING: BIOC 4811.03, PATH 5011.03

BIOC 5812.03: Biochemistry of Clinical Disorders II.

This class is an introduction to the pathophysiology of disease. It uses the same approach as BIOC 5811.03 but different groups of diseases are discussed. Topics include carbohydrate, lipid and amino acid disorders; endocrine and rheumatological diseases, as well as tumor markers and toxicology.

INSTRUCTOR: B.A. Nassar
FORMAT: Lecture 3 hours, case studies and assignments
PREREQUISITES: BIOC 3200.03, 3300.03 and 3400.03 or consent of instructor
CROSS-LISTING: BIOC 4812.03, PATH 5012.03

BIOC 5910.06-5913.06: Biochemistry Seminar.

Attendance at the weekly Departmental seminar, and discussion with seminar speaker; the presentation of seminars, in "Journal Club" format, covering recent research papers; participation in the Departmental Symposium on a student-selected topic.

COORDINATOR: TBA
FORMAT: Tutorial 1 hour.

BIOC 9000.00: MSc Thesis

BIOC 9530.00: PhD Thesis

Biology

Location: Life Sciences Centre
1355 Oxford Street
Halifax, NS B3H 4J1
Telephone: (902) 494-3515
Fax: (902) 494-3736

Chair
O'Dor, R.K.

Professors Emeriti

McLaren, I.A., MSc (McG), PhD (Yale), George S. Campbell Professor
Vining, L.C., MSc (Auck), PhD (Cantab), FRSC
von Maltzhan, K.E., MS, PhD (Yale)

Professors

Brown, R.G., MSc (McG), PhD (Rutgers)
Chapman, A.R.O., PhD (Liv)
Croil, R., PhD (McG), major appointment in Physiology/Biophysics
Doyle, R.W., MSc (Dal), PhD (Yale) Director, Gene Probe Laboratory
Fentress, J.C., PhD (Cantab), major appointment in Psychology
Freedman, B., MSc, PhD (UofT)
Hall, B.K., PhD, DSc (UNE), FRSC, Killam Research Professor
Kamra, O.P., MS (N Car State), PhD (Wash State)
Kimmins, W.C., PhD (Lond), Dean of Science
Lane, P.A., MSc (SUNY Binghamton), PhD (SUNY Albany)
Lee, R.W., MA (Mass), PhD (SUNY Stony Brook)
MacRae, T.H., MSc, PhD (Windsor)
Melnertzhagen, I.A., PhD (St. Andrews), major appointment in Psychology
Mills, E.L., MS, PhD (Yale), major appointment in Oceanography
O'Dor, R.K., PhD (UBC)
Patriquin, D.G., MSc, PhD (McG)
Scheibling, R.E., BSc, PhD (McG)
Shaw, S.R., BSc (London), PhD (St. Andrews), major appointment in Psychology
Stoltz, D.B., PhD (McM), major appointment in Microbiology
Wassersug, R.J., PhD (Chic), major appointment in Anatomy and Neurobiology
Willison, J.H.M., PhD (Nottingham)
Zouros, E., MSc, PhD (Agr Col Athens), PhD (Chic)

Associate Professors

Angelopoulos, E.W., MS, PhD (Minn)
Hicks, G.S., MSc (Carleton), PhD (Sask)
Pohajdak, B., MSc, PhD (Man)
Walde, S., PhD (Calgary), NSERC Research Fellow
Whitehead, H., MA, PhD (Cambridge)
Wright, J.M., PhD (Memorial)

Associate Professor (Research)

Newkirk, G.F., PhD (Duke)

Assistant Professors

Hutchings, J., MSc, PhD (MUN)
Iverson, S.J., PhD (Maryland)
Leonard, M., MSc (Guelph), PhD (Ottawa), WFA
Johnston, M.O., PhD (Chic)
Pinder, A., PhD (Mass), NSERC Research Fellow

Honorary Adjunct Professors

Aiken, D., MSc (New Hamp), PhD (Alta), Fisheries and Oceans
Anderson, D., PhD (Sask), MSc, BSA (Man), HRA
Asiedu, S., BSc, MSc, PhD, (McG), HRA
Boutlier, R.G., MSc (Acadia), PhD (East Anglia)

Bowen, W.D., PhD (UBC), BIO
Brodie, P.F., MSc (McG), PhD (Dal)
Caldwell, C.D., PhD (East Anglia), NS Agric Col
Campana, S.E., PhD (UBC), BIO
Castell, J.D., MSc (Dal), PhD (Oregon)
Cone, D.K., MSc (Guelph), PhD (UNB), St. Mary's University
Conover, R.J., PhD (Yale), BIO
Craigie, J.S., MSc, PhD (Queens), Inst. Marine Bioscience, NRC
Douglas, S.E., MSc, PhD (Dal)
Doull, J., PhD (Dal)
Durvasula, S.R.V., MSc, PhD (Andhra), BIO
Eaton, L., NSRC
Fredeen, A.H., PhD (McG), NS Agric Col
Fritz, L., PhD, BS (SUNY Stony Brook), MS, PhD (Rutgers),
University of Arizona
Gray, A.B., MSc, PhD (McG), NS Agric Col
Hargrave, B.T., MSc (Dal), PhD (UBC)
Harrington, F., PhD (New York at Stony Brook)
Harrison, W.G., PhD (North Carolina, Raleigh), BIO
Head, E., MPhil (London), PhD (Wales), BIO
Ju, H.Y., PhD (McG), NS Agric Col
Kenchington, E., MSc (Dal), PhD (Tas), Fisheries and Oceans
Kepkay, P.E., BSc (Reading), MSc, PhD (Dal)
Kerr, S.R., MSc (Queen's), PhD (Cal), BIO
Lall, S.P., MSc, PhD (Guelph), NRC
Mann, K.H., PhD (Reading), DSc (Lond), FRSC, BIO
McLachlan, J.L., MA, PhD (Oregon State College), Acadia
Nowak, J., PhD (Olsztyn), PhD (Dal), NS Agric Col
Platt, T.C., MA (UofT), PhD (Dal), BIO
Pringle, J.D., MSc (Victoria), PhD (Dal), Fisheries and Oceans
Ragan, M., PhD (Dal), NRC
Silver, M., PhD (Syracuse)
Sinclair, M., MSc (Southampton), PhD (USCD), BIO
Tennessee, T., PhD (Alta), NS Agric Col
van der Meer, J.P., PhD (Cornell), Inst. Marine Bioscience, NRC
Vandermeulen, J., MSc (Alta), PhD (U of Calif, LA), BIO
White, M.J., BSc (McM), PhD (UBC)
Wright, J.L.C., PhD (Glasgow), Inst. Marine Bioscience, NRC

Research Associates

Aidoo, K., MSc, PhD (Dal)
Cook, D., MSc (Michigan)
Herbinger, C.M., MSc (DEA Paris), PhD (Dal), Gene Probe
Laboratory
Martin, R.C., MSc (Carleton), PhD (McG), NS Agric Coll
Pogson, G., PhD (UBC)
Retallack, E., MSc (Dal), PhD (Manchester)
Tang, Y., MSc, PhD (Dal)
Warman, P.R., MSc, PhD (Guelph), NS Agric Coll
Webber, D., MSc (Dal)

Honorary Research Associate

Horn, A., PhD (UofT)
Stalcer, C., MSc (NAU), PhD (Mass)
Taschereau, P., MSc (Acadia), PhD (Manchester)
Wielgart, L., MSc (Memorial), PhD (Dal)

I. Admission

The Biology Department has facilities for advanced study and research leading to the MSc and PhD degrees.

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies and normally a student will not be permitted to earn all three degrees (BSc, MSc, and PhD) at Dalhousie. All inquiries for admission to the graduate programme should be addressed to Dr. Finn Sander, Biology Department.

II. Degree Options

A. MSc Degree Programme

For minimum times required to complete this programme, see section 4.

Students are required to obtain five full credits at the graduate level; of these at least two must be graduate classes and include Biology 5700.03 and Biology 5705.03; they may include graduate classes from other departments, and in the case of students supervised at Nova Scotia Agricultural College, may include classes given at the College. The thesis may count as 1, 2, or 3 credits. Additional classes may be specified by supervisory committees.

Students are required to demonstrate in an undergraduate biology class for at least one year and must be admitted to candidacy before they are permitted to submit and defend a thesis.

A thesis reporting original research must be submitted and defended orally.

Students are expected to participate in weekly departmental seminars.

B. PhD Degree Programme

For minimum times required to complete this programme, see section 4.

BIOL 5700.03 (or 5701.03) and BIOL 5705.03 (or 5706.03/5707.03) are required classes and additional classes may be specified by supervisory committees.

A preliminary examination on subjects in the general area of the thesis research is required for all PhD students. Students must pass the preliminary examination at least one year before submitting a PhD thesis.

Students are required to demonstrate in an undergraduate biology class for one year, and must be admitted to candidacy before submitting a thesis.

A thesis reporting original research must be defended orally. Students are expected to participate in weekly departmental seminars.

III. Areas of Specialization

Incoming students are assigned to one of three streams: however, they may take classes outside their stream areas. Consult department for details. The streams are:

- A. Population Biology
- C. Cellular and Molecular Biology
- D. Organismal Biology

Stream A - Population Biology

- Biology and culture of lobster and scallops (D.E. Aiken)
- Ecophysiology and post-harvest biology of crops; plant-microbe interaction (S.K. Asledu)
- Population dynamics and management of seals (W.D. Bowen)
- Investigation of tacer movement in plant translocation systems (C.D. Caldwell)
- Incremental growth of fish otoliths (S.E. Campana)
- Population and community ecology of seaweeds (A.R.O. Chapman)
- Ecology; Zooplankton physiology and population studies (R.J. Conover)
- Physiology and biochemistry of marine algae (J.S. Craigie)
- Ecological genetics of aquatic organisms; aquaculture genetics (R.W. Doyle)
- Phytoplankton ecology and primary production (S.R.V. Durvasula)
- Management of mineral nutrition of lowbush blueberry (L.J. Eaton)
- Ethology; development and adaptation in behaviour (J.C. Ferriss)
- Forest ecology, pollution and resource management, ecology (B. Freedman)
- Plant pathology in Nova Scotia (A.B. Gray)
- Marine benthic ecology (B.T. Hargrave)
- Mammalian behavioural ecology; social communication (F. Harrington)
- Marine phytoplankton (W.G. Harrison)
- Secondary production and copepod ecology (E. Head)

- Experimental analysis of development of seed plants and ferns (G.S. Hicks)
- Evolutionary and ecological genetics of plants; evolution of mating systems; development and evolution of flowers (M.O. Johnston)
- Evolutionary ecology; population biology; life history strategies of fishes (J.A. Hutchings)
- Effect of boron nutrition on glucosinolate content in crucifers (H.-Y. Ju)
- Marine population studies; ecology (S.R. Kerr)
- Seal biology (W.C. Kimmins)
- Community ecology, structure and stability of plankton communities, competition-predation phenomena, eutrophication (P.A. Lane)
- Avian behavioural ecology (M.L. Leonard)
- Analysis of ecosystems. Comparison of system function in coastal inlets and in lakes. Ecological energetics. (K.H. Mann)
- Field crop management and multiple cropping systems (R.C. Martin)
- Marine botany (J.L. McLachlan)
- Population, production, and evolutionary ecology of zooplankton, (I.A. McLaren)
- Biological oceanography, benthic invertebrates (E.L. Mills)
- Aquaculture genetics and bivalve culture (G.F. Newkirk)
- Plant tissue culture (J. Nowak)
- Plant anatomy, taxonomy (A.R. Olson)
- Biological Agriculture (D.G. Patriquin)
- Dynamics and spatial properties of phytoplankton. (T.C. Platt)
- Ecology of crustacea and marine plants. (J.D. Pringle)
- Fisheries management studies (M. Sinclair)
- Population and community ecology of marine benthos (R.E. Schefling)
- Fisheries biology (M. Sinclair)
- Experimental taxonomy of the genus *Atripex*, Weed taxonomy, biology and distribution (P. Taschereau)
- Ethology in Canadian Animal Science and its applications to research on cattle (T. Tennesen)
- Genetics of marine algae (J.P. van de Meer)
- Marine pollution studies: fate and effects of petroleum and coal hydrocarbons (J.H. Vandermeulen)
- Regeneration and reproduction in lower plants. (K.E. von Maltzahn)
- Predator-prey relationships in terrestrial arthropods (S. Walde)
- Evolutionary biology; anatomical adaptation (R.J. Wassersug)
- Social organization and population biology of whales (H. Whitehead)
- Plant stress physiology; environmental policy (J.H.M. Willison)
- Population and ecological genetics; the genetic basis of adaptation and evolution (E. Zouros)

Stream B - Cellular and Molecular Biology

- Birth control for seals (R.G. Brown)
- Biosynthesis and regulation of secondary metabolites (K. Aldoo)
- Molecular biology of marine algae of importance to aquaculture (S.E. Douglas)
- Radiation genetics and chemical mutagenesis; cytogenetic effects of food additives and insecticides (O.P. Kamra)
- Marine bivalvs; molecular evolution of fisheries biology (E. Kenchington)
- Genetics, characterization and regulation of chloroplast DNA in *Chlamydomonas* (R.W. Lee)
- Synthesis and assembly of tubulin; microtubule organization; metals in marine environments (T.H. MacRae)
- Isolating, cloning and identifying genes expressed in killer cells (B. Pohnsdak)
- Molecular biology of marine plants (M. Ragan)
- Physiology and evolution of invertebrate sensory systems (S.R. Shaw)
- Bacterial leaching and environmental microbiology (M. Silver)
- Viruses and parasitism in insects (D.B. Stoltz)
- Regulation of chlorophyll a & b protein gene expression by ultraviolet light (M.J. White)
- Chemistry of marine natural products (J.L.C. Wright)
- Molecular genetics of fishes (J.M. Wright)

Stream C - Organismal Biology

- Monogastric nutrition and feedstuff evaluation (D.M. Anderson)
- Nutrient requirements of aquatic species (J. Castell)
- Fish Physiology (R.G. Boutlier)
- Fish parasites and diseases (D.K. Cone)
- Molluscan reproduction and development (R.P. Croll)
- Relationship of feeding and management to milk yield (A.H. Fredeen)
- Fish nutritional research (S.P. Lall)
- Invertebrate nervous systems: Their structural organization and development (L.A. Meinertzhagen)
- Exercise physiology and bioenergetics of marine invertebrates, especially cephalopods; The life cycles of squid (R.K. O'Dor)
- Development, nutrition, pathology of marine invertebrates (R. Scheibling)
- Optics of arthropod compound eyes (S.R. Shaw)
- Alternative amendments for soil chemistry and fertility and plant production (P.R. Warman)
- Functional morphology of amphibian larvae (R. Wassersug)
- Ultrastructure of trypanosomes and Trichomonas (E. Angelopoulos)
- Developmental biology, cell differentiation, development and evolution (B.K. Hall)
- Lipid metabolism and energetics of mammals, especially marine mammals (S.J. Iverson)
- Comparative animal physiology (A. Pinder)

IV. Classes Offered

Classes marked with an asterisk (*) are offered in alternate years. Please check the current timetable to see whether a particular class is being offered.

BIOL 5012.03: Advanced Laboratory in Biochemical Techniques.

INSTRUCTOR: C.J.A. Wallace, J.M. Wright
FORMAT: Lab 72 hours total (approx.)

BIOL 5020.03: Advanced Cell Biology.

INSTRUCTOR: T.H. MacRae
FORMAT: Lecture 3 hours

BIOL 5024.03: Microscopy.

INSTRUCTORS: G. Faulkner, D.B. Stoltz, K.B. Easterbrook
FORMAT: Lecture 2 hours, lab 3 hours

BIOL 5030.03: Topics in Genetics.

INSTRUCTOR: R.W. Lee
FORMAT: Seminar 2 hours

BIOL 5060.03: Environmental Ecology.

INSTRUCTOR: B. Freedman
FORMAT: Lecture 3 hours

BIOL 5061.03: Experimental Design and Data Analysis in Biology.

INSTRUCTORS: R. Scheibling, H. Whitehead
FORMAT: Lecture 3 hours

***BIOL 5070.03: Advanced Topics in Animal Physiology.**

INSTRUCTORS: R.K. O'Dor, A. Pinder
FORMAT: Lecture 2 hours, open lab 3 hours

***BIOL 5072.06: Animal Nutrition.**

INSTRUCTOR: J. Castell
FORMAT: Lecture/seminar 2 hours

BIOL 5101.03: Industrial Microbiology and Biochemistry.

INSTRUCTOR: M. Silver
FORMAT: Lecture/seminar 2 hours

BIOL 5103.03: Infectious Diseases of Aquatic Organisms.

INSTRUCTOR: R. Brown
FORMAT: Lecture 3 hours

***BIOL 5214.03: Physiology and Biochemistry of Marine Algae.**

INSTRUCTOR: J.S. Craigie
FORMAT: Lecture 2 hours

***BIOL 5439.03: Topics in Human and Medical Genetics.**

INSTRUCTORS: O.P. Kamra (Coordinator), M. Ludman, J.P. Welch, E. Zouros
FORMAT: Lecture/seminar 2 hours

***BIOL 5600.03: Invertebrate Fisheries and Aquaculture.**

INSTRUCTORS: J. Grant, R. Mohn, G.F. Newkirk
FORMAT: Lecture/seminar 3 hours

***BIOL 5616.03: Ecosystem Analysis.**

INSTRUCTOR: P. Lane
FORMAT: Lecture/discussion 3 hours

***BIOL 5651.03: Marine Mammalogy.**

INSTRUCTORS: I. McLaren, H. Whitehead
FORMAT: Lecture/projects/etc. 3 hours

BIOL 5700.03: Communications Skills for Scientists.

INSTRUCTORS: J.H.M. Willison and others
FORMAT: Lecture 2 hours

BIOL 5701.03: Communication Assignment.

INSTRUCTOR: Staff
FORMAT: Lecture 1 hour

BIOL 5705.03: Graduate Module Class I. Taken by MSc students only (graded)

INSTRUCTOR: Staff
FORMAT: 2 hours

BIOL 5706.03: Graduate Module Class II.

Taken by PhD students (or for MSc students who wish to take additional modules) (graded)
INSTRUCTOR: Staff
FORMAT: 2 hours

BIOL 5707.03: Graduate Module Class III.

Taken by PhD students only (pass/fail)
INSTRUCTOR: Staff
FORMAT: 2 hours

BIOL 5800.03-5899.03: Special Topics in Biology.

The format of Special Topics classes will depend upon individual student needs. The availability of these classes is dependent upon demand. The names of the professors associated with the following classes are not exclusionary and are provided as a guide only. Students are advised to discuss Special Topics classes with their supervisor.

BIOL 5801.03/5901.06: Special Topic in Agricultural Biology.

BIOL 5802.03/5902.06: Special Topic in Animal Behaviour.

INSTRUCTOR: H. Whitehead

BIOL 5803.03/5903.06: Special Topic in Animal Physiology.

INSTRUCTOR: R.K. O'Dor

- BIOL 5804.03/5904.06: Special Topic in Animal Science.**
- BIOL 5805.03/5905.06: Special Topic in Aquaculture.**
INSTRUCTOR: G. Newkirk.
- BIOL 5806.03/5906.06: Special Topic in Biochemistry.**
INSTRUCTOR: B. Pohajdak
- BIOL 5807.03/5907.06: Special Topic in Biological Education.**
- BIOL 5808.03/5908.06: Special Topic in Biomathematics.**
- BIOL 5809.03/5909.06: Special Topic in Biostatistics.**
- BIOL 5810.03/5910.06: Special Topic in Cell Biology.**
INSTRUCTOR: T. MacRae
- BIOL 5811.03/5911.06: Special Topic in Developmental Biology.**
INSTRUCTOR: B.K. Hall
- BIOL 5812.03/5912.06: Special Topic in Ecology.**
INSTRUCTOR: I. McLaren
- BIOL 5813.03/5913.06: Special Topic in Environmental Biology.**
INSTRUCTOR: J.H.M. Willison
- BIOL 5814.03/5914.06: Special Topic in Evolutionary Biology.**
INSTRUCTOR: E. Zouros
- BIOL 5815.03/5915.06: Special Topic in Fish Biology.**
INSTRUCTOR: S.R. Kerr
- BIOL 5816.03/5916.06: Special Topic in Functional Morphology.**
INSTRUCTOR: A. Pinder
- BIOL 5817.03/5917.06: Special Topic in Genetics.**
INSTRUCTOR: O.P. Kamra
- BIOL 5818.03/5918.06: Special Topic in History of Biology.**
INSTRUCTOR: J. Farley
- BIOL 5819.03/5919.06: Special Topic in Industrial Microbiology.**
INSTRUCTOR: R.G. Brown
- BIOL 5820.03/5920.06: Special Topic in Limnology.**
INSTRUCTOR: P. Lane
- BIOL 5821.03/5921.06: Special Topic in Marine Biology.**
INSTRUCTOR: R. Doyle
- BIOL 5822.03/5922.06: Special Topic in Marine Ecology.**
INSTRUCTOR: R. Scheibling
- BIOL 5823.03/5923.06: Special Topic in Marine Microbiology.**
- BIOL 5824.03/5924.06: Special Topic in Microbiology.**
INSTRUCTOR: L.C. Vining
- BIOL 5825.03/5925.06: Special Topic in Molecular Biology.**
INSTRUCTOR: J. Wright
- BIOL 5826.03/5926.06: Special Topic in Philosophy of Biology.**
INSTRUCTOR: K. von Maltzhan
- BIOL 5827.03/5927.06: Special Topic in Phycology.**
INSTRUCTOR: A.R.O. Chapman
- BIOL 5828.03/5928.06: Special Topic in Plant Biology.**
INSTRUCTOR: G. Hicks
- BIOL 5829.03/5929.06: Special Topic in Plant Ecology.**
INSTRUCTOR: B. Freedman
- BIOL 5830.03/5930.06: Special Topic in Plant Physiology.**
INSTRUCTOR: D.G. Patriquin
- BIOL 5831.03/5931.06: Special Topic in Plant Science.**
- BIOL 5832.03/5932.06: Special Topic in Population Biology.**
INSTRUCTOR: S. Walde
- BIOL 5833.03/5933.06: Special Topic in Zoology.**
INSTRUCTOR: E. Angelopoulos
- BIOL 9000.00: MSc Thesis**
- BIOL 9530.00: PhD Thesis**

Business Administration

Location: School of Business Administration
6152 Coburg Road
Halifax, NS B3H 1Z5

Telephone: (902) 494-7080
Fax: (902) 494-1107

The School of Business Administration offers a curriculum of undergraduate and graduate studies designed to equip students to serve the community in business, government, and the professions.

Graduates in good standing in any discipline can apply to enter the graduate programme leading to the degree of Master of Business Administration.

Director of the School

Klapstein, R.E.

Director, International Business Centre

Brooks, M.R.

Professors Emeriti

Brookbank, C.R., BA, MA, PhD (UofT)
George, R.E., BSc (London), MS (Bristol), PhD (London)
Parker, J.R.E., BCom (Dal), MBA (Wash), CPhil (Mich), FCA

Professors

Brooks, M.R. BOT (McG.), MBA (Dal), PhD (Wales), William A. Black Chair of Commerce
Day, Sir G., LLB (Dal), Fellow of the University College (Cardiff) of the University of Wales, Chancellor, Herbert S. Lamb Chair in Business Education
Fooladi, I., BSc (Iran), MA (Tehran), MS, PhD (Oregon)
MacLean, L.C., BA, Bed (StFX), MA, PhD (Dal)
McNiven, J.D., BA, MA, PhD (Mich)
Rosson, P.J., Dip. MS (Salford), MA (Lancaster), PhD (Bath), Dean, Faculty of Management
Sankar, Y., BA (McG), MA (UofT), PhD (Johns Hopkins)
Schellinck, D.A., BSc, MBA (Dal), PhD (Illinois)

Associate Professors

Archibald, B.C., BA (Queen's), MSc (Stanford), PhD (Wat)
Blunden, R.G., BCom (Dal), MM (Northwestern), PhD (Western)
Carroll, R., BBA, BEd (StFX), MBA (Dal), CGA
Cherry, D.C., BCom (Dal), MBA (McM), CMA
Conrod, J.E.D., BCom (Dal), MBA (UofT), CA
Dirksen, C.J., BS (Santa Clara), MBA, PhD (Oregon)
Duffy, J.F., BS, MS, PhD (Iowa)
Ellison, R.A., BSc (UNB), MBA (McM), PhD (Tenn)
Gassmann, H.J., Vordiplom (Stuttgart), MS (Oregon State), PhD (UBC)
Klapstein, R.E., BSc (Calg), BA (Alta), MBA, LLB (Dal), LLM (Osgoode), CMA, Director, School of Business Administration
Ireland, A.M., BA (Chatham), MSc (Carnegie-mellon), MBA, PhD (Dal), CA
Larsson, S.O., BSc (SGW), MSc (Alta), PhD (UBC)
Maddox, R.N., BA, MBA, PhD (Ohio)
Mealiea, L.W., AB, MBA (Rutgers), PhD (Mass)
Oppong, A., BSc (Ghana), MBA (Chic), PhD (Iowa), CGA
Patton, D.J., BA (UNB), MA (UofT), DBA (Indiana)
Peacock, A.C., BA, MA, PhD (Western)
Sandhu, BSc, R.S., BCL, LLM (Delhi), LLM (Yale), MBA (Dal)
Scott, E.W., BCom (Dal), MBA (Col), CA, CMA
Shafiq, Y., BSc, MPA (Tehran), MBA, PhD (Mich)
Street, R.A., BCom, LLB, LLM (Dal), MBA (Western)

Assistant Professors

MacLean, B.W., BCom, MBA (Dal), CA
Liu, Z.S., BS (Nanjing), GDPA, MA (Carleton), PhD (UBC)
Sagebien, J., BA (Hampshire), MA (Naropa), MBA (Simmons), PhD (London School of Economics)

Lecturer

Grise, M.L., BCom (Queen's)
Rumsey, J.D., PhD, MBA (York), MSc (Victoria), BEd (UofT), AB (Berkeley)
Sharma, P., PhD (ABD) (Calgary), MBA, BSc (Panjab Agricultural University)

Research Associate

Silver, D.L., PhD (ABD), MSc (Western), CIM (SMU), BSc (Acadia), Chair in Marketing Informatics

I. Introduction

MBA Programme

The aim of the MBA programme is to prepare students to become effective managers in small or large organizations. The programme concentrates on developing the ability to make sound decisions and judgements, and trains students in the analysis and evaluation of data for decision making. These skills have wide application in business, government and other organizations. Core courses develop basic skills, while elective subjects strengthen functional skills and deepen understanding of the complex and changing environment facing modern organizations. Required modules in communication develop skills through application. Integration of current computer technology into the curriculum ensures that the learning environment closely approximates that in which graduates will be working. While students may choose to concentrate elective studies in one or two areas, there is no requirement that a major be formally declared.

Additional information on the MBA programme, including course descriptions, is found in a brochure published by the School of Business, and available from the School. Students seeking further information should contact the Coordinator of the MBA Programme, School of Business Administration.

Telephone: 1-800-205-7510
E-mail: MBA.Admissions@Dal.Ca
Website: <http://www.mgmt.dal.ca/>

NOTE: The core curriculum was altered from the previous structure. Students admitted to the MBA programme before this date should consult the calendar of the year admitted.

II. Admission Requirements

Regulations of the Faculty of Graduate Studies govern admissions. Admission is approved by the Faculty of Graduate Studies, on the recommendation of the School of Business Administration. Applicants must hold a degree recognized by Dalhousie University as the equivalent of a Bachelor's Degree in one of its own faculties. Applicants are welcomed from those who have concentrated in the humanities, the social sciences, the physical sciences and engineering.

The School of Business actively seeks applicants also having relevant full-time work experience, but some candidates will be admitted directly from undergraduate studies. A résumé should accompany every application.

All applicants are required to submit results of a Graduate Management Admission Test (GMAT). Information on test dates, locations and registration can be obtained from the Dalhousie Registrar, or by writing directly to GMAT, Educational Testing Service, Box 966, Princeton, NJ, U.S.A. 08541.

Candidates whose native language is not English are required to submit results of the Test of English as a Foreign Language (TOEFL). Information on test dates, locations and registration can be obtained by writing to TOEFL, Educational Testing Service, P.O. Box 899, Princeton, NJ, U.S.A. 08540.

Admission criteria and procedures are identical for the part-time and full-time programmes.

Admissions are made on a rolling basis, commencing in January for the following September. Admission is made only for the academic year beginning in September. Interim (official) transcripts will be considered for candidates currently attending university, if all other documentation is complete. Since space in the programme is limited, it is strongly recommended that all documents be submitted before May 31. (January 31 for PRC applications, March 31 for foreign students.) Applications received after these dates will be considered on a space available basis.

A complete application includes:

- Faculty of Graduate Studies application form
- Two reference letters, (academic)
- GMAT results
- TOEFL results, where applicable
- Proof of financial ability, where applicable (see Faculty Regulation, item 3)
- Transcripts from each institution attended (two copies)
- A brief statement explaining how You expect the Dalhousie MBA to benefit you, and what you will contribute to the programme (two copies)
- Your résumé (two copies)

The application form, together with the application fee, should be sent to the Registrar's Office. All supporting documentation should be sent directly to the School of Business Administration. Reference letters must be originals, sent directly by the referees. Only official transcripts received directly from the issuing institution will be accepted. GMAT and TOEFL score reports must be forwarded by the Educational Testing Service.

All admitted applicants must confirm in writing their acceptance of the offer of a place, and provide a non-refundable deposit of \$200. This fee will be applied toward tuition but will be forfeited if the student does not register in the academic year for which he or she was admitted. Please note that this deposit is separate from any application or pre-registration fees, and is the means by which candidates to whom orientation materials are to be sent are identified.

Tuition deposits are normally due:

- By April 30 for offers made before April 1
- Within 30 days for offers made between April 1 and June 15
- Within 10-15 days for offers made after June 1

The Faculty of Law may require a deposit in addition to that required by the School of Business.

III. Grading System and Good Standing

Under the regulations of the Faculty of Graduate Studies and the requirements of the School of Business, MBA students are required to achieve a grade of B- or better in all classes taken. In order to graduate, students must achieve a B average (3.0 GPA) for the programme. Students are permitted to continue in the programme with one FM grade if an overall B average is maintained for the year. No credit towards a degree is granted for any class in which a grade of less than B- is obtained.

Students who do not meet these requirements may not continue in the programme unless readmissions is recommended by the School and approved by the Faculty of Graduate Studies.

Failed Core classes must be repeated and passed at the earliest opportunity; failed elective classes may be repeated and passed or replaced. When a failed course has been successfully repeated or replaced, only the repeated or replaced grade will be used to calculate the GPA. A second failure in the programme, regardless of when such failure occurs, will normally result in immediate dismissal from the MBA programme. Within two weeks of the first meeting of a class, each instructor shall make available a written description of the method of evaluation to be used in this class. In any course for which 25 percent or more of the evaluation is based on group work, there must be an exam(s), which must be passed on average.

Special examinations may be granted to students only in the case of illness supported by a medical certificate, or in other exceptional circumstances. Medical certificates must be submitted at the time of the illness and will not normally be accepted after a lapse of one week from the date of the examination.

IV. Degree Programmes

A. One Year MBA Programme Structure

Students with a recognized undergraduate degree in business (i.e., Bcom, BBA, HBA) normally with a GPA of at least 3.3, will be granted up to a maximum of seven half credits of Advanced Standing, reducing their total MBA programme to 13 classes. Students may receive exemptions for core classes for which a demonstrated overlap is shown, replacing exempted classes with electives of their choice. The minimum number of classes required is thirteen half credits which will normally be five core and eight elective classes. Normally, the one year MBA can be completed in ten months.

Fall Term

- Five classes

Winter Term

- Five classes

Spring Term

- BUSI 6005.03: Strategy Implementation
- Two Electives

NOTE: The core classes will vary for individual students depending on their undergraduate classes. Please consult the MBA Programme Office for a personalized requirements listing.

B. Two Year MBA Programme Structure

The Two-Year MBA programme includes eleven required core classes, one required non-credit class and nine free electives (six for LLB/MBA). All MBA classes are half-credit classes. Normally, the two-year MBA can be completed in 20 months.

Full-time students are normally required to carry a full course load in the first year, consisting of ten half-credit classes and one non-credit class.

First Term

- BUSI 5003.00A: Communications and Career Planning - Module 1 (non-credit)
- BUSI 5103.03: Accounting
- BUSI 5503.03: Quantitative Decision Making
- BUSI 5511.03: Management Information Systems (formerly 6903.03). Cross-listing: LIBS 6090.03
- BUSI 5703.04A: Business Economics
- BUSI 5801.03: International Business (formerly 6801.03)

Second Term

- BUSI 5003.00: Communications and Career Planning - Module 2 (non-credit)
- BUSI 5201.03: Financial Management. Prerequisite: BUSI 5101.03, 5703.04, or permission of the instructor
- BUSI 5305.03: Managing People (formerly 5311.03/5315.03)
- BUSI 5401.03: Marketing Management
- BUSI 5551.03: Production Management
- One elective

The second year normally consists of two required core classes and eight electives, to total ten classes.

Third Term

- BUSI 6004.03: Business Policy I: Strategy Formulation. Prerequisite: All first year required classes, or permission of the instructor.
- Four electives

Fourth Term

- BUSI 6005.03: Business Policy II: Strategy Implementation. Prerequisite: BUSI 6004.03
- Four electives

The variety of electives allows a student to develop a programme in keeping with his/her career plan.

Students may also elect to take, with the approval of the School, graduate classes in other faculties and departments, such as Mathematics, Statistics and Computing Science, Resource and Environmental Studies, Economics, Public Administration, Law, etc. A concentration in Environmental Studies became available to MBA students in 1992/93. Throughout the programme, candidates will be expected to attend lectures given by visiting professors and business executives and to take part in projects involving the analysis of the problems of local business firms.

C. Part-time MBA Programme

The MBA degree may be earned through part-time study. A student must normally complete the requirements for the MBA degree within six years of initial enrolment in the programme. Extensions may be granted in special cases upon petition to the Faculty of Graduate Studies.

Many core classes and a selection of electives are offered at night each year on a rotating basis, and any summer classes offered are scheduled at night.

There is no prescribed order of completion of courses in the part-time programme, except as dictated by course prerequisites. However, MBA 6004.03A (Strategy Formulation) and 6005.03B (Strategy Implementation) are among the last classes taken, since they provide an integration of the whole programme and require a major field project.

No more than five (5) half-credit classes may be taken in each twelve month academic year, including summer sessions. Only Graduate level classes will be eligible for credit.

Part-time MBA students will be enrolled in classes together with full-time MBA students.

D. Combined LLB and MBA Programme

This is a four-year programme which enables students to select classes leading to the degrees of Bachelor of Laws and Master of Business Administration. The usual order of the programme is:

Year 1

- First-year classes of MBA programme, with a minimum of ten half-credit classes. See "Two Year MBA Programme Structure" for details.

Year 2

- First-year classes of the LLB programme

Year 3

- Three half-credit classes from the MBA programme
- 25 hours of classes from the LLB programme, including 7/9 hours from the Business Law area

Year 4

- Four half-credit classes, including BUSI 6004.03A and 6005.03B from the MBA programme
- Between 23 and 25 hours of classes in law.

Years 1 and 2 may be reversed, but students wishing to do so should advise both Schools and the Faculty of Graduate Studies as early as possible.

Candidates for the LLB/MBA programme must satisfy the entrance requirements of the Faculty of Law (see Dentistry, Law and Medicine calendar) and may obtain further information about the combined programme by writing either to the Faculty of Law or to the Coordinator of the MBA programme. For admission, students must apply to both the Law School and the Business School.

E. Advanced Standing and Exemptions

Students with relevant academic background may receive advanced standing or exemption for core classes in the MBA programme. For further information, contact the MBA Coordinator. Full-time students will not normally be permitted to carry less than a full work load in the first year of the programme, regardless of the number of waivers granted.

Students may not apply for advanced standing or exemptions once their programme of study has been approved.

F. International Business

There are no formal concentration requirements in the MBA programme but students hoping to be considered for International Business Fellowships are expected to complete: 5801.03 International Business, 6802.03 Strategic Management of International Operations, 6317.03 Management in a Multicultural Setting, and at least one of the other International Business courses offered by the School.

These include:

- BUSI 6803.03: International Transportation
- BUSI 6804.03: Ocean Shipping Seminar
- BUSI 6805.03: Seminar on Marine Resources and Ocean Industry
- BUSI 6806.03: International Marketing
- BUSI 6807.03: International Financial Management
- BUSI 6808.03: International Banking
- BUSI 6812.03: Foreign Study Mission
- BUSI 6813.03: Management and the Natural Environment
- BUSI 6815.03: Doing Business Effectively in Asia
- BUSI 6816.03: Environmental Management Systems for Business

G. MBA (Financial Services) Programme

This MBA degree is designed to further prepare managers in the financial services industry to exercise leadership, sound general business knowledge, analytical skills and judgment in their managerial and client service roles. The MBA (Financial Services) consists of sixteen graduate level classes, including seven classes offered by the Institute of Canadian Bankers through the Professional Banking Program (PBP), and nine classes provided by the School of Business Administration. To be eligible for admission to the programme, applicants will be required to have successfully completed a minimum of four PBP classes and either meet the normal undergraduate requirements for admission to the MBA programme at Dalhousie, or possess at least five years experience in relevant management positions. Once accepted to the programme, a student must complete the requirements for the MBA (Financial Services) degree within seven years.

Eight of the nine Business Administration classes are offered via a distance education format, using university texts supplemented with teaching notes prepared by Dalhousie University professors. Each of the initial eight core classes in the programme will consist of 17 weeks of distance study and assignments, followed by a three day intensive learning session. The capstone class, Strategic Leadership and Change, will be a one week intensive learning session conducted at Dalhousie University.

The programme will offer two academic terms per year, commencing in mid September and mid February; admissions are made for either term. There will be four classes available in each term. Classes will only be offered if there are an acceptable minimum number of students enrolled in a class section. The capstone class will be offered during the summer break between the two regular terms, commencing in the first summer after a sufficient number of students have completed the preceding 15 classes. There is no prescribed order of completion of classes in the programme, except as dictated by class prerequisites. However, a student may only enrol in the capstone class after having successfully completed the preceding 15 classes in the programme.

1. Application Procedure

For the 1997-98 academic year applications (including all supporting documents) must be post-marked no later than June 1, for the term commencing September 15, 1997, and no later than November 15 for the term commencing February 9, 1998. A complete application includes:

- Faculty of Graduate Studies Application for Admission
- Two letters of reference (one academic, one employment)
- One original transcript from each educational institution attended
- Two original ICB transcripts
- Two copies of your resume

- Two Confirmations of Employment Record

2. Classes

The classes available to students in the MBA (Financial Services) programme are:

September Term

- BUSI 5103.03: Accounting
- BUSI 5503.03: Quantitative Decision Making
- BUSI 6317.03: Management in a Multicultural Setting
- BUSI 6410.03: Advanced Marketing

February Term

- BUSI 5551.03: Production and Service Management
- BUSI 5703.03: Business Economics
- BUSI 5801.03: International Business
- BUSI 6207.03: Advanced Corporate Finance

Summer Term

- BUSI 6990.03: Strategic Leadership and Change (Project)

MBA (Financial Services) students are permitted to take these classes in the distance format only.

3. Contact

Students seeking further information should contact the Coordinator, MBA (Financial Services) Programme at:

Location: School of Business Administration
6152 Coburg Road
Halifax, NS B3H 1Z5

Telephone: (902) 494-7080

Toll Free: 1-800-205-7510

Fax: (902) 494-1107

e-mail: J.Macdonald@Dal.ca

WWW: <http://www.mgmt.dal.ca>

V. Elective Classes

NOTE: Classes marked with an * are not offered every year. Please consult the university timetable for a list of current offerings.

*BUSI 5101.03: Financial Accounting.

FORMAT: Lecture
PREREQUISITE: BUSI 5103.03 or permission of the instructor

*BUSI 5102.03: Managerial Accounting.

FORMAT: Lecture
PREREQUISITE: BUSI 5103.03 or permission of the instructor

BUSI 5331.03: Introduction to Labour Management Relations.

FORMAT: Seminar

BUSI 5402.03: Buyer Behaviour.

FORMAT: Lecture

*BUSI 6002.03: New Venture Creation.

PREREQUISITES: BUSI 5101.03, 5102.03, 5201.03, 5401.03

*BUSI 6003.03: Management of Diversification.

PREREQUISITES: BUSI 5101.03, 5102.03, 5201.03, 5315.03, 5401.03, 5503.03, 5551.03, or permission of the instructor

*BUSI 6006.03: Managing the Family Enterprise.

PREREQUISITES: BUSI 5103.03, 5102.03, 5201.03, 5315.03, 5401.03, 5503.03, 5551.03, or permission of the instructor

BUSI 6101.03: Public Auditing.

FORMAT: Seminar
PREREQUISITE: BUSI 5103.03

BUSI 6102.03: Taxation.

FORMAT: Seminar
PREREQUISITE: BUSI 5103.03, 5703.04

*BUSI 6103.03: Advanced Taxation.

FORMAT: Seminar
PREREQUISITE: 6102.03

BUSI 6106.03: Advanced Managerial Accounting 1: Cost Accounting.

FORMAT: Lecture
PREREQUISITE: BUSI 5703.03 or permission of the instructor

BUSI 6107.03: Advanced Managerial Accounting 2: Organizational Control.

FORMAT: Lecture
PREREQUISITE: BUSI 6106.03 or permission of the instructor

BUSI 6108.03: Advanced Financial Accounting 1.

FORMAT: Lecture
PREREQUISITE: BUSI 5103.03 or permission of the instructor

BUSI 6109.03: Advanced Financial Accounting 2.

FORMAT: Lecture
PREREQUISITE: BUSI 6108.03 or permission of the instructor

*BUSI 6112.03: Financial Statement Analysis.

FORMAT: Lecture
PREREQUISITES: BUSI 5103.03, 5201.03, and 5503.03

BUSI 6114.03: Information Systems Controls.

FORMAT: Lecture
PREREQUISITES: BUSI 5103.03, 5511.03

BUSI 6201.03: Investments.

FORMAT: Lecture
PREREQUISITE: BUSI 5201.03.03.
RECOMMENDED: BUSI 5103.03

*BUSI 6202.03: Investments II.

FORMAT: Lecture
PREREQUISITES: BUSI 5201.03, BUSI 6201.03 or BUSI 6205.03 recommended

BUSI 6203.03: Canadian Capital Markets.

FORMAT: Lecture
PREREQUISITE: BUSI 5201.03.
RECOMMENDED: BUSI 5103.03

BUSI 6204.03: Short-Term Financial Management.

FORMAT: Lecture
PREREQUISITE: BUSI 5201.03,
RECOMMENDED: BUSI 5103.03

BUSI 6205.03: Capital Budgeting.

FORMAT: Lecture
PREREQUISITE: BUSI 5103.03 and 5201.03

BUSI 6206.03: Portfolio Theory.

FORMAT: Lecture
PREREQUISITE: BUSI 5103.03 and 5201.03

BUSI 6250.03: Theory of Finance.

FORMAT: Seminar
PREREQUISITE: Concentration in Finance and permission of the instructor.

BUSI 6313.03: Organizational Change.

FORMAT: Lecture/seminar
PREREQUISITE: BUSI 5305.03 & BUSI 5312.03 or permission of the instructor

BUSI 6315.03: Management in a Multicultural Setting.

FORMAT: Lecture
PREREQUISITE: BUSI 5801.03

BUSI 6322.03: Selection - Testing & Interviewing.

FORMAT: Seminar/lecture

PREREQUISITE: BUSI 5315.03 or permission of the instructor

BUSI 6323.03: Training & Development.

FORMAT: Seminar

PREREQUISITE: BUSI 5305.03 or permission of the instructor

BUSI 6324.03: Performance Appraisal & Compensation.

FORMAT: Seminar/lecture

PREREQUISITE: BUSI 5305.03 or permission of the instructor

BUSI 6326.03: Management Skills Development.

FORMAT: Seminar

PREREQUISITE: BUSI 5305.03 or permission of the instructor

***BUSI 6332.03: Collective Bargaining.**

FORMAT: Seminar

***BUSI 6333.03: Comparative Labour Relations.**

FORMAT: Seminar

PREREQUISITE: BUSI 5331.03 or permission of the instructor

BUSI 6401.03: Marketing Research and Information Systems.

FORMAT: Seminar

PREREQUISITES: BUSI 5402.03, BUSI 5401.03

RECOMMENDED: BUSI 6504.03, strongly recommended

BUSI 6402.03: Marketing Channels.

FORMAT: Lecture

PREREQUISITE: BUSI 5401.03

RECOMMENDED: BUSI 5402.03

BUSI 6403.03: Advertising Management.

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5401.03

RECOMMENDED: BUSI 5402.03

***BUSI 6404.03: Consumer Behaviour.**

FORMAT: SEMINAR

PREREQUISITE: BUSI 5401.03 and 5402.03

BUSI 6405.03: Sales Management.

FORMAT: Lecture/case studies

PREREQUISITE: BUSI 5401.03

BUSI 6406.03: Domestic Transportation.

FORMAT: Lecture/seminar

BUSI 6407.03: Logistics Management.

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5551.03 or permission of the instructor

BUSI 6408.03: Transportation Management.

FORMAT: Lecture

PREREQUISITE: BUSI 5201.03 and BUSI 5315.03

BUSI 6450.03: Marketing Strategy Seminar.

FORMAT: Seminar

PREREQUISITES: BUSI 5401.03 and at least two 6000-level marketing classes, (which may be taken concurrently) or permission of the instructor

***BUSI 6501.03: Operations Research.**

FORMAT: Lecture

PREREQUISITE: BUSI 5503.03

***BUSI 6502.03: Forecasting Models.**

FORMAT: Seminar

PREREQUISITE: BUSI 5503.03 or equivalent

***BUSI 6503.03: Simulation Models.**

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5503.03

***BUSI 6504.03: Applied Statistics.**

FORMAT: Seminar

PREREQUISITE: BUSI 5503.03

***BUSI 6505.03: Managerial Decision Making.**

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5503.03

**BUSI 6507.03: Advanced Operations Research Project.
Choice of Instructor**

FORMAT: Tutorial

PREREQUISITE: See the Management and Information Science area coordinator for requirements

BUSI 6512.03: Telecommunication and Business Strategy.

FORMAT: Seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6905.03 in 1992/93 and 1993/94

BUSI 6514.03: Systems Analysis and Design.

FORMAT: Seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6904.03 (former number)

CROSS-LISTING: LIBS 5580.03

BUSI 6515.03: Special Topics in Management Information Systems.

FORMAT: Seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6905.03 (former number)

BUSI 6516.03: Database Management Systems.

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6906.03 (former number)

CROSS-LISTING: LIBS 5540.03

BUSI 6517.03: Management of the Information Resource.

FORMAT: Seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6907.03 (former number)

***BUSI 6518.03: Expert Systems.**

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5511.03

EXCLUSION: BUSI 6908.03 (former number)

BUSI 6519.03: Systems Analysis and Applications Development.

BUSI 6520.03: Electronic Commerce.

BUSI 6521.03: Supporting Teamwork with IT.

BUSI 6802.03: Strategic Management of International Operations.

FORMAT: Seminar

PREREQUISITE: BUSI 5801.03

BUSI 6803.03: International Transportation.

FORMAT: Seminar

RECOMMENDED: BUSI 5801.03

***BUSI 6804.03: Ocean Shipping Seminar.**

FORMAT: Seminar

PREREQUISITE: BUSI 6803.03

***BUSI 6805.03: Seminar on Marine Resources and Ocean Industry.**

FORMAT: Seminar

BUSI 6806.03: International Marketing.

FORMAT: Seminar

PREREQUISITE: BUSI 5401.03

RECOMMENDED: BUSI 5801.03, strongly recommended

BUSI 6807.03: International Financial Management.

FORMAT: Seminar

PREREQUISITES: BUSI 5703.04, 5201.03 and 5103.03

RECOMMENDED: BUSI 5801.03, strongly recommended

BUSI 6808.03: International Banking.

FORMAT: Seminar

PREREQUISITE: BUSI 5703.04

RECOMMENDED: BUSI 5801.03 (strongly recommended)

BUSI 6812.03: European Business Programme.

PREREQUISITE: BUSI 5801.03

BUSI 6813.03: Management and the Natural Environment - An International Perspective.

BUSI 6815.03: Doing Business Effectively in Asia.

FORMAT: Lecture/seminar

PREREQUISITE: BUSI 5801.03

CO-REQUISITE: BUSI 6802.03 or permission of the instructor.

BUSI 6816.03: Environmental Management Systems for Business.

BUSI 6901.03: Business Law.

FORMAT: Seminar

BUSI 6902.03: Business and Government.

FORMAT: Lecture

BUSI 6902.03: Business and Government

FORMAT: Seminar

BUSI 6951.03A/6952.03: Research Reading and Conference.

Choice of instructor

BUSI 6960.03: Institutions.

Chemistry

Location: Chemistry Building
Dalhousie University
Halifax, NS B3H 4J3

Telephone: (902) 494-3305
Fax: (902) 494-1310
e-mail: DALCHEM@AC.DAL.CA
Website: <http://mol.chem.dal.ca>

Chairperson of Department

Boyd, R.J.

Graduate Coordinator

Stephens, R.

Professors Emeriti

Knop, O., DSc (Laval), FCIC, Harry Shirreff Professor of Chemical Research

Ryan, D.E., BSc (UNB), MA (UofT), PhD, DSc (Lond), DIC, FCIC

Professors

Arnold, D.R., BS (Bethany College), PhD (Roch), FCIC, Alexander McLeod Professor of Chemistry

Aue, W.A., PhD (Vienna)

Boyd, R.J., BSc (UBC), PhD (McG), FCIC

Burford, N., BSc (Wales, Cardiff), PhD (Calgary)

Cameron, T.S., BA, MA, DPhil (Oxon)

Chatt, A., BSc (Calcutta), MSc (Roorkee), MSc (Wat), PhD (UofT), FCIC

Coxon, J.A., MA (Cantab.), MSc, PhD (East Anglia)

Forrest, T.P., BSc (MtA), MSc (Dal), PhD (UNB)

Grindley, T.B., BSc, MSc, PhD (Queen's), FCIC

Grossert, J.S., BSc, MSc, PhD (Natal), FCIC

Kwak, J.C.T., BSc, MSc, PhD (Amsterdam), FCIC

Pacey, P.D., BSc (McG), PhD (UofT), FCIC

Pincock, J.A., BSc, MSc (Man), PhD (UofT)

Ramaley, L., BA (Columbia), MA, PhD (Princeton), FCIC

Stephens, R., MA (Cantab.), MSc (Bristol), PhD (Lond), DIC

Wasylishen, R.E., BSc (Wat), MSc, PhD (Man), FCIC, Faculty of

Science Killam Professor in Chemistry

White, M.A., BSc (Western), PhD (McM), FCIC

Associate Professors

Grundy, K.R., BSc, MSc, PhD (Auckland)

Guy, R.D., BSc (SFU), PhD (Carleton)

Hooper, D.L., BSc, MSc, PhD (UNB), FCIC

Warren, C.H., BSc (Western), PhD (McM)

Wentzell, P.D., BSc (Dal), PhD (Mich State)

White, R.L., BSc (Dal), PhD (McM), FCIC

Assistant Professors

Cozens, F.L., BSc (Hons) (York), PhD (UofT), NSERC Women's Faculty Award

Kusalk, P.G., BSc (Lethbridge), MSc, PhD (UBC), NSERC University Research Fellow

Honorary Adjunct Professors

Boyd, R.K., BSc, PhD (St. Andrews, Scotland), National Research Council, Institute for Marine Biosciences

Curtis, J.M., BSc (Southampton), MSc (Guelph), PhD (Swansea), National Research Council, Institute for Marine Biosciences

Marangoni, D.G., BSc (Acadia), PhD (Dal), St. Francis Xavier University

Thibault, P., BSc, PhD (Montreal), National Research Council, Institute for Marine Biosciences

Vaughan, K., BSc (UMIST), PhD (Scotland), Saint Mary's University

Visiting Scientists (1996)

Amoh, K.G., Ghana Atomic Energy Commission, Accra, Ghana
Ewa, I.D.B., Ahmadu Bello University, Nigeria
Kankare, J.J., University of Turku, Finland
Kicenluk, J.W., Fisheries and Oceans Canada, St. John's, NF
Lee, C.K., National University of Singapore, Singapore
MacFarlane, S., University of the West Indies, Kingston, Jamaica
Nyarko, B.J.B., Ghana Atomic Energy Commission, Ghana
Ugalde, J.M., University of the Basque Country, Spain

Postdoctoral Fellows (1996)

Chan, G., BSc, PhD (Chinese Univ. of Hong Kong)
Elchele, K.O., BSc, PhD (University of Tübingen, Germany)
Heard, G.L., BSc (Melbourne), PhD (Tasmania)
Li, M., PhD (Dal)
McManus, K.A., BSc, PhD (Dal)
Singh, H., BSc (Guyana), PhD (Dal)
Stringfellow, T.C., BA (Indiana State), PhD (Wisconsin)
Sviahchev, I.M., MSc, PhD (Moscow)
Thurbide, K.B., BSc (SMU), PhD (Dal)
Wang, J., BSc (Henan), MSc (Academia Sinica), PhD (Queen's)
Wan, Q., BSc (Hongzhou), PhD (Edinburgh)

Research Assistants/Associates (1996)

Bogdonova, R.S., BSc (HP Inst., Shumen, Bulgaria)
Cordes, R.E., BSc (Dal), MSc (UBC)
Dimitrijevic, S.T., PhD (Belgrade)
Furue, H., PhD (Queen's)
Kwiatkowski, W., MSc, PhD (Lodz)
Lowery, N.B., BSc, PhD (Dal)
Pincock, A.L., BSc, MSc (Manitoba) BFA (NSCAD)

Programmes leading to MSc and to PhD degrees are offered. Research for these degrees can be undertaken in analytical, inorganic, organic, physical/theoretical chemistry or combinations thereof.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. Normally, a MSc Degree may be required as a prerequisite for entry into a PhD programme. It is recommended that all students from outside Canada submit the results of the advanced Graduate Record Examination in Chemistry. In some cases this will be made a precondition to consideration of the student's application for admission. For those whose first language is not English a minimum TOEFL score is required (see section 2.4).

A. General Regulations

All graduate students are required, as part of their training, to instruct in the undergraduate laboratories and to attend departmental seminars which are given by invited speakers. The Department will hold an annual meeting at which time it will review the work of all graduate students. Permission to continue will be contingent upon a satisfactory decision by the Department. All graduate students must be in the Department and available for teaching assistant duties by September 1st of each year. Further details of degree regulations are presented in a Handbook for Graduate Students in Chemistry, which may be obtained from the Departmental Office.

II. Degree Options

A. MSc Degree

Full-time Programme

Two full credit classes, or the equivalent, together with the presentation and oral defence of a thesis based on original research are required. Faculty regulations permit a 1-year MSc candidate to graduate after 12 months of resident study. Experience has shown that most MSc candidates in the Department require at least 16 months to complete their work. Financial support is not available for more than two years.

Part-time Programme

The full-time MSc class requirements and thesis regulation apply. The thesis must be supervised by a member of the Department. No stipends are available from the Faculty of Graduate Studies.

B. PhD Degree Programme

Three full-credit classes, or the equivalent, are required. A preliminary oral examination must be completed successfully. Original research, together with preparation and oral defence of a thesis, is required.

For the minimum time required to complete the programme, see Section 4. Financial support is not available for more than four years.

III. Classes Offered

Core classes, specialized classes and modular classes are offered by the department. The core classes constitute the main framework of a student's formal course work, and are designed to be broad-based but at an advanced level. They are intended to help the student gain a wide understanding in several major branches of chemistry and thus students are required to take such classes outside their area of specialization.

The following half-credit core classes are offered at least every other year. Please consult the Department to ascertain which classes are being given.

Core Classes

Analytical

CHEM 5201.03: Advanced Topics in Separations
CHEM 5202.03: Topics in Advanced Analytical Spectroscopy
CHEM 5204.03: Chromatography

Inorganic and Structural

CHEM 5101.03: Topics in Advanced Main Group Chemistry
CHEM 5102.03: Advanced Transition Metal Chemistry
CHEM 5103.03: Topics in Solid State Chemistry

Organic

CHEM 5401.03: Synthesis in Organic Chemistry
CHEM 5402.03: Organic Structure Determination
CHEM 5403.03: Organic Reaction Mechanisms

Physical and Theoretical

CHEM 5301.03: Theory of Chemical Bonding
CHEM 5304.03: Kinetics and Catalysis
CHEM 5305.03: Introductory Statistical Thermodynamics
CHEM 5306.03: Magnetic Resonance
CHEM 5308.03: Molecular Spectroscopy

Interdisciplinary

CHEM 5504.03: Diffraction Techniques in Solid State Chemistry.
Additional specialized classes at the 6000 level provide the opportunity for in-depth study of selected topics which are more closely related to the student's research area. These classes vary from year to year depending on students' needs and interests.

Specialized Classes

Inorganic

CHEM 6106.03: Advanced X-Ray Crystallography and Group Theory
CHEM 6107.03: Inorganic Crystallography and Application of Group Theory
CHEM 6108.03: Structure and Bonding in Non-Metal Chemistry
CHEM 6199.03: Special Topics in Inorganic Chemistry

Analytical

CHEM 6203.03: Environmental Chemistry
CHEM 6204.03: Analytical Radiochemistry
CHEM 6205.03: Chemometrics
CHEM 6299.03: Special Topics in Analytical Chemistry

Physical/Theoretical

CHEM 6301.03: Advanced Electronic Structure Theory
CHEM 6312.03: Colloid and Surface Science
CHEM 6313.03: Special Topics in Solid State Chemistry

- CHEM 6314.03: Advanced Topics in NMR
 CHEM 6315.03: Topics in Statistical Mechanics
 CHEM 6316.03: Theory of Modern NMR Experiments
 CHEM 6399.03: Special Topics in Physical Theoretical Chemistry

Organic

- CHEM 6404.03: Organic Photochemistry
 CHEM 6405.03: Stereochemistry
 CHEM 6407.03: Organic Electrochemistry
 CHEM 6408.03: Free Radical Chemistry
 CHEM 6409.03: Carbohydrate Chemistry
 CHEM 6499.03: Special Topics in Organic Chemistry

Interdisciplinary

- CHEM 6501.03: Electronic Instrumentation for Scientists

Modular

- CHEM 6600.03: Special Topics in Chemistry

Approved classes from departments other than Chemistry may be taken for credit.

Chemistry Research Interests

Analytical Chemistry

- Aue, W.A.: Basic and applied chromatography
 Boyd, R.K.: Separations science; mass spectrometry
 Chatt, A.: Nuclear and bioanalytical methods; studies on trace elements in the environment
 Guy, R.D.: Method development for the speciation of toxic metals and organics
 Ramaley, L.: Electroanalytical chemistry, mass spectrometry and chemical instrumentation
 Stephens, R.: Analytical atomic spectroscopy
 Wentzell, P.D.: Chemometrics; sensors; continuous flow analysis

Inorganic and Structural Chemistry

- Burford, N.: Synthesis, structure and bonding of compounds of the main group elements
 Cameron, T.S.: X-ray structural studies on inorganic and organic compounds
 Curtis, J.M.: Applications of mass spectrometry in structural studies and trace analysis
 Grundy, K.R.: Synthesis and reactivity of organometallic complexes
 Knop, O.: Structural and solid-state inorganic chemistry
 Zaworotko, M.J.: Supra molecular chemistry; non-covalent bonding; design, synthesis and characterization of new materials

Organic Chemistry

- Arnold, D.R.: Development of photochemical and electrochemical synthetic methods
 Forrest, T.P.: Expert systems and neural networks for spectroscopic interpretation
 Grindley, T.B.: Carbohydrate chemistry; molecular modelling; synthesis
 Grossert, J.S.: Mass spectrometry and organosulphur chemistry
 Hooper, D.L.: Spectroscopic methods; high field multinuclear nmr
 Leffek, K.T.: Physical organic chemistry
 Pincock, J.A.: Studies on reaction mechanisms involving both ground and excited states
 Vaughan, K.: Triazene chemistry
 White, R.L.: Biosynthesis of natural products and enzymes of secondary metabolism

Physical and Theoretical Chemistry

- Boyd, R.J.: Quantum chemistry reaction mechanisms; density functional theory and surface chemistry
 Coxon, J.A.: Electronic spectra; laser spectroscopy; weak chemiluminescence
 Kusalik, P.G.: Computer simulations of polar liquids and solutions; liquid state theory
 Kwak, J.C.T.: Colloid and polymer chemistry
 Pacey, P.D.: Temperature dependence of reaction rates
 Warren, C.H.: Molecular graphics and computer-aided instruction
 Wasylshen, R.E.: Multinuclear nmr studies of solids and fluids
 White, M.A.: Materials science; thermal properties of solids

Classics

Location: 1244 LeMarchant Street
 Halifax, NS B3H 3P7
 Telephone: (902) 494-3468
 Fax: (902) 494-2467

Chairperson of Department
 Atherton, J.P.

Professors Emeriti

Armstrong, A.H., MA (Cantab), FBA
 Crouse, R.D., BA (Vind), STB (Harvard), MTh (Trinity), PhD (Harvard)
 Doull, J.A., BA (Dal), MA (UofT)

Professors

Atherton, J.P., MA (Oxon), PhD (Liverpool)
 Friedrich, R., Dr phil (Goettingen), Graduate Studies Coordinator
 Hankey, W.J., BA (Vind), MA (UofT), PhD (Oxon)
 Starnes, C.J., BA (Bishop's), STB (Harvard), MA (McG), PhD (Dal)

Associate Professors

House, D.K., MA (Dal), PhD (Liverpool)
 Kusmaul, P.F., Dr phil (Biele), Dr phil habil (Heidelberg)

Assistant Professor

Calkin, P., BA (UBC), MA, PhD (Dal)

The Department invites all students who wish to pursue graduate work in classical studies: in addition to students interested in the historical, literary, and philosophical culture of antiquity, the programme might appeal to students who wish to study the relation of contemporary culture to its classical origins.

MA students may concentrate their work in any of these areas. PhD candidates must work in the area of Hellenic and Hellenistic Studies.

I. Admission Requirements

Candidates must satisfy the admission requirements of the Faculty of Graduate Studies. The requirement of both Classical languages at Honours level may sometimes be relaxed, e.g., where a student has taken a Combined Honours course involving only one Classical language. In such cases at least two classes in the second language will be taken in addition to the MA course proper. In certain programmes, a knowledge of other ancient languages may be required.

II. Degree Options

A. Master of Arts (MA)

Three graduate seminars, two in the general area of interest and a reading and research class related to the thesis subject are required. Candidates are expected to attend graduate seminars related to their theses throughout their period of full-time study. A thesis is required.

MA students should obtain a copy of the Departmental regulations for the degree.

B. Doctor of Philosophy (PhD)

The normal admission requirement is the Dalhousie MA in Classics, or equivalent preparation. The minimum residence requirement for such candidates is two years, during which time they must satisfy

the general requirements of the Faculty, and, in addition, must demonstrate competence in the languages (ancient and modern) necessary for research in their particular fields of study.

All candidates are expected to have a broad understanding of all aspects of Classical culture, and within the general area of Hellenic-Hellenistic Studies, each candidate is expected to concentrate, with the guidance of a Supervising Committee, in one of three fields: History, Literature and Philosophy. Before submitting a thesis, the candidate must pass a comprehensive examination (written and oral) in his/her special field: this will normally be taken towards the end of the second or beginning of the third year of study.

III. Classes Offered

Greek and Latin Literature

- CLAS 5010.06: Seminar on Greek Literature (1). R. Friedrich
CLAS 5020.06: Seminar on Greek Literature (2). R. Friedrich
CLAS 5021.03: Reading and Research in Greek Literature (1).
CLAS 5022.03: Reading and Research in Greek Literature (2).
CLAS 5030.06: Seminar on Latin Literature (1). R. Friedrich/J.P. Atherton
CLAS 5040.06: Seminar on Latin Literature (2). R. Friedrich/J.P. Atherton
CLAS 5041.03: Reading and Research in Latin Literature (1).
CLAS 5042.03: Reading and Research in Latin Literature (2).

Ancient History

- CLAS 5530.06: Reading and Research in Ancient History (1). P.F. Kussmaul
CLAS 5531.03: Reading and Research in Ancient History (2). P.F. Kussmaul
CLAS 5530.06: Reading and Research in Ancient History (2). P.F. Kussmaul
CLAS 5551.03: Reading and Research in Ancient History. P.F. Kussmaul
CLAS 5552.03: Reading and Research in Ancient History. P.F. Kussmaul

Classical Philosophy

- CLAS 5600.06: Seminar on the Philosophy of Aristotle. J.P. Atherton
CLAS 5601.06: Seminar on Plato and Neoplatonism. J.P. Atherton
CLAS 5602.06: Seminar on Hellenistic Philosophy. D.K. House
CLAS 5603.06: Seminar on the Philosophy of Plato. D.K. House

Patristics

- CLAS 5700.06: Seminar on the Philosophy of the Church Fathers. R.D. Crouse
CLAS 5701.06: Seminar on the Medieval Interpreters of Aristotle. D. Crouse
CLAS 5705.06: Seminar on St. Augustine (1). C.J. Starnes
CLAS 5706.06: Seminar on St. Augustine (2). C.J. Starnes
CLAS 5800.06: Seminar on Christian Beginnings. W.J. Hankey
CLAS 5801.06: Seminar on Christianity and Neoplatonism. W.J. Hankey

Classes Occasionally Offered

Greek and Latin Literature

- CLAS 5011.06: Seminar on Greek Tragedy. R. Friedrich
CLAS 5012.06: Seminar on Greek Comedy. R. Friedrich
CLAS 5013.06: Seminar on Greek Lyric. R. Friedrich
CLAS 5031.06: Seminar on Roman Satire. Staff
CLAS 5032.06: Seminar on Roman Historians. Staff
CLAS 5033.06: Advanced Seminar on Latin Literature. Staff
CLAS 5034.06: Seminar on Greek Literature.

Ancient History

- CLAS 5531: Seminar on the Roman Empire and the Rise of Christianity. P.F. Kussmaul
CLAS 5551.03: Ancient Law and Jurisprudence. P.F. Kussmaul

Classical Philosophy

- CLAS 5604.06: History of the Interpretation of Aristotle. Staff
CLAS 5605.06: Advanced Seminar on Neoplatonism. Staff
CLAS 5606.06: Greek Philosophical Texts. Staff
CLAS 5607.06: Latin Philosophical Texts. Staff

- CLAS 5608.06: Reading and Research. Staff
CLAS 5609.03: Greek Philosophical Texts. J.P. Atherton
CLAS 5610.03: Latin Philosophical Texts. Staff

Patristics

- CLAS 5707.06: Readings in Patristic Texts. Staff
CLAS 5708.03: Reading and Research. Staff
CLAS 5900.06: Departmental Seminar. Staff
CLAS 5901.06: Reading and Research. Staff

- CLAS 9000.00: Master's Thesis
CLAS 9530.00: Doctoral Thesis

Community Health and Epidemiology

Location: Clinical Research Centre
5849 University Avenue
Halifax, NS B3H 4H7
Telephone: (902) 494-3860
Fax: (902) 494-1597

Head of Department
MacLean, David R.

Graduate Coordinator
Kirkland, Susan A.

Professors Emeriti

Stewart, C.B., OC, BSc (Med), MD, CM (Dal), MPH, Dr PH (Johns Hopkins), FAPHA, FRCPC, MCFP, LLD (Dal, UPEI, MtA), DSc (StFX)
Irwin, A.C., BA (Sask), MD, DPH (UofT), DSM (Edin), FRSH

Professors

Brown, M.G., BA(hons) (Western), MA (Queen's), AM, PhD (Chicago)
Cohen, F., AB (Harvard-Radcliffe), MEd (Harvard), PhD (Minnesota), major appointment in Resource and Environmental Studies
Cohen, M., BA (Mich), DMD (Tufts), MSD, PhD (Minnesota), major appointment in Oral Biology, Dentistry
Ismail, A., BDS (Baghdad), MPH, DrPH (Mich), major appointment in Paediatrics and Community Dentistry
MacLean, D.R., MD (Dal), MHSc (UofT), CCFP
MacLean, L.C., BA, BEd (StFX), MA, PhD (Dal), major appointment in Business Administration
Makrides, L., BPT (Sask), MSc (Ottawa), PhD (McM), MCSP, major appointment in School of Physiotherapy
Murray, T.J., MD, FRCPC(c), FACP, major appointment in Neurology
Sketris, I., BSc (UofT), MPA (Dal), PharmD (Minnesota), major appointment in Pharmacy
Stewart, M.J., BScN (McM), PhD (Dal), major appointment in Nursing

Associate Professors

Flowerdew, G., BSc (Lond), MSc (London School of Hygiene and Tropical Medicine), DSc (Harvard)
Joffres, M., MD (Toulouse), MSPH, PhD (Hawaii)
McIntyre, L., MD, MHSc (UofT), FRCPC, major appointments in Health Services Administration and Recreation, Physical and Health Education
Rockwood, K., BA, BMed, MD (MUN), MPA (Queen's), major appointment in Geriatric Medicine
Tan, M., MD (cum laude) (Dal), FRCPC, FACP, major appointment in Medicine
Veldhuyzen van Zanten, S.J.O., major appointment in Gastroenterology

Assistant Professors

Cox, J., BA, MD (UofT), FRCPC, major appointment in Medicine
Dodds, L., MS (Washington), PhD (UofT)
Gordon, K., MD (Queen's), MSc (Mich), major appointment in Paediatrics
Gross, M., MSc (McM), MB, BS (Newcastle-upon-Tyne), FRCS (Eng), FRCPS, major appointment in Surgery
Johnston, G.M., BSc (Hon) (McG), MHSA (Alta), PhD (Western), major appointment in Health Services Administration

Kephart, G., BS(Hons) (California), MS, PhD (Wisconsin)
Kirkland, S., BSc, MSc (Waterloo), PhD (UofT)
Langille, D., BSc (Acadia), MD (Dal), MHSc (UBC)
Langley, J.M., MD (Dal), major appointment in Paediatrics
Poulin, C., BSc (Dal), MD (Laval), MSc (McG), FRCPC
Read Guernsey, J., BSc(Hons) (Carleton), MSc, PhD (Iowa)
Roy, P., BSc, MD (Dal), MSc (McM), major appointment in Surgery
Schlech, W., III, MD (Cornell), FACP, major appointment in Medicine
Weerasinghe, S., BSc (Jaffna), MSc (Sri Lanka), PhD (Dal)

Lecturers

Anderson, D., BA, MD (Dal), MSc (McM)
LeBlanc, J., MD, MSc (McM), major appointment in Paediatrics

Honorary Adjunct Appointments

Farquharson, BSc (Hons), MSc (Dal)
Hood, R., BPE (Calgary), MS, PhD (Illinois), jointly appointed in School of Resource and Environmental Studies
Leighton, A.H., MD (Johns Hopkins), MA (Cantab), MA (Hon) (Harvard), DS (Hon) (Acadia), FRC Psych (Hon), DS (Hon) (Laval), jointly appointed in Psychiatry
MacPherson, K., BSc, MD (Dal), MPH (Mich), Geriatric Program Development and Research, Camp Hill Medical Centre
Murphy, J., PhD (Cornell), Department of Psychiatry, Harvard Medical School; Chief of Psychiatric Epidemiology, Massachusetts General Hospital; Lecturer, Department of Epidemiology, Harvard School of Public Health
Scott, K.E., BSc, MD, CM (McG), MSc (Lond), FRCPC, FSS

I. Introduction

A. Master of Science

The MSc Community Health and Epidemiology (CH&E) programme focuses on knowledge, analytical skills and formal evaluative methods used in assessing community health needs and in designing, implementing and evaluating disease prevention and health promotion initiatives. The programme includes one year of course work plus thesis.

B. Institutional Environment

The Department of Community Health and Epidemiology is part of Dalhousie University's Faculty of Medicine which serves Canada's Maritime Provinces. CH&E full-time and part-time faculty have backgrounds in a number of disciplines including community medicine, epidemiology, biostatistics, economics, occupational and environmental health, psychiatry, demography, sociology and anthropology. CH&E faculty have provided leadership in areas of population health research, prevention, health promotion, assessment of community health service needs, epidemiology, biostatistics, health manpower planning, health services utilization research and in various types of evaluative studies, including international health projects.

II. Admission Requirements

The typical MSc CH&E student has had undergraduate training in a health profession or related discipline and has worked in the health sector. Admission standards are those of Dalhousie University's Faculty of Graduate Studies. An honours baccalaureate degree or an M.D. degree from a recognized university is ordinarily required. Enrolment is limited. A limited number of part-time students are accepted. Applicants must meet English Language Competency and Quantitative Skills requirements. Applicants will be interviewed as part of the selection process.

III. Curriculum

The programme requires a minimum of five Core Classes, three Elective Classes and a Thesis. All course work may be completed in one academic year. The five required classes are: Community Health Principles; Epidemiology Principles; Research Methods for Community Health; Biostatistics II; and Community Health Services Systems.

The Master's Thesis is a major part of the MSc CH&E programme. A thesis may include the design and execution of an applied research project in the field of community health and epidemiology. Full-time students will ordinarily complete their thesis during their second year in the MSc programme.

IV. Classes Offered

- CH&E 5000.03: Community Health Principles. C. Poulin
CH&E 5010.03: Epidemiology Principles. S. Kirkland
CH&E 5020.03: Biostatistics II. S. Weerasinghe
CH&E 5030.03: Research Methods for Community Health. G. Kephart
CH&E 5040.03: Community Health Services Systems. M. Brown
- CH&E Elective Classes**
CH&E 5019.03: Biostatistics I. S. Weerasinghe
CH&E 6000.03: Community Health Programmes for Communicable and Non-communicable Diseases. C. Poulin
CH&E 6001.03: Environmental and Occupational Health. J. Read Guernsey
CH&E 6010.03: Community Health Practicum. C. Poulin
CH&E 6020.03: Advanced Epidemiology. S. Kirkland
CH&E 6021.03: Advanced Biostatistics. S. Weerasinghe
CH&E 6022.03: Evaluation of Health Services and Programmes. M. Brown
CH&E 6024.03: Methods in Clinical Trials. J. LeBlanc
CH&E 6042.03: Determinants of Health in Human Populations. G. Kephart
CH&E 6043.03: Principles of International Health. L. McIntyre and M. Cohen
CH&E 6045.03: Qualitative Methods in Health Research. J. Graham
CH&E 6060.03: Directed Readings/Studies
CH&E 9000.00: Master's Thesis

Computing Science

Location: Chase Building
Halifax, NS B3H 3J5
Telephone: (902) 494-2572
Fax: (902) 494-5130
e-mail: paula@cs.dal.ca
WWW: <http://www.cs.dal.ca/home2.html>

Chair of Department
Gupta, R.P.

Director of Division
Hartzman, C.S.

Professors
Keast, P., PhD (St. Andrews)
Moriarty, K.J.M., MSc (Dal), PhD (London)
Shepherd, M.A., MSc, PhD (Western) - Graduate Coordinator

Associate Professors
Farrag, A., PhD (Alta)
Hartzman, C.S., MS (Purdue), PhD (Colorado)

Assistant Professors
Gao, Q., MSc, PhD (Waterloo)
Sedgwick, A.E., MS (Wisconsin), PhD (UofT)
Srinivas, S., PhD (Ind. Inst. of Sc.)

Computer Systems Manager
Trueman, D., MSc (UofT)

Adjunct Professors
Muir, P., MSc, PhD (UofT)
Oliver, L., MSc (Acadia), PhD (McG)
Trappenberg, T., PhD (RWTH Aachen Germany)
Waters, C.R., MSc (Western), PhD (TUNS)

Please refer to the entry for the Department of Mathematics, Statistics and Computing Science for a full listing of the members of the Department and information on other programmes offered by the Department.

The department offers programmes leading to the degree of MSc in the following areas: software development, database systems and design, parallel computing, supercomputers, numerical analysis and optimization, artificial intelligence, computer vision, information retrieval, hypermedia, networking and fault-tolerant computing.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

Candidates will normally be expected to hold a degree recognized by Dalhousie University as the equivalent of a Bachelor's degree with Honours in one of its own faculties.

GRE Aptitude scores are recommended for all applicants for graduate studies whose undergraduate work has been completed outside of Canada, and TOEFL scores are required for applicants whose native language is not English. Valid score reports must be received directly from the Educational Testing Service. To ensure consideration for scholarship funds, application should be made early.

II. Masters Degree Programme

Requirements

1. At least three full-credit classes, not including seminar classes, at the graduate level to be chosen in consultation with a department adviser. In addition, students whose preparation is deficient will be required to complete appropriate classes which will be designated by the adviser.
2. Attendance and participation in seminars.
3. A satisfactory thesis.
4. Students are required to give an oral presentation of their thesis and at that time to answer questions about the thesis. This presentation will be made after the thesis is in the hands of the student's committee and will be taken into account when the committee makes its decision.

iii. Classes Offered

A selection of the following graduate classes will be offered subject to demand.

COMP 5100.03/4100.03: Operating Systems II
COMP 5130.03/4130.03: Analysis of Algorithms
COMP 5140.03/4140.03: Software Design and Development
COMP 5150.03/4150.03: Theory of Programming Languages
COMP 5200.03/4200.03: Topics in Artificial Intelligence
COMP 5210.03: Expert Systems
COMP 5250.03/4250.03: Information Retrieval
COMP 5270.03/4270.03: Numerical Software
COMP 5330.03: Topics in Graph Theory
COMP 5350.03/4350.03: Object-Oriented Programming
COMP 5360.03: Topics in Vector and Parallel Computing
COMP 5400.03/4400.03: Programming Methodology
COMP 5450.03/4450.03: Data Communications
COMP 5550.03/4550.03: Topics in Computer Systems
COMP 5650.03/4650.03: Selected Topics in Information Retrieval
COMP 5660.03/4660.03: Automata and Computability
COMP 5670.03/4670.03: Computer Graphics
COMP 5700.03/4700.03: Advanced Topics in Data Base Design
COMP 5800.03/4800.03: Computer Systems Modelling
COMP 6000.03 - 6990.03: Reading Classes for Advanced Graduate Students

Earth Sciences

Location: Life Sciences Centre, Room 3006
1355 Oxford Street
Halifax, NS B3H 4J1
Telephone: (902) 494-2358
Fax: (902) 494-6889

Chair of Department
Reynolds, P.H.

Graduate Co-ordinator
Culshaw, N.

Professors Emeriti

Cooke, H.B.S., MSc, DSc (Witwatersrand)
Medioli, F.S., PhD (Parma)
Milligan, G.C., MSc (Dal), PhD (Harv)

Professors

Clarke, D.B., BSc, MA (UofT), PhD (Edin)
Hall, BSc, J.M. (Wales), PhD, DIC (Lond)
Jamieson, R.A., BSc (Dal), PhD (MUN)
Reynolds, P.H., BSc (UofT), PhD (UBC) (jointly with Physics)
Robinson, P.T., BSc (Mich), PhD (Calif)
Schenk, P.E., BSc (Western), MSc, PhD (Wisc)
Scott, D.B., BSc (Wash), MSc (Wash State), PhD (Dal)
Zentilli, M., BSc (Chile), PhD (Queen's)

Associate Professors

Culshaw, N., BA (Keele), PhD (Ottawa)
Gibling, M.R., BA (Oxon), PhD (Ottawa)
Muecke, G.K., BSc, MSc (Alta), DPhil (Oxon)
Ryall, P.J.C., BSc (Dal), MSc (Alta), PhD (Dal)

Assistant Professors

Godfrey-Smith, D., BA (Calgary), PhD (SFU)
Martell, A.T., PhD (Dal) - Research

Senior Instructor

Wallace, P., BSc, MSc (McM)

Research Associate

Beaumont, C., major appointment in Oceanography Department

Honorary Research Associates

Dick, H., BA (Pennsylvania), PhD (Yale), Woods Hole
Graves, M., BSc (Idaho), MSc (Dal), Cuesta Research, Ltd.
Malpas, J., BA, MA (Oxon), MSc, PhD (MUN), University of Hong Kong
Mukhopadhyay, P.K., PhD (Jadaupur), Global Geoenergy Research
Ruffman, A., MSc (Dal), Geomarine Associates Ltd.
Verhoeef, J., PhD (Utrecht), GSC Atlantic
Williams, G., BSc (London), PhD (Sheffield), GSC Atlantic

Honorary Adjunct Professors

Barr, S., BSc (UNB), PhD (UBC), Acadia University
Boyd, R., BSc, PhD (Sydney), University of Newcastle
Calder, J., BSc (Saint Mary's), PhD (Dal), NS Natural Resources
Coflin, K., BSc, MSc, PhD (Calgary), GSC Atlantic
Doetal, J., BSc (Charles), PhD (McM), Saint Mary's University
Gayes, P., BSc (SUNY), MSc (Pennsylvania), PhD (SUNY)
Hacquebard, P.A., BSc, MSc (Leiden), PhD (Groningen), LLD (Dal)
Jansa, L.F., BSc, MSc (Masaryk), PhD (Charles), GSC Atlantic
Kalkreuth, W., Dip (Berlin), Institute of Sedimentary and Petroleum Geology, Calgary

Melchin, M., MSc (Waterloo), PhD (Western), St. Francis Xavier University
 Mudie, P.J., BSc (Cape Town), BSc (Leicester), PhD (Dal), GSC Atlantic
 Murphy, J.B., BSc (Dublin), MSc (Acadia), PhD (McG), St. Francis Xavier University
 Pe-Piper, G., BSc (Athens), PhD (Cambridge), Saint Mary's University
 Piper, D.J.W., BA(Hons) (St Catharine's Col, Cantab), MA (Cantab), PhD (Darwin Col, Cantab), GSC Atlantic
 Raeside, R., BSc (Aberdeen), MSc (Queen's), PhD (Calgary), Acadia University
 Salisbury, M.H., BSc (MIT), MSc, PhD (Wash), GSC Atlantic
 Stea, R., BSc (Acadia), MSc, PhD (Dal), NS Dept of Natural Resources
 van Wagoner, N., BA, BSc (Cal State), PhD (Dal), Acadia University
 Waldron, J., BA (Cambridge), PhD (Edinburgh), Saint Mary's
 Williamson, M., BSc, MSc (Wales), PhD (Dal), GSC Atlantic

Students with degrees in any of the sciences or mathematics who wish to study some aspect of the earth are welcome. Graduate work leading to the degrees of MSc and PhD is possible in a number of different fields. These include for example: Marine geology and geophysics, Appalachian geology, isotope geology, economic geology, petrology, geochemistry and mineralogy, geophysics, sedimentology, micropaleontology and coastal sedimentation, structural geology, metamorphism, and tectonics.

Interdisciplinary studies are encouraged, and there is active cooperation among the science departments (including Oceanography) at Dalhousie University. Students are urged to take full advantage of the opportunities this affords. Research, on scientific problems of mutual interest to Dalhousie and government laboratories such as the Nova Scotia Department of Natural Resources, Nova Scotia Research Foundation and the Geological Survey of Canada Atlantic at the Bedford Institute of Oceanography, is often done. Members of these laboratories frequently serve on supervisory committees.

The complex of departments and laboratories in Halifax and Dartmouth concerned with various aspects of the earth make graduate study in earth sciences very attractive.

I. Admission Requirements

Candidates must satisfy general requirements for admission to the Faculty of Graduate Studies. Candidates seeking financial support should ensure that their applications are complete by January 31.

II. Degree Programmes

A. MSc Degree Programme

The minimum time for completion of the MSc degree is 12 months of full-time study (see Faculty Regulation 4). Experience has shown that most students take at least 24 months to complete their work. Financial support is available for no more than 24 months.

Part-time study is also possible. Conditions for admission to this programme are the same as those for full-time students. Financial support is not normally available for part-time study. Research leading to the preparation and oral defence of a thesis is required.

The equivalent of five graduate classes is required, of which the thesis normally counts as three.

Graduate students are required to participate in the Earth Sciences seminar. EARTH 6300.03 and EARTH 6350.03 are compulsory.

B. PhD Degree Programme

The minimum time required to complete this programme is two years from an MSc; normally three years are required (see Section 4).

The preliminary examination (see Section 6) is an integral part of the compulsory classes, EARTH 6300.03 and 6350.03.

Participation in the Earth Sciences seminar is required.

Research leading to the preparation and oral defence of a thesis is required.

III. Classes Offered

The following classes are designed primarily for undergraduates in their final year; they may be taken by graduate students for general interest, because the material is needed to help in their research, or because the student's background may be inadequate.

PLEASE NOTE: Not all classes are offered every year, please consult the current timetable.

ERTH 5151.03: Mineral Deposits. M. Zentilli
 EARTH 5152.03: Fossil Fuels. M. Gibling
 EARTH 5270.03: Applied Geophysics. P.J.C. Ryall
 EARTH 5280.03: Marine Geophysics. K. Loudon (Ocean.)
 EARTH 5350.03: Tectonics. J.M. Hall
 EARTH 5351.03: Canadian Regional Tectonics. N. Culshaw
 EARTH 5380.03: Advanced Geochemistry. G.K. Muecke
 EARTH 5390.03: Advanced Igneous Petrology. D.B. Clarke
 EARTH 5400.03: Advanced Metamorphic Petrology. R.A. Jamieson
 EARTH 5502.03: Micropaleontology and Global Change. D.B. Scott
 EARTH 5520.03: GIS Applications to Environmental and Geological Sciences. G.K. Muecke

The following classes are designed specifically for graduate students.

ERTH 6100.03: Seminar in Sedimentology and Stratigraphy.
 EARTH 6110.03: Research Topics in Micropaleontology.
 EARTH 6120.03A/6220.03: Seminar in Mineralogy, Petrology and Geochemistry.
 EARTH 6150.06: Metallogeny in Mineral Exploration.
 EARTH 6160.06: Research Topics in Sedimentary Geology I.
 EARTH 6170.06: Research Topics in Sedimentary Geology II.
 EARTH 6250.03: Directed Studies.
 EARTH 6300.03: Research Presentation and Design in Earth Sciences.
 EARTH 6350.03: Research Topics in Earth Sciences

All graduate students must be registered in one of:

ERTH 9000.00: MSc Thesis.
 EARTH 9530.00: PhD Thesis.

Economics

Location: 6214 University Avenue
Halifax, NS B3H 3J5
Telephone: (902) 494-2026
Fax: (902) 494-6917
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Chairperson of Department
Lesser, B.

Faculty Advisors

Dasgupta, S., Graduate Coordinator (494-6868)
McAllister, I., MDE Coordinator (494-6993)

Professors Emeriti

Cornwall, J.L., BA (Iowa), MSc (Lond), PhD (Harvard), FRSC
Konczacki, Z.A., BSc (Lond), BEcon(Hons) (Natal), PhD (Lond)
Sinclair, A.M., BA (Dal), MA, BPhil (Oxon), PhD (Harvard)

Professors

Bradfield, F.M., BCom (McM), PhD (Brown)
Dasgupta, S., BA (Calcutta), MA (Delhi), PhD (Rochester)
Klein, E., LL.M. (Buenos Aires), MSc (Dal), Dr Rer Pol (Hamburg)
Lesser, B., BCom (Dal), MA, PhD (Cornell)
Marfels, C., Diplom-Volkswirt, Dr Rer Pol (Berlin)
McAllister, R.I., MA (Oxon), MA (Cantab)
Osberg, L., BA(Hons) (Queen's), MPhil, PhD (Yale)
Rao, U.L.G., MA, MSc (Andhra), PhD (Western)

Associate Professors

Burton, P., BSc (Sask), MA, PhD (UBC)
Cross, M.L., AA (Dawson College), BA (Hons) (Montana), MA (SFU), PhD (Texas A&M)
Huber, P.B., BA, MA, PhD (Yale)
Mazany, L., BSFS (Georgetown), PhD (UBC)
Phipps, S., BA(Hon) (Victoria), MA, PhD (UBC)

Assistant Professors

Iscan, T.B., MA, PhD (Cornell)
Xu, K., MBA, PhD (Concordia)

Special Lecturer

Pinfold, T.A., BA, MA (Western), PhD (Minn)

Honorary Adjunct Professors

Amirkhalkhali, S., BAHons (Shiraz), MA, PhD (Dal), Saint Mary's University
Badawi, J., BCom (Aln Shams, Claro), MBA, PhD (Indiana), Saint Mary's University
Bowles, P., BSc (Southampton), MA (Sussex), PhD (London), UNBC
Comeau, R.L., BA, MA (StFX), PhD (Brown) (retired)
Cornwall, J.L., BA (Iowa), MSc (London), PhD (Harvard), Dalhousie (retired) (Professor Emeritus)
Cornwall, W., BA (MSVU), PhD (Dal), Mount St. Vincent University
George, R., BSc (London), MSc (Bristol), PhD (London) (retired)
Marsoorian, BSc (LSE), MA (McM), PhD (Queen's), York University
Ogwang, BStat (Makerere), MA (Leeds), PhD (Dal), UNBC
Pinfold, BA, MA (Western), PhD (Minn)
Rankaduwa, W., BA, MSc (Sri Lanka), MA, PhD (Dal), UPEI
Sharif, N., BA (Punjab), MA (Dacca), MA, PhD (McM)

I. Degree Options

A. Master of Arts

1. Admission Requirements

Candidates must at a minimum satisfy the general requirements for admission to the Faculty of Graduate Studies as spelled out in section 2.2 of this calendar. Entrance to a one-year MA Programme requires an Honours BA in Economics (or equivalent) with an average of at least 75% (B+) at Dalhousie standards in classes in Economics and related fields. Normally this means completion of at least eight classes in Economics beyond the introductory level including classes in Economic Theory beyond the intermediate level, Statistics, Econometrics and classes in areas related to some of the fields of specialization, other than Economic Theory or Econometrics, that are listed below under Programme Choices. Mathematics classes which are equivalent to Dalhousie MATH 1000.03 and 2030.03 are also required.

In some circumstances students may enter a two-year MA programme requiring a pass or General BA degree with a major in Economics and an average of at least 75% (B+) at Dalhousie standards in the classes of Economics and related fields. A minimum of four classes in Economics beyond the introductory level, with content and level of work satisfactory to the Department, is required. These prerequisite classes should include one full class in intermediate theory (equivalent to Dalhousie Economics 2200.03/2201.03) and a basic class in Statistics (equivalent to Dalhousie Mathematics 2060.03 and 2080.03). A first-level Mathematics class (equivalent to Dalhousie Mathematics 1000.03 or to both 1110.03 and 1120.03) is also required.

Promising students who do not meet the entrance requirements for the programmes may be admitted to a Qualifying Year to permit them to bring their work up to full admission standards.

Applicants should also consult regulations 2., "Admissions Requirements," which includes regulation 2.4, "English Language Proficiency".

b) Programme Choices

The department offers the MA in the following areas of specialization:

- Economic Theory
- Econometrics
- Labour Economics
- Public Finance
- Resource Economics
- Monetary Theory
- Industrial Organization
- Regional and Development Economics

Department approval is required for the programme of each student.

c) Interdisciplinary Programmes

The Department of Economics participates with other Departments and Institutions in several such programmes. These include:

- African Studies
- Environmental Studies
- Health Evaluation Studies
- Urban, Rural, and Regional Studies

Graduate students wishing to orient their studies in the direction of these interdisciplinary fields take some classes in the relevant area from offerings outside the Department and do their graduate thesis on related topics. The Department's approval of such a programme is required. Other special interdisciplinary programmes may be devised, with the Department's consent, to meet particular interests.

d) Completion of MA Programme

Students must successfully complete the required and optional classes of their programme. Normally a course of study worth at least five (5) credits is required, including a thesis which must be submitted and approved by the Department.

B. Master of Development Economics (MDE)

a) Admission Requirements

The normal duration of the programme is two years; although applicants with the equivalent of some graduate level training or a professional degree (such as MPA, MBA, LLB or MES) may be eligible for a one-year programme. Also, candidates with first-class undergraduate degrees with a major in Economics or International Development may be considered for a one year programme.

All candidates for admission must satisfy the general requirements for admission to the Faculty of Graduate Studies. The department will consider applications for the two year programme from candidates possessing an undergraduate degree with an academic average of at least 75% (B+) at Dalhousie standards. Because of its interdisciplinary nature, applicants may possess a BA, BSc or BComm degree, but all candidates must have at least two classes in Economics beyond the introductory level including one full class in intermediate theory, plus a basic class in statistics.

Promising students who do not meet these requirements may be considered for admittance to a Qualifying Year. In exceptional circumstances, a highly qualified candidate may be admitted to the two year programme and permitted to take missing classes within the first year of the two year programme (such classes would usually be above the normal course requirement for the graduate programme).

b) Programme Choices

The MDE Programme permits students to follow one of two paths:

- The Canadian Studies Programme concentrates on Canadian economic development, with comparative insights from other countries. Primary emphasis in the programme is placed on exploring problems of development in Canada's less developed regions, with special attention to the Atlantic Provinces. Regional development policy initiatives and strategies are stressed.
- The International Development Studies Programme concentrates both on sectoral themes and on geographic regions. These include urban and rural development, human resource planning, the role of state corporations, international trade and payments, import substitution policies, international and bilateral aid, disaster relief, health and environmental issues, women in development, and the problem of helping those in greatest need in Third World countries. Specific country experiences will be extensively drawn upon through links the University faculty has with West Africa, East Africa, Indonesia, Latin America, the Baltic states, the Caribbean, China, Nepal and India.

For both programme options, students should select classes to achieve a blend of economics and at least one of the disciplines of business/public administration, law, education, environmental studies, history, music, political science, sociology and social anthropology. Class selection should also facilitate skill development in: the ability to think numerically, to interpret data, and to apply economic logic to real issues; computer literacy; and a sensitivity to human behaviour and different cultures. For both programme options, some field exposure is encouraged both through class frameworks and thesis research.

c) Completion of MDE Programme

Students in a full two-year programme must normally complete seven full-credit classes plus thesis. In some cases, this number of classes may be reduced on the basis of advanced standing granted for previous work, but not used for credit towards another degree.

C. Doctor of Philosophy (PhD)

a) Admission Requirements

Applicants for admission to the PhD programme must have academic qualifications superior to those required for entrance into the MA programme. The minimum required for entry is an Honours Degree in Economics with an average of at least 80% (A-) by Dalhousie standards in the classes in economics and related fields. Students entering after completing the required course work for an MA degree in Economics would normally prepare for their PhD Comprehensive Exams in two years; those with only an Honours BA would normally require three years. In addition to the entrance

requirements above, students are expected to have completed classes, at a satisfactory level, in Intermediate Calculus, Matrix and Linear Algebra, and Statistics (equivalent to Dalhousie MATH 2000.06, 2030.03, 2040.03, 2060.03 and 2080.03).

Applicants may be required to submit the results of the Graduate Record Examination in Economics with their application. They should also consult regulation 2, "Admissions Requirements," which includes regulation 2.4, "English Language Proficiency."

b) Programme Choices

The department offers the PhD in the following areas of specialization:

- Econometrics
- Economic Theory (Microeconomics) (Macroeconomics)
- Industrial Organization
- Labour Economics
- Resource Economics

Students admitted to a two-year PhD programme may choose any area of specialization. Students admitted to a three-year PhD programme may do so after having satisfactorily completed a prescribed course of study during their first year. Departmental approval is required for the programme of each student.

The structure of the PhD programme is described below.

The PhD Programme is designed to provide students with a strong foundation in economic theory and quantitative methods and intensive work in two applied fields of economics. At the completion of their class work, candidates for the PhD Programme will be examined in:

1. Macroeconomic and Microeconomic theory (at the level of Dalhousie Economics classes 5500.03, 5509.03, 6600.03 and 6609.03, including applications of the economic theory described)
2. Two fields of specialization
3. History of Economic Thought

They are also required to show proficiency in Quantitative Analysis and Economic History in the course of their work. A course of study recommended for the two-year PhD Programme would include:

Year 1

1. ECON 5500.03 (Macroeconomic theory)
2. ECON 5509.03 (Microeconomic theory)
3. ECON 5506.06 (Economic History as available)
4. Two elective classes

Year 2

1. ECON 6600.03 (Macroeconomic theory)
2. ECON 6609.03 (Microeconomic theory)
3. ECON 5533.06 (Econometrics)
4. Two elective classes

c) Examination and Thesis

Comprehensive examinations consisting of written papers in economic theory and two fields, and oral examinations in the same three subjects, are required at the end of the required period of course work.

A suitable thesis must be submitted and defended. Students are required to make a public presentation of a thesis proposal no later than six months after completion of the comprehensives and preferably at some point prior to the comprehensives.

II. Classes Offered

Classes other than those listed may be offered. Not all classes listed are necessarily offered in any given year.

ECON 5000.03: Economic Theory for MDE Microeconomics.

ECON 5001.03: Economic Theory for MDE Macroeconomics.

ECON 5231.03: Health, Economics and Development. M. Brown

ECON 5238.03: The Industrial Revolution in Europe. P.B. Huber

ECON 5239.03: The European Economy in Historical Perspective:

After the Industrial Revolution. P.B. Huber

ECON 5250.06: Applied Development Economics.

ECON 5251.03: Seminar in Development Studies.

ECON 5252.03: From Disaster Relief to Development. I. McAllister
 ECON 5333.03: Theories of Economic Development. B. Lesser
 ECON 5334.03: Economic Development. Recent Debates, Controversies and Conflicts
 ECON 5336.03: Regional Development: Post-1945 Canadian and Industrial Countries' Economic Policy Experience. R.I. McAllister
 ECON 5350.03: Social Cost-Benefit Analysis. T. Pinfold
 ECON 5431.03: International Finance. L. Mazany
 ECON 5500.03: Macroeconomics. T. Iscan or K. Xu
 ECON 5502.03: Monetary Theory: Microeconomic Aspects. K. Xu
 ECON 5503.03: Public Finance I. S. Phipps
 ECON 5504.03: Public Finance II. S. Phipps
 ECON 5506.06: North American Economic History. B. Lesser
 ECON 5508.06: Government and Business. C. Marfels
 ECON 5509.03: Microeconomics. S. DasGupta or E. Klein
 ECON 5513.03: Regional Economics: Analysis and Policies. F.M. Bradfield
 ECON 5514.03: Monetary Theory - Macroeconomic Aspects. K. Xu
 ECON 5516.03: Natural Resource Economics I. M.L. Cross
 ECON 5517.03: Natural Resource Economics II. P. Burton
 ECON 5518.03: Antitrust Economics. C. Marfels
 ECON 5520.03: Economic Applications of Game Theory. P. Burton, S. Dasgupta or E. Klein
 ECON 5521.03: Mathematics for Economists. S. DasGupta or E. Klein
 ECON 5522.03: Labour I. L. Osberg
 ECON 5523.03: Labour II. L. Osberg
 ECON 5533.06: Econometrics. U.L.G. Rao
 ECON 5551.03: Special Topics in Monetary Policy.
 ECON 5552.03: Special Topics in Monetary Theory.
 ECON 5557.03: Selected Topics: Industrial Organization and Antitrust Economics. C. Marfels
 ECON 5558.06: Special Topics in Industrial Organization. C. Marfels
 ECON 5559.06: Special Topics in Labour Economics. L. Osberg
 ECON 5563.06: Special Topics in Regional Economics. F.M. Bradfield
 ECON 5570.03: Special Topics in Econometrics. U.L.G. Rao
 ECON 5572.03: Special Topics in International Trade. P.B. Huber
 ECON 5575.03: Applied Statistics and Econometrics I. L. Mazany
 ECON 5576.03: Applied Statistics and Econometrics II. L. Mazany
 ECON 5600.06: Special Topics in Macroeconomics. T. Iscan or K. Xu
 ECON 5601.03: Special Topics in Macroeconomics. T. Iscan or K. Xu
 ECON 5620.03: Special Topics in Resource Economics. P. Burton or M. Cross
 ECON 5621.03: Special Topics in Resource Economics. P. Burton or M. Cross
 ECON 5659.03: Special Topics in Labour Economics. L. Osberg
 ECON 5670.03: Special Topics in Econometrics. G. Rao
 ECON 6600.03: Economic Theory (Macroeconomics). T. Iscan or K. Xu
 ECON 6609.03: Economic Theory (Microeconomics). S. DasGupta or E. Klein
 ECON 6610.03: Mathematical Economics. S. DasGupta and E. Klein
 ECON 6619.03: Seminar in Mathematical Economics and Advanced Economic Theory I
 ECON 6620.03: Seminar in Mathematical Economics and Advanced Economic Theory II
 ECON 6680.06: Directed Reading.
 ECON 9000.00: MA Thesis.
 ECON 9530.00: PhD Thesis.

Special Topics classes, not separately listed, will be arranged to provide for advanced work in the areas of specialization chosen by PhD students. MA students with the appropriate backgrounds will also be admissible to such classes. Other classes than those listed may also be offered and certain of the classes listed are not necessarily offered on an annual basis.

Education

Location: 6090 University Avenue
 Halifax, NS B3H 3J5
 Telephone: (902) 494-3724
 Fax: (902) 494-2847

Acting Director, School of Education
 Taylor, G., Dean of Arts and Social Sciences

Professor Emeritus
 Friedenberg, E.Z., BA (Centenary), MA (Stanford), PhD (Chicago)

Professors

Laidlaw, T., BA, MEd (Calgary), PhD (Alta), major appointment in Medicine
 Myers, J.D., BA, MA (Tor), PhD (Edinburgh), major appointment in Henson College
 Murphy, H.J., BSc (St.Dunstan's), BEd (UPEI), MEd, EdD (Virginia), major appointment in Dentistry
 Wright, W.A., BA (MtA), MA (McG), PhD (Montreal), major appointment in Office of Instructional Development

Associate Professors

Barton, A., BA, MA (Trinity)
 Ricker, G., BA, MEd (UBC), PhD (UofT), major appointment in School of Public Administration
 Sullivan, K.C., BSc, BEd (Dal), MEd, PhD (Alta), major appointment in School of Public Administration

Honorary Adjunct Professor

Akbari, A.H., BSc, MBA (Karachi), MA, PhD (Simon Fraser); Saint Mary's University
 Bérard, R.N., BA (Antioch), MA (McM), BEd (Dal), PhD (McM), Mount Saint Vincent University
 Crowley, M., BA (Miami), MAT (Johns Hopkins), PhD (Maryland), Mount Saint Vincent University
 French, F., BA, MEd (Memorial), PhD (Alta); Mount Saint Vincent University
 Gamberg, R., BA (Brandeis), MA (Ill)
 Hare, W., BA (London), MA (Leicester), PhD (Tor)
 Kienapple, K., BA (Waterloo), MSc, PhD (Purdue); Mount Saint Vincent University
 MacCleave, A., BSc (Acadia), MA (MSVU), PhD (Penn State); Mount Saint Vincent University
 MacCuspie, P.A., BA (Dal), MEd (Boston), PhD (Dal)
 Manicom, D.A., BEd (McG), MEd (AIE), PhD (UofT), Mount Saint Vincent University
 Manning, A., BA, MS (Ed) (Niagara), PhD (Ottawa); Mount Saint Vincent University
 Manos, J., BA, BEd (StFX), MEd (Calgary), PhD (Alta), Mount Saint Vincent University
 McGee, H., BA, MA (Florida State), PhD (Southern Illinois); Saint Mary's University
 Neilsen, L., BEd (Sask), MA (Mun), PhD (New Hampshire)
 Plumb, D., BA (Alta), MEd (Sask), PhD (Alta), Mount Saint Vincent University
 Portelli, J., BA (Malta), MA, PhD (McG); Mount Saint Vincent University
 Roald, J., BEd (UBC), MA (Wash), EdD (UBC)
 Semple, S., BA, DipEd (Sid), MEd, EdD (UofT)
 Welton, M., BA, MA, PhD (UBC), Mount Saint Vincent University

There will be no new admission to the MEd or MA and PhD in Education. All graduate students currently enrolled in Masters and Doctoral programmes should refer to the 1995/96 Graduate Studies calendar for programme regulations and class descriptions.

English

Location: 1434 Henry Street
Halifax, NS B3H 3J5
Telephone: (902) 494-6924
Fax: (902) 494-2176
e-mail: GRADENGL@IS.DAL.CA
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Chairperson of Department

Baxter, J.

Professors Emeriti

Fraser, J., MA (Oxon), PhD (Minn), FRSC
Gray, J., MA (Aberd), MA (Oxon), PhD (Mont), GRSA, FRSC,
McCulloch Professor of English
Ross, M., OC, BA (UNB), MA (UofT), PhD (Corn), DLitt (UNB), LLD
(St.Thom), LLD (Dal), LLD (Queen's), DLitt (Trent), DLitt
(Edinburgh), DLitt (Windsor), DSL (Trinity College), DLitt
(Acadia), LLD (StFX), FRSC
Sprott, S.E., MA, BD (Melbourne), PhD (Columbia)

Professors

Andrews, A., BA, DipEd, MA (Leeds), PhD (Ill), FRSA, major
appointment in Theatre
Baxter, J.R., BA, BEd, MA, PhD (Alta)
Huebert, R.M., BA (Sask), MA, PhD (Pitt)
Monk, P., BA (Reading), MA (Carleton), PhD (Queen's)
Tetreault, R.R., BA (UBC), MA, PhD (Cornell)
Wainwright, J.A., BA (UofT), MA, PhD (Dal)

Associate Professors

Diepeveen, L., BA (Calvin), MA, PhD (Ill)
Furrow, M.M., BA (Dal), MA, MPhil, PhD (Yale)
Greenfield, B.R., BA (York), MA (McG), MPhil, PhD (Columbia)
Higgins, A., BA (Connecticut), MA (McG), MA (Mass), MA, PhD
(Yale)
Li, V., BA, MA (UBC), PhD (Cantab)
Lucky, C., BA, MA, PhD (UofT)
McNeil, D., BA (Concordia), MA (UNB), PhD (McM)
Stone, M., BA (Guelph), MA, MPhil (Waterloo), PhD (UofT)

Assistant Professors

Maitzen, R., BA (UBC), MA, PhD (Cornell)
Morgan, H.E., BA (UBC), MA (Wash), BLitt (Oxon), PhD (Wash)
Ross, T., BA, MA (Carleton), PhD (UofT)
Stewart, A., BA (Guelph), MA, PhD (Queen's)
Thompson, J., BA (Western), MA, PhD (UofT)

Honorary Adjunct Professors

Bruhm, S., MA (Dal), PhD (McG); Mount Saint Vincent University
Davies, G., BA (Dal), MA (UofT), PhD (York); Acadia University
Davies, R., PhD (Wales), Acadia University
Drain, S., BA (Trent), MA (Leicester, PhD (Lond)); Mount Saint
Vincent University
Ferns, C., BA, PhD (Lond); Mount Saint Vincent University
Perkin, J.R., BA (Oxford), PhD (UofT); Saint Mary's University
Schwenger, P., PhD (Yale); Mount Saint Vincent University
Smith, D., BA (Man), MA (Carleton), PhD (Man); St. Francis Xavier
University
Smol, A., BA (Concordia), MA, PhD (Queen's); Mount Saint Vincent
University
Whalen, T., MA (Melbourne), PhD (SMU); Saint Mary's University

Applicants should designate the proposed thesis area at the time of application for admission. The Department will entertain research proposals at the MA level in most areas of British, Canadian, or

American literature, and at the PhD level in many of these areas. Nonetheless, applicants for the PhD should take care to consult the Graduate Coordinator of the department concerning its strength, in both resources and personnel, in the field of study in which they propose to specialize.

I. Admission Requirements

Candidates must at a minimum satisfy the general requirements for admission to the Faculty of Graduate Studies as spelled out in section 2.2 of this calendar. Since this department accepts full-time graduate students only if we can fund them, standards are very high, currently an A- or better average at least in the last two years. Both our MA and PhD programmes presuppose an acquaintance with English literature of different periods and nationalities. Applicants with other strengths but with limited historical coverage might still be accepted, but required to remedy deficiencies with one or even two of their graduate classes.

Only in exceptional circumstances will persons holding a BA and an MA from Dalhousie be allowed to proceed to a PhD programme without study at another institution. If you have a Dalhousie BA and MA and wish to apply to the PhD, please consult the Graduate Coordinator first.

The Department suggests a pragmatic deadline much earlier than the official one. We urge applicants to complete their application by late January to allow the Department to put forward the best candidates for Killam awards.

II. Degree Programmes

A. Master of Arts (MA)

For minimum time required to complete this programme, see Section 4.

Course work must include a graduate seminar (half or full-year) in the thesis area; at least one graduate seminar in a field unrelated to the thesis; and additional seminars in English to make up the equivalent of three full-year classes. With the approval of the Department, a graduate class in another department relevant to the candidate's course may take the place of one of the additional seminars, and under certain conditions a reading class may take the place of the seminar in the thesis area.

All students are required to have studied at least one European language other than English and to demonstrate some proficiency in it.

A thesis, equivalent to two classes, is required.

B. Doctor of Philosophy (PhD)

For a minimum time required to complete this programme, see Section 4.

In the first year, doctoral candidates must take graduate seminars in the pattern described above for the MA.

Candidates must take a qualifying examination, with written and oral portions, in the field (period and national literature) most germane to their intended thesis. The examination is to be taken no later than May of the second year in the programme.

All graduate students in the Department are required to have studied at least one European language other than English, and to demonstrate some proficiency in it.

Preparation and defence of a thesis are required.

Malcolm Ross Award in Canadian Literature

To be awarded at the discretion of the Department of English for an outstanding MA or PhD thesis in the field of Canadian Literature. McClelland and Stewart, publishers of the New Canadian Library series, have funded the award to honour Malcolm Ross, founding editor of the series and Professor Emeritus in the Department of English.

III. Classes Offered

Graduate Seminars

Approximately seven full-year seminars or the equivalent are offered each year. Students should consult the Department about which of the following seminars will be offered in 1996-97.

- ENGL 5110.06: Middle English Literature. M. Furrow, H. Morgan
ENGL 5120.06: Early English Drama. A. Higgins
ENGL 5125.03: The Social Context of Guide Drama. A. Higgins
ENGL 5220.06: Shakespeare. J. Baxter
ENGL 5226.06: Re-imagining Shakespeare. J. Baxter
ENGL 5230.06: Renaissance Poetry and Rhetoric. J. Baxter
ENGL 5231.03: Spenser, Shakespeare, Donne: Eros and Chastity. J. Baxter
ENGL 5232.03: Brave New Worlds in the English Renaissance. J. Baxter
ENGL 5235.03: Milton's Paradise Lost. R. Huebert
ENGL 5237.06: Gender in English Renaissance Drama. C. Luckyj
ENGL 5250.06: Renaissance Dissident Writers. R. Huebert
ENGL 5255.03: The Body in Renaissance Literature and Culture. R. Huebert
ENGL 5260.03: 17th Century Life-Writing. R. Huebert
ENGL 5265.03: Renaissance Women's Writing, 1580-1640. C. Luckyj
ENGL 5306.03: The Restoration Theatre. D. McNeil
ENGL 5310.06: Restoration and Augustan Satire. D. McNeil
ENGL 5315.06: The Eighteenth-Century English Novel. D. McNeil
ENGL 5316.03: Studies in the Eighteenth-Century English Novel. D. McNeil
ENGL 5317.03: Studies in the 18th Century Novel. D. McNeil
ENGL 5335.03: Reading Pope and Swift: Satire, Entrapment, Theory. T. Ross
ENGL 5340.06: Values in Literature: The Example of the Eighteenth Century. T. Ross
ENGL 5405.06: The Wordsworths and Coleridge in Conversation. J. Thompson
ENGL 5410.06: Innovation and Tradition in Romantic Poetry. R. Tetreault
ENGL 5411.03: Women and Men in the Romantic Era. R. Tetreault
ENGL 5412.06: Women and Men in the Romantic Era. R. Tetreault
ENGL 5415.06: Wordsworth and Coleridge. R. Tetreault
ENGL 5417.03: The 1790s: The Revolutionary Decade. J. Thompson
ENGL 5420.03: Keats and Shelley. R. Tetreault
ENGL 5421.03: Keats. R. Tetreault
ENGL 5422.03: Shelley. R. Tetreault
ENGL 5435.06: Victorian Narrative Modes. M. Stone
ENGL 5436.03: Engendering the Muse: Victorian Poetry, Literary History and Feminist Poetics. M. Stone
ENGL 5450.03: Studies in the Victorian Novel: George Eliot and History. R. Maitzen
ENGL 5517.06: The Ideology of Modernism: Pound and Eliot. V. Li
ENGL 5522.03: The Modernist/Post-Modernist Novel. V. Li
ENGL 5615.06: Modern Canadian Poetry. P. Monk
ENGL 5620.06: Modern Canadian Fiction. J.A. Wainwright
ENGL 5625.03: Studies in Modern Canadian Poetry. P. Monk
ENGL 5628.06: Modern Canadian Literature: Re/writing History. J.A. Wainwright
ENGL 5630.03: Studies in Modern Canadian Fiction. J.A. Wainwright
ENGL 58.05.03: Walt Whitman and Emily Dickinson. B. Greenfield
ENGL 5810.06: The American Scene: Major Figures of the Nineteenth Century. B. Greenfield
ENGL 5811.03: American Lives. B. Greenfield
ENGL 5815.06: American Travel/American Literature. B. Greenfield
ENGL 5820.06: American Poetry 1910-1945. L. Diepeveen
ENGL 5830.03: Reading American Modernism. L. Diepeveen
ENGL 5835.03: Finding a Centre: Making Literary History in Contemporary American Poetry. L. Diepeveen
ENGL 5840.06: Literary Talk: How Modernism was invented. L. Diepeveen
ENGL 5906.03: Problems in Literary History. T. Ross
ENGL 5918.03: The Politics of Representation. V. Li
ENGL 5922.03: Neo-Primitivism in Contemporary Discourses. V. Li
ENGL 5928.06: Literary Couples. J. Thompson, M. Stone
ENGL 5930.03: The New Historicism. R. Huebert
ENGL 5935.03: Canonicity. T. Ross
ENGL 5940.06: Queer Theory. S. Bruhm

ENGL 5945.03: Representations of Slavery: Race, Writing and

Gender. M. Stone

ENGL 9000.00: MA Thesis

ENGL 9530.00: PhD Thesis

Environmental Studies

Location: 1312 Robie Street
Halifax, NS B3H 3E2
Telephone: (902) 494-3632
Fax: (902) 494-3728

Resource and Environmental Studies

Director of School

Côté, R.P., BSc (Concordia), MSc (Mem)

Academic Programme Co-ordinator

Dwire, A., DipOT Liverpool, BA, MA (Dal)

Professors

Apostle, R., BA (SFU), MA, PhD (Calif, Berkeley), major appointment in Sociology and Social Anthropology
Binkley, M.E., BA, MA, PhD (UofT) major appointment in Sociology and Social Anthropology
Boardman, R., BSc, PhD (Lond), major appointment in Political Science
Cohen, F., BA, MBd (Harvard), PhD (Minn)
Freedman, B., BSc, MSc, PhD (UofT), major appointment in Biology
Lane, P.A., MSc (SUNY Binghamton), PhD (SUNY Albany) major appointment in Biology
McAllister, I., MA (Oxon), MA (Cantab), major appointment in Economics
Renton, K.W., BSc (Sir Geo. Wms.), PhD (McG), major appointment in Pharmacology
Ricketts, P.J., BA (Nottingham), PhD (Southampton), Dean of Graduate Studies
Wildsmith, B.H., BSc (Guelph), LLB (Dal), LLM (Harvard), major appointment in Law
Willison, J.H.M., PhD (Nottingham), joint appointment with Biology
Wood, K.S., BA, MA (Oregon)

Associate Professors

Bearlanda, G.E.E., BSc, MSc (UNB), PhD (Dal)
Brown, M.P., BA (MtA), MA (Dal), PhD (UofT) major appointment in Public Administration
Côté, R.P., BSc (Loyola), MSc (Memorial)
Cross, M.L., AA (Dawson College), BA (Montana), MA (SFU), PhD (Texas A&M), major appointment in Economics
Mazany, L., BSFS (Georgetown), PhD (UBC), major appointment in Economics
McCurdy, R.F., MPH, MSc (Minn), PhD (TUNS), major appointment in Pathology
Muecke, G.K., BSc, MSc (Alta), DPhil (Oxon), major appointment in Earth Sciences
Newkirk, G.E., PhD (Duke), major appointment in Biology
Petton, D.J., BA (UNB), MA (UofT), DBA (Indiana), major appointment in Business Administration
VanderZwaag, D., BA (Calvin), MDiv (Princeton), JD (Arkansas), LLM (Dal), joint appointment with Law

Assistant Professors

Dwire, A., BA, MA (Dal)
Guernsey, J.R., BSc (Carleton), MSc, PhD (Iowa), cross appointment in Community Health and Epidemiology
Saunders, P., BA, MA, LLB (Dal), major appointment in Law

Research Associates

Reade, J., BA (SMU), MLS (Dal)

Honorary Research Associates

Barchard, W., BSc, MSc (Guelph), Environment Canada
Buckley, D.E., BSc (Acadia), MSc (Western), PhD (Alaska), BIO
Campbell, J.M., BA (Dal), MA, PhD (UC Irvine)
Chute, J., BA (Dal), MA (MUN), MA (UofT), PhD (McM)
Crawford, R., MSc, PhD (UofT), NS Dept. of Fisheries
Gardner, M., BA, MA, PhD (Dal), Gardner, Pinfold & Assoc.
Howell, G., BSc, MSc (Dal), Environment Canada
Leith, J., BPhysEd (McM), MA (Guelph)
Monk, K.A., BSc (Durham), PhD (Lond)
Tomascik, T., BSc (UofT), PhD (McG)

Honorary Adjunct Professors

Babcock, T.G., BA (McG), MA, PhD (Cornell)
Beesley, K.B., BBS, PhD (Waterloo), Nova Scotia Agricultural College
Bondrup-Nielsen, S., BSc (Guelph), MSc (UofT), PhD (Alta), Acadia University
Charles, A.T., BSc (Carleton), PhD (UBC), Saint Mary's University
Cossey, K., MES (York), Heritage Canada
Daborn, G., BA (Keele), MSc, PhD (Alta), Acadia University
Gold, E., BA, LLB (Dal), PhD (Wales)
Grant, J., MA, PhD (Waterloo), Nova Scotia College of Art & Design
Guppy, S., BSc (Nottingham), MSc, PhD (Wales), MArch (Columbia), Technical University of Nova Scotia
Herman, I., MSc, PhD (Alta), Acadia University
Hood, R., BPE (Calgary), MS, PhD (Ill), Heart Health of Nova Scotia
Kasdan, L., MA, PhD (Chicago), Dalhousie
Lamson, C., BA (Skidmore), MSc (Simmons), MA (Memorial), MES (Dal), Department of Fisheries
Manuel, P., BA (Carleton), MSc (McG), PhD (Dal)
Martin, R., BA (Carleton), MSc (Carleton), PhD (McG)
Munro, N., BSc (UNB), MA (Carleton), Heritage Canada
Pinter, J., MSc (Botvos), PhD (Moscow State)
Rifal, N., MSc, PhD (Nitra), Nova Scotia Agricultural College
Scarratt, D.J., BSc, PhD (Wales), Bedford Institute of Oceanography
Shaw, R.W., DEng (RMC), BSc (Queen's), MA (UofT), PhD (McG)
Vandermeulen, J.H., BSc, MSc (Alta), PhD (UCLA), Department of Fisheries and Oceans
Vigerstad, T., MSc, PhD (Rhode Island), Bio-Response Systems Limited
Waller, D.H., PhD (Dal), DIC (Public Health) (Lond), BEng (TUNS), Technical University of Nova Scotia
Wells, P.G., BSc (McG), MSc (UofT), PhD (Guelph), Environment Canada

Honorary Research Associate

Beach, H., BA (Hons) (Simon Fraser), MSc (McG), Department of Canadian Heritage

International Programme Staff

Babcock, T.G., BA (McG), MA, PhD (Cornell)
Campbell, J., BA (Dal), MA, PhD (UC Irvine)

The School (formerly the Institute) offers a graduate programme leading to the Master of Environmental Studies (MES) degree.

The core faculty of the School is complemented by cross-appointed faculty whose major appointments are in other units within Dalhousie, at other universities, or in government agencies.

Classes in Environmental Studies are offered through the school. In addition, a wide selection of classes relevant to the programme are given by other units within Dalhousie, and by Saint Mary's University, the Technical University of Nova Scotia and the Nova Scotia College of Art and Design. Students take core classes from which they will acquire a broad, interdisciplinary background in environmental studies. Each student will also take classes and write a thesis in a particular field of interest. An important element in the MES programme is group research projects which give the students experience in multidisciplinary team work. There are opportunities for study and research from the points of view of policy, technique and science. More than 25 faculty members from various academic units in the university contribute in class work and as thesis supervisors.

I. Admission Requirements

In order to be enrolled in an MBS programme students must have achieved sufficient depth of knowledge in an appropriate branch of an approved academic discipline.

The minimum entry requirement is

- (i) An Honours bachelor degree in a life science, an earth science, chemistry, physics, mathematics, economics, political science or sociology, or
- (ii) A professional degree in law, architecture, medicine or engineering, or
- (iii) Equivalent academic qualification

Deadline for applications is 15 February.

II. Programme Duration and Minimum Requirements

For most students the minimum programme requirements will occupy two years. Students are required to complete, not later than the end of their first year, three half-credit classes selected from the disciplines of life sciences, earth sciences, chemical and physical sciences, engineering (group A), and social sciences, law, architecture (group B). An approved class in statistics as related to the environment may be accepted in either group A or B.

Students whose undergraduate specialization was in group A should take at least two subjects in group B, and vice versa. Each credit must be in a different discipline and must be in subjects other than the major subject of the student's first degree. In total, 11 half-credit courses and a thesis are required. During the first year, students will generally complete the following requirements:

1. Three half-classes specified above
2. ENVI 5000.06 and 5001.03
3. An approved graduate half-class in an area designed to relate the undergraduate major to an environmental theme
4. ENVI 5110.03 (or appropriate alternative)
5. ENVI 5200.03 (or appropriate alternative)
6. A class with an international perspective

The requirements for the second year are:

1. ENVI 5002.03
2. An approved graduate level half-class
3. ENVI 9000.00 (Thesis)

In exceptional cases, a student may be admitted to a one-year programme. The requirements for a one-year programme are:

1. ENVI 5000.06 and 5001.03
2. One graduate level class related to an environmental theme in the student's area of specialization.
3. ENVI 9000.00 (Thesis)

III. Classes Offered

All classes except ENVI 5002.03 and ENVI 9000.00 are open to students in other programmes by permission of the instructor. Please note that not all classes are offered each year, class content may also vary from year to year.

- ENVI 5000.06: Introduction to Environmental Studies. A. Dwire
ENVI 5001.03: Environmental Assessment. G. Beanlands
ENVI 5002.03: Environmental Studies Joint Project. Staff
ENVI 5004.03: Management of Chemicals and Waste. R.P. Côté
ENVI 5006.03: Environmental Toxicology. P. Wells and B. Freedman
ENVI 5008.03: Nature Conservation. M. Willison
ENVI 5020.03: Resource Systems and Economic Development. S. Wood
ENVI 5021.03: Fisheries Management and Development. T. Charles
ENVI 5030.03: Seminar on Management of Sustainable Development. Staff. Cross-listing: PUAD 6775.03
ENVI 5031.03: Environmental/Ecological Economics. S. Wood
ENVI 5032.03: Aquatic Toxicology and Water Quality Assessment. P. Wells
ENVI 5035.03: Research Methods. A. Dwire
ENVI 5036.03: Rural Environments. K. Beesley
ENVI 5038.03: Public Involvement in Resource Management. G. Beanlands

ENVI 5039.03: Indigenous People and Natural Resources Issues. F. Cohen

ENVI 5041.03: Environmental Education. F. Cohen

ENVI 5044.03: Industrial Ecology Seminar. R.P. Côté

ENVI 5047.03: Protected areas Management. M. Willison

ENVI 5048/49.03: Independent Reading. Faculty

ENVI 5110.03: Resource Economics. P. Burton - Cross-listing: ECON 5516.03

ENVI 5120.03: Environmental Ecology. B. Freedman - Cross-listing: BIOL 5060.03

ENVI 5180.03: Coastal Communities in the North Atlantic. A. Dwire - Cross-listing: SOSA 3220.03/5220.03

ENVI 5200.03: Environmental Law. A: P. Saunders, B: D. Vander Zwagg - Cross-listing: LAWS 2104.03

ENVI 5204.03: Coastal Zone Management. P. Ricketts, A. Chircop, L. Hildebrand - Cross-listing LAWS 2041.02

ENVI 5601.03: Management of the Marine Environment. A. Dwire

ENVI 5818.03: Management and the Natural Environment. R.P. Côté and D. Patton

ENVI 9000.00: Master's Thesis

French

Location: 1315 LeMarchant Street
Halifax, NS B3H 3J5
Telephone: (902) 494-2430
Fax: (902) 494-1626
e-mail: ylandry@is.dal.ca

Chairperson of Department
De Méo, P.

Professors Emeriti

Chavy, P.
Kocourek, R., State Examination, PhD, CSc (Charles, Prague),
McCulloch Professor, Chevalier dans l'ordre des Palmes
Académiques

Professors

Bednarski, H.E., BA (Lond), MA (Dal), PhD (Laval)
Bishop, M., BA, BEd (Manchester), MA (Man), PhD (Kent,
Canterbury), Graduate Co-ordinator, McCulloch Professor
Brown, J.W., AB (Miami), MA (Middlebury), PhD (Penn)
De Méo, P., BA, MA, PhD (UCLA)
Gesner, B.E., BA, BEd, MA (Dal), Dr. de 3e cycle (Toulouse II)
Gordon, W.T., BA, MA, PhD (UofT)
Oore, I.Z., BA (Tel-Aviv), MA (Waterloo), PhD (Western)
Runte, H.R., MA, MPh, PhD (Kansas)
Sandhu, M., Licence ès Lettres (Montpellier), PhD (Yale)
Waterson, K., BA (Long Island), MA (NYU), PhD (CUNY)

Associate Professors

Bonnel, R., Licence (Paris), MA (Essex), Dr. de 3e cycle (Paris)
Carter, T.P., BA (Princeton), MA, PhD (Brown)
Trèves, N., BSc (American U, Cairo), PhD (Rice)
Mopoho, R., BA (Yaounde, Cameroon), MA, PhD (Montreal)

Honorary Adjunct Professors

Best, J., BA (UWO), MA, PhD (Strasbourg), Acadia University
Bishop, N., BA, BEd, MA (Sask), Dr. de 3e cycle (d'Aix-Marseille),
Memorial University of Newfoundland
Cauville, J., BA (Sorbonne), MA, PhD (UBC), Saint Mary's University
Eygun, F.X., BA (St. Boniface), MA (Calgary), PhD (Manitoba),
Mount Saint Vincent University
Filkeld, K., MA (France), PhD (Sherbrooke), Saint Mary's University
Gamble, D.R., BA, MA (UofT), PhD (St. John's, Oxford), Memorial
University of Newfoundland
Gann, A.G., PhD (UofT), Mount Allison University
Graham, D., BA (Hons) (Sask), MA, PhD (Western), Memorial
University of Newfoundland
Lavoie, L., BA (Laurentian), MA (Laval), PhD (d'Aix-Marseille),
University College of Cape Breton
Lemelin, J.-M., BA, MA, PhD (Sherbrooke), Memorial University of
Newfoundland
Macdonald, A., MA, MLitt (Aberdeen), PhD (Harvard), Memorial
University of Newfoundland
Pugh, A.R., BA, MA, PhD (Cambridge), University of New
Brunswick
Rubinger, C., BA (Sorbonne), MA (McG), Mount Saint Vincent
University
Thomas, G., BA (Wales), MA, PhD (MUN), Memorial University of
Newfoundland

Honorary Research Associates

Cormier, Y., BEd (Moncton), MA (Laval), PhD (Sherbrooke),
Université Sainte-Anne
Demers, P.J., BA, BPed, MEd, PhD (Montreal), University of New
Brunswick

Jacquot, M., Licence d'anglais (Paris-Sorbonne), MA (Acadia), PhD
(Dal)
Kocay, V., BA, MA (Man), PhD (UofT), Saint Francis-Xavier
University
O'Reilly, M., BA (Carleton), MA, PhD (Ott), Memorial University of
Newfoundland

I. Degree Programmes

A. Master of Arts (MA)

For general rules see the Faculty Regulations section 2.2 of this calendar.

1. Classes and research leading to the MA degree in French are offered in the areas of French literature, linguistics, second language studies and culture. Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies and must show evidence of proficiency in spoken and written French.
2. Students may be accepted on a full-time or a part-time basis. A full-time student must spend a minimum of one year in full-time graduate study. The time normally required to complete the full-time programme is one year for holders of a French Honours degree or equivalent, and two years for holders of a general degree.
3. In a one-year full-time programme, the equivalent of at least five university credits is required. This will consist of thesis (usually equivalent to two credits) plus three 5000-level credits. In a two-year full-time programme, students have to attain the equivalent of Honours status (see Undergraduate Calendar) and to obtain the additional five credits as required in a one-year full-time programme.
4. In addition to the five credits, all MA students are normally expected to take a half-year class in Research Methods. When appropriate, up to one additional undergraduate or graduate credit may be required in order to improve the student's proficiency in French. Part-time students carry no more than two and one-half full-credit classes during one year. A one-year full-time programme corresponds to three years part-time. A two-year full-time programme corresponds to six years part-time.
5. The thesis, written in French, is to be submitted and approved within the time limits set out in Section 5 of this calendar.

B. PhD Programme

For general rules see the Faculty Regulations Section 5.3 of this calendar.

The admission requirements are as follows: An MA thesis degree in French, an excellent French oral and written proficiency, a scholarly interest in one of the PhD thesis areas: All periods of French, Québec and Acadian Literature, with certain emphases, and the field of Linguistics, equally with particular emphases. Please consult the Department's PhD document for full details.

The requirements after admission are the following: Two years of Dalhousie residency, four full graduate credits (from the departmental offerings in the years of residency), a second language examination (within two years after admission), preliminary and comprehensive written and oral examinations (not less than one year prior to submission of thesis), and the PhD thesis (normally written in French) and its oral defence.

II. Selection of Classes and Registration

It is the responsibility of students admitted to one of the graduate programmes to report to the graduate coordinator in the week preceding the beginning of classes, or earlier. The purpose is a briefing interview, the final selection of classes, completion of class selection forms and the drawing up of the programme of graduate studies. All graduate students must be registered before classes begin.

III. Classes Offered

What follows is a list of PhD and MA classes. Classes required in particular cases will be specified in each student's Programme of Graduate Studies. Only a limited number of classes is offered in any given year. Descriptions of the graduate classes offered in a particular year will be made available to students.

- FREN 5002.03: Méthodes de recherche/ Research Methods: H. Runte and staff
- FREN 5005.03: Philologie française: Séminaire d'ancien français/French Philology: Old French Seminar. H. Runte
- FREN 5006.03: Philologie française: Séminaire de l'histoire du français moderne/French Philology: Seminar on the History of Modern French. H. Runte
- FREN 5016.03: Aspects de la traduction/Topics in the Science of Translating. W.T. Gordon
- FREN 5120.06: Linguistique/Linguistics. Staff
- FREN 5121.03: Fonctionnalisme et structuralisme en linguistique/ Functionalism and Structuralism in Linguistics. Staff
- FREN 5122.03: Créativité Lexicale/Lexical Creativity. R. Mopoho
- FREN 5123.03: Langue et terminologie savantes/Learned Language and Terminology. R. Mopoho
- FREN 5124.03: Vocabulaire et Culture/Vocabulary and Culture. R. Mopoho
- FREN 5125.03: Sémantique/Semantics. W.T. Gordon
- FREN 5130.03: Linguistique saussurienne/Saussurean Linguistics. W.T. Gordon
- FREN 5140.03 B: Dialectologie acadienne et sociolinguistique/Acadian Dialectology and Sociolinguistics. B.E. Gesner
- FREN 5180.03: Linguistique de texte/Linguistics of Texts. Staff
- FREN 5185.03: Les Métaphores dans les textes/Metaphors in Texts. Staff
- FREN 5295.03/5296.03: Séminaire: Didactique des langues secondes/Seminar: Second-Language Teaching. Staff, Topic varies, Consult Department for current year's topic.
- FREN 5300.03: Séminaire: littérature médiévale/Seminar in Mediaeval French Literature. H. Runte
- FREN 5301.03: Lectures: littérature médiévale/Supervised Readings in Mediaeval French Literature. H. Runte
- FREN 5400.03: Rabelais et son temps/Rabelais and his Time. N. Trèves
- FREN 5401.03: Montaigne et son temps/Montaigne and his Time. N. Trèves
- FREN 5402.03: La Poésie de la Renaissance/ Renaissance Poetry. N. Trèves
- FREN 5500.03: L'Aventure Intellectuelle du Grand Siècle/The Intellectual Adventure of French Classicism. K. Waterson
- FREN 5600.03: Le roman épistolaire du 18e siècle/18th Century Epistolary Novel. R. Bonnel
- FREN 5610.03: Ethique et esthétique de la nature dans l'art et la littérature du 18e siècle/Ethics and Aesthetics of Nature in 18th Century Art and Literature. R. Bonnel
- FREN 5700.03: La Révolution romantique/The Romantic Revolution. M. Sandhu
- FREN 5701.03: Le Roman du dix-neuvième siècle/ Nineteenth-Century Novel. M. Sandhu
- FREN 5705.03: Le Poème en prose au 19e siècle/ The Prose Poem in the 19th Century. J. Brown
- FREN 5706.03: Impressionnisme et symbolisme/ Impressionism and Symbolism. M. Bishop
- FREN 5801.03: Anti-romans du vingtième siècle/ Anti-Novels of the 20th Century. Staff
- FREN 5802.03: La Poésie moderne de Char à Bonnefoy/Modern Poetry from Char to Bonnefoy. M. Bishop
- FREN 5803.03: La Littérature Contemporaine I/ Contemporary Literature I. M. Bishop
- FREN 5804.03: Art et Littérature/Art and Literature. M. Bishop
- FREN 5805.03: La Stylistique structurale/Structural Stylistics. J. Brown
- FREN 5806.03: Poétique et théorie de la littérature/ Poetics and Theory of Literature. J. Brown
- FREN 5807.03: Culture contemporaine/ Contemporary Culture. M. Bishop
- FREN 5808.03: La Littérature Contemporaine II/ Contemporary Literature II. M. Bishop

- FREN 5876.03: Aspects de la littérature du Canada français/Studies in French Canadian Literature. B. Bednarski
- FREN 5877.03: Analyse de textes littéraires québécois/ Analysis of Quebec Literary Texts. I. Oore
- FREN 5910.03: Lecture de textes acadiens contemporains/Supervised Readings in Acadian Literature since 1968. H. Runte
- FREN 5920.03: Femmes écrivains et images de femmes dans la littérature française à travers les siècles/French Women Writers and Images of Women through the Centuries. N. Trèves
- FREN 5990.06: Projet indépendant/ Independent Project (MAT). Subject to independent completion of study.
- FREN 5998.03A/5999.03: Recherches indépendantes/ Independent Research. Subject to approval by graduate coordinator and department chairperson.
- FREN 9000.00 MA Thèse/Thesis
- FREN 9530.00 PhD Thèse/Thesis

German

Location: 1355 LeMarchant Street
Halifax, NS B3H 3J5
Telephone: (902) 494-2161
Fax: (902) 494-2719
WWW: <http://www.dalgrad.ca/homepage.htm>

Chairperson of Department
Curran, J.V.

Graduate Studies Coordinator
Gaede, F.W.

Professors
Gaede, F.W., PhD (Freib), FRSC, McCulloch Professor
Schwarz, H.-G., MA (Munich), PhD (McG)

Associate Professor
Steffen, D.H., PhD (Göttingen)

Assistant Professor
Curran, J.V., MA, MA (Dal), PhD (Newcastle-upon-Tyne)

Graduate classes leading to the degree of MA are offered in the history of German literature and thought. Research in the Department is concerned principally with the Baroque Age, the literary and philosophical tradition of German Idealism, and the culture of the twentieth century.

Graduate students may concentrate on any of the periods or any particular aspect of the history of German literature and thought.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

II. MA Degree Programme

Depending on their level of preparation, students spend either one or two years towards completion of their classes and thesis. Candidates are expected to have a reading knowledge of a third modern or ancient language. A thesis is required.

III. Classes Offered

GERM 5500.06: Literature and Thought from Reformation to Enlightenment
GERM 5520.06: Goethe and the Enlightenment
GERM 5530.06: Hegel's Aesthetics and the Ancients
GERM 5540.06: Kant and the History of German Idealism
GERM 5550.06: Hegel: Phenomenology of Spirit
GERM 5570.06: Goethe and Romanticism
GERM 5580.06: Goethe's Faust
GERM 5590.06: Studies in German Idealism
GERM 5600.06: Heidegger and German Idealism
GERM 5610.06: Literature of the 19th Century
GERM 5620.06: Modern German Literature
GERM 5630.06: Aesthetic Theory
GERM 5640.06: Ancient and Modern Dialectics
GERM 5660.06: History and Theory of the German Novel
GERM 5670.06: Hegel's Philosophy of Nature
GERM 5700.03: Special Topics I
GERM 5701.03: Special Topics II
GERM 5800.06: Research Seminar
GERM 9000.00: Thesis

Health Services Administration

Location: 5599 Fenwick Street
Halifax, NS B3H 1R2
Telephone: (902) 494-7097
Fax: (902) 494-6849

Director of School
Rathwell, T., BA (York), MA, PhD (Durham)

Professor Emeritus
Rudeman, A.P., BS, MA, PhD (Harvard), MBA (Chicago)

Professors
Cohen Jr., M.M., BA (Mich), DMD (Tufts), MSD, PhD (Minn), MPH (Boston) FCCMG Professor of Oral and Maxillofacial Pathology & Epidemiology, Health Services Administration Anthropology
Nestman, L., BCom (Sask), CA, MHSA (Alta)

Associate Professor
Curry, L., PhD (Stanford) (Honorary)
McIntyre, L.L., MD, MHSc (UofT), FRCPC, joint-appointment in Recreation, Physical and Health Education
Rathwell, T., BA (York), MA, PhD (Durham)
Tamlyn, D., BN (McG), MEd (Ottawa), PhD (Dal), major appointment in School of Nursing

Assistant Professors
Hayden, V., BSc (Hons) (LMU), MA, PhD (Bradford)
Johnston, G., BSc(Hons) (McG), MHSA (Alta), PhD (Western)
Rondeau, K., BSc Hons, BLT (Regina), DIA, MA, MBA (Concordia), PhD (UofT)

Lecturers
Cochrane, W.D., BA(Hons), LLB (Dal)
Ferguson, D., BEd, BSc (Buffalo), Honorary
Hampton, M.J., BA, MHS (pending) (UofT), Honorary
Langille, E., BA, MA (Dal)
MacIntyre, K., RN, BBA (MSVU), MHSA (Dal)
Marsh, W., BCom (Dal), MBA (SMU)
McKeough, M., BSc (Hons) (UofT), MEd (Dal)
McKillop, D., BA (York), MEd (UofT)
Maxwell, M., BA (Acadia), BD (Planning) (NSCAD), MES, MHSA (Dal), Honorary
Montgomery, B., BScN (MSVU), MHSA (Dal), Honorary
Moore, C., BScN (MSVU), MScN (UofT), Honorary
Nurse, R., BA (MUN), MHSc (UofT), Honorary
Rice, D.W., BEng, MEng, PEng (TUNS)

Students seeking further information or help in planning courses of study in the School of Health Services Administration should contact the:

Graduate Co-ordinator
School of Health Services Administration
5599 Fenwick Street
Halifax, NS B3H 1R2
(902) 494-7097

The MHSA programme is accredited by the Accrediting Commission on Education for Health Administration, and the School is a full member of the Association of University Programmes in Health Administration. The school is also a member of the European HealthCare Management Association.

I. Objectives

The School of Health Services Administration offers a Masters degree which meets the needs of those pursuing administrative careers in the Canadian health care delivery system. The programme is designed to prepare individuals for careers in hospital administration, nursing administration, long term care administration, public and community health administration and administration in municipal, provincial and federal governments in health and health-related areas. There are employment opportunities for individuals with an MHSA in policy, planning, evaluation, administration and research.

The programme seeks to provide a conceptual background for the increasingly complex managerial tasks that need to be performed in health institutions and health related governmental departments. Every effort is made to balance political, social, economic, cultural, medical and ethical approaches to understanding the health care delivery system with those of the management sciences.

The emphasis in the programme is on an academic, multidisciplinary and professional education. It is academic in that it emphasizes knowledge of current research findings and treats the practice of health services administration as phenomena subject to social scientific analysis. It is multidisciplinary in that faculty are drawn from traditional social and administrative sciences. It is a professional programme in the sense that it will attempt to broaden the social perspectives of the student emphasizing the feature that a professional has a social responsibility to society and must have an appreciation of the ethical standards appropriate to a career in health services administration.

II. Application Procedure

Application forms are available from the Registrar's Office of Dalhousie University. Application should be submitted as early as possible to the Registrar's Office.

The following supporting documents are to be sent directly to the School:

- (a) Transcripts of all previous work
- (b) At least two academic letters of reference
- (c) Résumé/Curriculum Vitae
- (d) A statement of career interests and reasons for seeking admission to the School
- (e) GMAT (see below)
- (f) TOEFL for Foreign Students (see below)

The application (including all supporting documentation) must be received by May 1.

Candidates are required to sit for the Graduate Management Admission Test (GMAT). This requirement may not be waived without explicit permission of the school of MSA Admissions Committee. GMAT results will be considered with other information submitted by applicants, in deciding on eligibility for admission.

The Test may be taken at conveniently-located centres throughout North America and in many other parts of the world. In the case of North American candidates, applications for the test are accepted by the ETS in Princeton until approximately six weeks before test dates. For candidates in other countries, closing dates are eight weeks before test dates.

School of Health Services Administration GMAT Number is 0690.

Applicants for the test should use an order form obtainable from the Registrar's Office of the nearest University, Dalhousie University, or may write to the address below to obtain an information bulletin and registration form for the GMAT. If the order form is lost or omitted from the materials received write directly to:

Graduate Management Admission Test
Educational Testing Service
Box 966
Princeton, N.J., 08540, U.S.A.

All students are required to demonstrate at an early stage in their studies that they are proficient in writing reports and essays in English. Candidates from countries outside Canada whose mother

tongue is not English will be required to take the Test of English as a Foreign Language (TOEFL) as a requirement for admission and a minimum score of 580 must be achieved. Further information may be obtained by writing:

Test of English as a Foreign Language
Box 899
Princeton, N.J., 08540, U.S.A.

CANDIDATES ARE ADVISED TO TAKE THE TEST(S) AT THE EARLIEST POSSIBLE DATE.

The deadline for applying to the School is May 1. For foreign students, it is strongly recommended that all documents (transcripts and references) be submitted prior to January 31 for students who wish to be considered for financial support.

III. Degree Programmes

A. Part time Study

The Programme offered through the School is available to students on a part time basis. A part-time student may enrol in up to two and one-half credits in any one academic year. In order to ensure that graduate students benefit from a reasonable concentration of their studies, part-time studies must normally be completed within six years.

B. LLB/MHSA

The four year LLB/MHSA programme is a collaborative effort between the Dalhousie Law School and the School of Health Services Administration. The combined LLB/MHSA enables students to select classes leading to degrees of Master of Health Services Administration and Bachelor of Law.

Candidates for the LLB/MHSA programme must satisfy the entrance requirements of both programmes, and may obtain further information about the combined programme by contacting either the School of Health Services Administration or the Faculty of Law. For admission, students must apply to both the School of Health Services Administration and the Law School individually. Students applying for the MHSA programme may submit LSAT results in lieu of GMAT results.

C. MN/MHSA

The combined MN/MHSA programme, a collaborative undertaking between the School of Nursing and the School of Health Services Administration, is a three-year programme which enables students to select classes leading to degrees of Master of Nursing and Master of Health Services Administration.

Candidates for the MN/MHSA programme must satisfy the entrance requirements of both programmes, and may obtain further information about the combined programme by contacting either the School of Health Services Administration or the School of Nursing. For admission, students must apply to both the School of Health Services Administration and the School of Nursing individually. Students applying for the MHSA programme may submit GRE results in lieu of the GMAT results.

IV. General Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. Enrolment in the School is limited. In general successful applicants should have attained at least a "B+" standing in their previous university work.

Admission is based on an assessment of:

- All previous academic work;
- Original, complete transcripts;
- Letters of reference;
- GMAT;
- TOEFL (when required)
- Professional experience and/or promise;

A. Exemption

Applicants wishing to receive exemption from a required class should include class outlines for those classes previously taken which they consider to be equivalent to Dalhousie HEAS classes.

Where it is determined at time of admission that a student has the equivalent of a required class but is not granted advanced standing, an exemption may be permitted, so that another class is substituted for the required class.

V. Classes Offered

The two-year programme leading to a Master of Health Service Administration degree features both an academic and results-oriented curriculum. It requires the successful completion of 9-11 credits which must include:

Required Classes

- HEAS 5300.03: Introduction to the Canadian Health System
- HEAS 5315.03: Management and Design of Health Care Organizations II
- HEAS 5320.03: Managerial Epidemiology
- HEAS 5330.03: Management and Design of Health Care Organizations I
- HEAS 5335.03: Information Systems in Health Administration
- HEAS 5339.03: Health Care Economics I
- HEAS 5340.03: Health Care Economics II
- HEAS 5345.03: Health Services Accounting and Management Control
- HEAS 5350.03: Health Services Management Accounting and Control
- HEAS 6330.03: Health Services Planning and Evaluation
- HEAS 6365.03: Quality Management
- HEAS 6380.03: Senior Seminar in Health Services
- HEAS 6390.06: Health Services Residency
- HEAS 6500.03: Intermediate Statistics for Health Services

Five half-credit classes must be chosen from the following

- HEAS 5200.03: Principles of International Health
- HEAS 6000.03: Nursing Administration and Leadership
- HEAS 6310.03: Health Care Policy
- HEAS 6320.03: Managed Care
- HEAS 6325.03: Long Term Care Administration
- HEAS 6340.03: Human Resources in the Health Care Setting
- HEAS 6341.03: Management Union Relations
- HEAS 6364.03: Risk Management
- HEAS 6360.03: Health Care Law
- HEAS 6370.03: International Comparative Health Care Systems
- HEAS 6375.03: Health Care Marketing
- HEAS 6394.03: Directed Project (full or half credit)
- HEAS 6395.03: Directed Reading (full or half credit)

Graduate Electives: One full credit

The remaining one-credit requirement may be made up from any of the elective classes offered by the School of Health Services Administration or any other graduate studies programme, subject to approval of a faculty advisor.

NOTE: Not all classes are offered each year; consult the school for current year offerings.

History

Location: 1411 Seymour Street
Halifax, NS B3H 3M6
Telephone: (902) 494-2011
Fax: (902) 494-3349
e-mail: history@ls.dal.ca

Chair of Department
O'Brien, J.T.

Graduate Co-ordinator
Brooke, S.J.

Professor Emeritus
Waite, P.

Professors

Cross, M.S., BA, MA, PhD (UofT)
Crowley, J.E., AB (Princeton), MA (Mich), PhD (Johns Hopkins)
Parpart, J.L., BA (Brown), MA, PhD (Boston)
Pereira, N.G.O., BA (Williams), MA, PhD (Calif, Berkeley)
Stokes, L.D., BA (UofT), MA, PhD (Johns Hopkins)
Taylor, G.D., BA, PhD (Penn), Dean of Faculty of Arts and Social Sciences
Traves, T., BA (Man), MA, PhD (York), President and Vice-Chancellor, Dalhousie University
Woolf, D.R., BA (Queen's), DPhil (Oxford), FR Hist S

Associate Professors

Brooke, S.J., BA (Dal), MA (McG), DPhil (Oxford)
Hanson, G., BA, MA (UofT), PhD (Bordeaux)
Neville, C.J., BA, MA (Carleton), PhD (Aberdeen)
O'Brien, J.T., BA (Wisconsin), MA, PhD (Rochester)
Sutherland, D.A., BA (MtA), MA (Dal), PhD (UofT)

Assistant Professors

Cadigan, S., BA (Mem), MA (Queen's), PhD (Mem)
Tillotson, S., BIS (Waterloo), MA, PhD (Queen's)
Vander Meulen, J., BA (UBC), MA, PhD (UofT)
Zachernuk, P., BA, MA (Dal), PhD (UofT)

Honorary Adjunct Professors

Conrad, M., BA (Acadia), MA, PhD (UofT), Acadia University
Early, F.H., BA (Florida State), MA, PhD (Concordia), Mount Saint Vincent University
Fingard, J., BA (Dal), MPhil, PhD (Lond), FRSC
Haigh, E., BSc, MSc (Alta), PhD (Wisconsin), Saint Mary's University
Howell, C., BA, MA (Dal), PhD (Cincinnati), Saint Mary's University
Lee, J.E., BA, MA, PhD (UofT)
Moody, B.M., BA (Acadia), MA, PhD (Queen's), Acadia University
Morrison, J.H., BA, BEd (Acadia), PhD (Ibadan, Nigeria), Saint Mary's University
Reid, J.G., BA (Oxon), MA (Memorial), PhD (UNB), Saint Mary's University
Stuart, R.C., BA, MA (UBC), PhD (Florida, Gainesville), Saint Mary's University
Twomey, R.J., BA (Connecticut St), MA, PhD (N. Ill)

I. Admission Requirements

Candidates for the one year MA degree must hold a BA Honours degree in history. Those with general history BA degrees or degrees in fields other than history may be placed in a two year MA

programme or in a qualifying year programme. Candidates for doctoral study must hold an MA degree in history or in a cognate field.

II. Degree Programmes

A. Master of Arts (MA)

Students admitted into either a qualifying year or a two year MA programme must in the first year take five upper level undergraduate history classes and secure at least a B+ grade in each. Students in the one year MA programme are required to attend the Graduate Seminar which meets weekly during the academic year.

The MA is a research degree and can be done full-time or part-time. Applicants for the one-year MA will normally have an honours (four-year) BA or equivalent. Students in the programme spend the first term satisfying course requirements and begin their thesis research early in the winter term, under the supervision of a faculty member, or members, in the student's area of interest. The course requirement is normally satisfied by taking two designated advanced classes, or one advanced class and a Directed Reading field with a faculty member. In cases where suitable advanced classes are not offered, a student may, at the discretion of the Graduate committee and on the recommendation of the student's principal supervisor, elect to fulfill his or her course requirements through two Directed Reading fields. Classes and fields may be selected from both departmental and extra-departmental offerings, subject to approval of the Graduate committee (at least one class or field must be taught by a member of the History Department). Directed Reading fields are generally examined in early January following the Christmas vacation. Theses may be orally examined at any time, and topics should be chosen with a view to completion twelve months after commencement of the programme. To complete their degree students must submit and orally defend a thesis of not more than 50,000 words.

Candidates writing theses in Canadian history must demonstrate a competent reading knowledge of French: those writing theses in other fields must demonstrate an adequate reading knowledge of the language required for the successful completion of their research.

B. Doctor of Philosophy (PhD)

For minimum time required to complete the programme, see Section 4 of the Faculty of Graduate Studies Regulations in this calendar.

In order to be considered a candidate for the PhD degree, students must prepare three fields, at least one of which must be outside the student's primary research area, and pass written and oral examinations in all three fields. Students must demonstrate an adequate reading knowledge of the language required for the successful completion of their research. All students engaged in Canadian history research must demonstrate a reading competence in French. A "pass" of the PhD field exams is deemed to be a mark of A- or better in each exam. Passes are recorded only as "P" on transcripts. Students who fail to attain the pass standard in one of three exams will be permitted to rewrite within three (3) months of the exam. Students who fail to attain the pass standard on two or three of the fields (or who fail in a rewrite attempt) will be required to withdraw from the PhD programme.

A thesis is required which shall not exceed 100,000 words in length, excluding footnote references and bibliography. Doctoral theses are usually to be undertaken in the areas of Canadian, British, British Imperial, Russian (mid-19th century to mid-20th century), and African History. Students wishing to do a PhD thesis in areas other than those named above may be recommended for admission providing that resources are available.

To qualify for the award of the PhD degree, the thesis must make a significant and original contribution to historical study by the discovery of new information, or by the original interpretation of known information, or both.

III. Fields of Study by Directed Reading (MA and PhD)

A. Canadian History

The following fields are offered:

History of the Maritimes, with emphasis on the late 18th to mid-20th century; Canadian social history, in particular such areas as poverty and philanthropy, urban and rural social disorder, labour history, and the rise of the city; Canadian political history, particularly the 19th and 20th centuries; Canadian-American relations, particularly since 1867.

B. African History

This field may be studied with special attention to precolonial history during the period of oral tradition, the colonial period since 1800, processes of decolonization in Anglophone Africa, and African social history in the 19th and 20th centuries.

C. British History

The following fields are offered:

Aspects of British history 1250-1730; aspects of political, social and cultural history, 1914-1979; labour history in the 20th century.

D. United States History

Fields are offered in:

Colonial and revolutionary America, 19th century American social, labour, and ethnic history, and 20th century American political and business history.

E. European History

Students may take a field in French or Italian history (1550 to 1789) emphasizing the sources and methods used in social history, but must have a reading knowledge of either of those two languages.

F. German History

Only one field is available in German history: Germany 1870-1945. Within this, students may concentrate upon particular topics or periods especially relevant to their thesis work. A prior reading knowledge of German is required.

G. Medieval History

Fields are available in English and medieval European history.

H. Russian History

Two fields are available one in nineteenth-century Russian history and one in twentieth-century Russian and Soviet history.

I. History of Political and Social Theory

Fields may be offered in the broad history of political and social theory (including historiography) or in more specific areas: Renaissance and Reformation political theory, the Enlightenment, and Marxism (including special reference to the Third World).

J. Caribbean and Latin American History

Fields may be offered in aspects of labour (including slave labour history), the impact of imperialism in the 19th and 20th centuries, and transitions to socialism.

K. Women's History

Fields are offered, both as single units and in combination, on women in developed industrial societies (North America), in developing societies (Africa), and in socialist societies (including Cuba and China).

IV. Senior Undergraduate Classes

These classes are open to Graduate Students for which Graduate Credit is assigned.

HIST 5000.03: Directed Readings*

HIST 5001.03: Directed Readings II*

HIST 5002.06: Selected Readings in History*

HIST 5090.03: Russian Society in Historical Perspective

HIST 5105.03: The English Civil War: Society, Religion and Politics
1603-1660

- HIST 5116.03: Culture, Class and Society in Twentieth-Century Britain
 HIST 5222.03: Topics in Canadian Social History, 19th and 20th Centuries
 HIST 5223.03: The Caring Society: Welfare in Canada Since 1900
 HIST 5261.03: The Rural Experience in Canada
 HIST 5271.03: The Fisheries of Atlantic Canada - Society and Ecology in Historical Perspective
 HIST 5292.03: Wealth and Power in North America
 HIST 5320.03: Feminism, Gender and Development
 HIST 5350.03: People and Things - Material culture in History
 HIST 5368.03: The United States since 1929
 HIST 5380.06: Latin American History
 HIST 5430.03: Making of Colonial Africa (1850-1930)
 HIST 5435.03: Rise and Fall of African Slavery
 HIST 5452.03: South Africa Since the Mineral Revolution
 HIST 5461.03: Gender and Development in Africa
 HIST 5462.03: African Economic History
 HIST 5470.03: Wars and Revolutions in Nineteenth Century Africa
 HIST 5475.03: African Intellectuals and the Modern Experience
 HIST 5500.03: Topics in Modern History
 HIST 5600.03: Topics in Late 19th and Twentieth-Century American and British History
 HIST 5610.03: Women in North America
 HIST 5612.03: Women in Socialist Development
 HIST 5701.03: Medieval Civilization
 HIST 5704.03: Crime and Society in Post-Conquest England
 HIST 5705.03: The Early Modern Mind
 HIST 5985.03: Modern Historiography

*Non-History MA or PhD students only; history students must take regular classes or one of the Directed Reading fields listed above.

Candidates for the full-time MA in History must take graduate classes in the A (fall) term.

Students from other disciplines may apply for admission to such classes in either A or B term (as offered) by seeking the permission of the instructor, and obtaining the approval of their own department and the Faculty of Graduate Studies.

Graduate classes are offered on a rotating basis and students should check with the History Department as to its offerings in a given academic year.

Human Communication Disorders

Location: 5599 Fenwick Street
 Halifax, NS B3H 1R2
 Telephone: (902) 494-7052
 Fax: (902) 494-5151

Director of the School

Yang, E.

Professors

Green, W.B., BS, MA, PhD (Syracuse)
 Mencher, G.T., BA, MA, PhD (Mich), FASHA (Honorary)
 Stach, B., BA, MA, PhD (Baylor) (Honorary)
 Yang, E., MD, MCD, PhD (Texas)

Associate Professors

Armson, J., BSc, MS, PhD (Temple)
 Caisie, R., BPs, MSc, PhD (McG)
 Fee, E.J., BA, MA, PhD (UBC)
 Kay-Raining Bird, E., BA, MA, PhD (Wisc)

Assistant Professors

Belanger, S.A., BSc, MA, PhD (Conn)
 Campbell, M., BSc, MSc, MA (CUNY)
 Cleave, P., BA, MSW, MSc, PhD (Kansas)

Lecturers

Jiang, T., MSc
 Wall, M.N., MD
 Whitehead, G., MA

Clinical Coordinators

Carey, L., MA
 Comeau, M.
 Fisher, S., MSc
 Tompkins, C., MSc

Clinical Instructors

Audiology

Anvar, B.	Comeau, M.
Fortier, S.	Gulliver, M.
Jiang, T.	Maxwell, S.
Ough, D.	Santilli, C.
Studdard, S.	Tompkins, C.
Whitehead, G.	

Speech-Language Pathology

Anthony, S.	Carey, L.
Casey, M.	Delva, S.A.
Dobblesteyn, C.	Farrell-Walker, T.
Foster-MacDonald, L.	Fisher, S.
Flemming, V.	Grantmyre, A.
Jozsa, S.	Kennedy, K.
MacDonald, A.	MacFarlane-King, D.
MacLean, H.	Martin, J.
Merchant, M.	Schmidbauer, J.
Scholten, C.	Smith, C.
Smith, K.	Smith-Jamotho, J.
Stoesz, B.	Tabor, R.
Walsh, L.	Wozniak, S.

Practicum Supervisors

Audiology

Botea, M.	Dunphy, R.
Ellis, P.	Evans, R.
Fitzpatrick, E.	M.L. Hughes
Johnson, S.	Mackay, S.
Simms, C.	Weckman, M.
Williams, M.	

Speech-Language Pathology

Adey, M.L.	Albans, B.
Andrew, C.	Atkinson, S.
Bernard, G.	Burger, B.
Cale, J.	Callaghan, S.
Carignan, C.	Chapman, J.
Cobham, L.	Dawe, A.
Derrah, C.	DeWolfe, C.
Diggie, P.	Downey, N.
Foley, S.	Forsey, C.
Gainforth, D.	Gallant, G.
Goodland, M.	Hache, M.
Hudson, C.	Keeler, A.
Lownsbury, K.	MacDonald, S.
MacKelgan, K.	Mahaney, S.
Mallett, C.A.	Mitton, J.
Polly, C.	Rice, R.
Roberts, K.	Roper, D.
Savoie, J.	Scott, A.
Steeves, G.	Vowels, M.
Vringer, T.L.	Wells, M.
Whalen, D.	Whabby, J.
York, M.	

The School of Human Communication Disorders provides a three year programme of studies and clinical experiences leading to a MSc degree in either Speech Language Pathology or Audiology. The School invites applications from students possessing a baccalaureate degree in Psychology, Educational Psychology, Linguistics, Special Education, Natural Science, Nursing, Health Sciences and other behavioural or health related disciplines. Applications must indicate the student's preference for either Audiology or Speech Language Pathology.

I. Admission Requirements

All applicants must possess a minimum of a baccalaureate degree from a recognized institution of higher education. This programme is designed for students with either minimal or no previous academic experience in the area of speech language pathology or audiology. Students whose undergraduate degree is in either speech language pathology or audiology may be considered for entrance into the programme at a more advanced level under exceptional circumstances only.

Preference will be shown to students whose academic background includes at least one class in each of the following five categories:

1. Research Methods, e.g., Statistics, Research Design
2. Physical and Biological Sciences, e.g., Anatomy, Physiology, Physiological Psychology, Human Biology, Neurophysiology, Physics, Acoustics
3. Linguistics, e.g., Language Development, Phonetics, Psycholinguistics, Neurolinguistics, Sociolinguistics
4. Psychology, e.g., Developmental Psychology, Abnormal Psychology, Learning Theory, Motivation
5. Perception and Psychophysics, e.g., Sensation, Perception, Speech Perception, Psychoacoustics

Undergraduate grade requirements should exceed the equivalent of a "B" in the student's major and be at least the "B" level overall. Two academic letters of recommendation, from Professors in the student's undergraduate major, will be required as well as a statement from the applicant indicating personal reasons for pursuing graduate work in Speech-Language Pathology or Audiology.

II. MSc Degree Programme

This degree programme is a full time three year course with summer practicum experiences at the end of the first and second years of study. Currently the School does not offer any part time studies in the MSc degree programme.

Students will be required to attain a minimum of 13 credits (10 academic, 1 final project and 2 clinical practicums) over a three year period. It should be noted that the individual special needs of students, especially with regard to practicum experiences, final project requirements, and possible inadequate baccalaureate course work, might dictate credit requirements in excess of thirteen.

Extensive supervised clinical practice is required throughout the three year programme. Much of this requirement is met by attending a practicum held during the summer months.

A final project is required of all students in order to graduate from the programme. In consort with a Faculty advisor, the student designs, executes, and reports a research project. Depending upon the nature and extent of the project, students may be required to also take additional course work. Successful completion of this requirement results in the equivalent of 1 academic credit.

A maximum of three students per year may undertake a thesis in place of a final project. The objective is to provide the student with an opportunity to develop independence in conceptualising and conducting research in the field of human communication disorders. A supervisory committee consisting of three members will oversee the thesis research.

Core Curriculum

While students may pursue a course of study that leads to specialization in either Speech-Language Pathology or Audiology, during the programme they will be required to take classes that contain information that is basic to both professions. These classes will be described under "core curriculum" in the class listings that follow.

III. Classes Offered

Core Curriculum

- HUCD 5020.03: Phonetics
- HUCD 5060.06: Practicum
- HUCD 5110.03: Anatomy and Physiology of the Speech Mechanism
- HUCD 5120.03: Hearing Measurement
- HUCD 5130.03: Introduction to Communication Disorders
- HUCD 5140.03: Aural (Re)habilitation with Children
- HUCD 5150.03: Speech and Language Acquisition
- HUCD 5230.03: Human Communication Processes
- HUCD 5260.03: Hearing Disorders
- HUCD 6060.03: Topics in Clinical Procedures
- HUCD 6310.03: Audition I
- HUCD 6600.03: Seminars in Communication Disorders
- HUCD 6980.03: Research Design
- HUCD 7000.06: Research Project
- HUCD 7060.06: Practicum

Speech Language Pathology Curriculum (above and beyond core)

- HUCD 5210.03: Speech-Language Analysis
- HUCD 5250.03: Speech Disorders - Children
- HUCD 5270.03: Language Disorders - Children
- HUCD 6350.03: Language Disorders - Adults
- HUCD 6370.03: Fluency Disorders
- HUCD 6390.03: Voice/Resonance Disorders
- HUCD 6450.03: Speech Disorders - Adults
- HUCD 6470.03: Language Disorders in School Age Children

Audiology Curriculum (above and beyond core)

- HUCD 5220.03: Diagnostic Audiology
- HUCD 5240.03: Aural (Re)habilitation - Adults
- HUCD 5280.03: Audition II
- HUCD 6320.03: Pediatric Audiology
- HUCD 6360.03: Amplification
- HUCD 6380.03: Electrophysiological Audiometric Measures

HUCD 6420.03: Advanced Diagnostic Audiology
HUCD 6440.03: Noise in Industry and the Community

Additional Classes Available

HUCD 6500.03: Tutorial Readings
HUCD 6700.03: Research

Interdisciplinary and Joint Programmes

Location: Faculty of Graduate Studies, Third Floor
Arts & Administration Building
Halifax, NS B3H 4H6
Telephone: (902) 494-2485
Fax: (902) 494-8797

Programme Coordinator: A. Manicom

Interdisciplinary PhD

The Interdisciplinary Ph.D. programme is designed to meet the needs of an increasing number of highly motivated, experienced students for research opportunities which cut across disciplinary boundaries. In some cases, the research incorporates the insights of two or three traditional disciplines; in others the research itself is in an interdisciplinary field such as environment, health, administration, international development, or information management. Each programme is individually customized to meet the needs of the student. While an interdisciplinary programme can be put together across departments within a single Faculty, programmes involving two or more Faculties are encouraged and are more usual. Students take graduate classes across the various Faculties and work with faculty members in existing doctoral disciplines and in other areas. The programme requires at least two years of full-time study.

Dalhousie University has many areas of considerable interdisciplinary strength. In particular, the following interdisciplinary areas are particularly well represented at the university (the main relevant Faculties are indicated in parenthesis): Ocean Studies (Science, Arts & Social Sciences, Law, Management), Health Studies (Health Professions, Medicine, Science), Environmental Studies (Management, Health Professions, Arts & Social Sciences, Law). While applications are encouraged within these four areas of interdisciplinary strength, applications in any area of interdisciplinary study will be considered as long as the application requirements (including the necessity to identify a supervisor, a Chair of the thesis committee, and potential committee members) outlined below are met.

Students considering such a programme must pay particular attention to the following aspects of interdisciplinary doctoral study:

- 1) The responsibility largely lies with the student to "organize" a unique programme of study with appropriate faculty members and the Programme Coordinator
- 2) The student must hold a first-class honours undergraduate degree and a research Master's degree, or acceptable equivalents.
- 3) The Interdisciplinary PhD is typically heavier in course work than other PhD programmes and may take longer to complete.
- 4) The student should plan such studies in the context of an overall career goal to ensure that, as far as possible, the programme will constitute a proper qualification for desired employment upon graduation.

International Development Studies

Being interdisciplinary in nature and structure, the programme will be able to draw on a wide selection of faculty who teach and research in development studies and related fields. The following is a list of faculty who contribute to the programme.

Faculty

Barkow, J.H. (Sociology & Social Anthropology)
Benoit, J.L. (Henson College)
Binkley, M.E. (Sociology & Social Anthropology)
Bishop, M. (French)
Black, D. (Political Science)
Boardman, R. (Political Science)
Mann Borgese, E. (Law/International Oceans Institute)
Brooks, M. (Business Administration)
Brown, P. (Public Admin)
Cadagan, S. (History/Marine Affairs)
Campbell, J. (Resource & Environmental Studies)
Cassin, M. (Public Administration)
Cherry, D.C. (Business Administration)
Chircop, A. (Law/Marine Affairs)
Cohen, F. (Environmental Studies)
Connelly, P. (SMU)
Dwire, A. (Resource & Environmental Studies)
Faulkner, C.T. (Comparative Religion)
Fierbeck, K. (Political Science)
Finbow, R.G. (Political Science)
Fraser-Davey, H.D. (Nursing)
Gardiner Barber, P. (Sociology & Social Anthropology)
Kamra, O.P. (Biology)
Kindred, H. (Law)
Kirk, J. (Spanish)
Lesser, B. (Economics)
Li, T.J. (Sociology & Social Anthropology)
Li, V. (English)
MacLean, D. (Community Health & Epidemiology)
McAllister, R.I. (Economics)
McInirye, L. (Health Services Administration)
McNiven, J. (Business Administration)
Newkirk, G. (Biology/Lester Pearson Institute)
Parpart, J.L. (History/Women's Studies)
Patton, D. (Business Administration)
Pereira, N.G.O. (History & Russian Studies)
Poel, D. (Public Administration)
Ravindra, R. (Comparative Religion)
Ricketts, P. (Environmental Studies & Marine Affairs)
Russell, B. (Business Administration)
Russell, D. (Law)
Sagebien, J. (Business Administration)
Saunders, P. (Law)
Shaw, T.M. (Political Science)
Sullivan, K. (Public Administration)
Thiessen, V. (Sociology & Social Anthropology)
VanderZwagg, D. (Law)
Wainwright, J.A. (English)
Willison, M. (Biology)
Winham, G.R. (Political Science)
Wood, S. (Resource & Environmental Studies)
Zachernuk, P. (History)

Adjunct Professors

Gardner, M.
Kamra, S.
Pachai, B.

Sinclair, A.M.
Williams, R.
Zurbrigg, S.

I. Master of Arts

Graduate Coordinator: Timothy M. Shaw (Political Science)

An interdisciplinary masters degree by course work and thesis which focuses on problems of and prospects for development in the countries and communities of the South.

In bringing together Dalhousie's considerable resources - individual, institutional and informational - in this area in cooperation with compatible offerings at Saint Mary's University we are able to offer an innovative degree program based on established graduate courses in cooperation with the ongoing activities of development studies centres on campus, particularly the undergraduate International Development Studies program and the Lester Pearson International Institute. The degree draws in particular on courses and supervisors in Economics, History, Political Science and Sociology and Social Anthropology. It is offered by the Faculty of Graduate Studies through the International Development Studies Programme in the Faculty of Graduate Studies and has a limited enrolment of six students per annum.

This new degree exists as an interdisciplinary offering with the following requirements. Candidates must take at least two half-classes in different disciplines and satisfy thesis readers from at least two departments. Candidates must also take one of each of the following half-classes in theory, in methods and in practice; initially cross-listed with appropriate, existing disciplinary offerings:

- i) One-half credit in theory
IDS 50XX.03 or IDS 600(SMU)
- ii) One-half credit in methods
IDS 51XX.03 or IDS 620.1(.2) (SMU)
- iii) One-half credit in practice
IDS 52XX.03 or IDS 630.1(.2) (SMU)
- iv) Out of the six half-classes at least two half-credits should be taken in different disciplines
- v) The masters thesis normally counts as two full-year courses; and
- vi) Thesis readers are normally drawn from at least two departments; one of the three members committee may come from the SMU programme in IDS or elsewhere.

The degree is available on a full and part-time basis and students are encouraged to participate actively in the non-credit seminar programs of the Pearson International Institute and IDS/IDA and other development studies centres on campus and in Halifax. Saint Mary's University is offering a similar MA, so permitting students from both campuses to take a broader range of offerings. In particular, IDS MA students on both campuses are expected to participate in the weekly Friday noon IDS seminar at SMU. The new MA at Dalhousie is designed to be complementary to and require the same standards as related degrees, such as the masters in History, Political Science, and Sociology & Social Anthropology, Development Economics, International Business, Marine Management and Environmental Studies.

A. Application and Admission

Candidates for admission to the masters degree in International Development Studies should hold an honours degree or equivalent from a university of recognized standing, in either International Development Studies or a relevant discipline (normally, but not exclusively, business, economics, environmental studies, history, law, political science, public administration, or comparative sociology) or have completed at least four senior undergraduate classes in one of these disciplines. All candidates for admission must meet the requirements of the Faculty of Graduate Studies.

Only candidates with honours or equivalent in IDS may complete the requirements in a 12-month period of full-time study; ie be required to pay only one year of programme fees. However, in most cases completion of the thesis will take more than the 12 month period and will involve payment of thesis - only fees for any additional years of registration. Candidates who do not meet the minimum admission requirements may be admitted to a preliminary Qualifying Year of study based on the established

honours year in the joint IDS program, after which they must reapply for admission. Courses taken during such a qualifying year do not count towards the master's degree requirements. Both undergraduate and graduate IDS classes are available in the annual Halifax Summer School in International Development.

Application forms, obtainable from the Registrar's Office, should be returned along with supporting documents, including an example of written work and a statement of educational and professional goals, by April 1 for overseas applicants and June 1 for North American applicants. Early application is especially recommended for foreign candidates who will need to arrange student visas; i.e. by January 31.

Candidates from outside Canada whose native language is other than English must demonstrate their capacity to pursue a masters program in English. They should submit the results of a TOEFL or other standard English competency test at the time of application. The minimum TOEFL score required is 580.

B. Graduate Student Funding

As with all programmes that were approved prior to the Faculty of Graduate Studies policy that all new programmes must provide additional external funding for students, the MA in IDS will not be eligible for a scholarship allocation for the first three years of its operation. However, students admitted will be eligible to apply for other competitive scholarships, such as the Killam and James Robinson Johnston scholarships.

C. Programme Requirements

Candidates for the Master's Degree in International Development Studies are expected to complete a course of study beyond the honours undergraduate level worth at least five full credits; normally three by course work and two by thesis. At least one course and one thesis reader must come from a discipline other than the primary one and every student must take appropriate half-courses in theory, in methods and in practice. Candidates would be encouraged to take appropriate graduate courses in the Halifax Summer School in International Development towards the end of their year in residence. Full-time students with appropriate interdisciplinary and development studies backgrounds may complete the degree through a one-year residency; part-time students may complete the requirements over a three-year period. The thesis will conform to graduate studies regulations and will normally be presented and examined orally in public.

D. Administration

The interdisciplinary MA in International Development Studies is administered by a committee of faculty who teach and research in the area of development studies chaired by a coordinator who acts as the graduate admissions/advising officer for the program. Normally, major participating departments will be represented on the committee, which will liaise with the undergraduate IDS committee at Dalhousie and the Saint Mary's University IDS committee.

II. Classes

NOTE: Some of which may require prerequisites: see departmental rules. Not all classes are offered every year.

Business Administration

BUSI 6803.03: International Transportation
BUSI 6805.03: Seminar on Marine Resources & Ocean Industry
BUSI 6807.03: International Financial Management
BUSI 6908.03: International Banking
BUSI 6815.03: Doing Business Effectively in Asia
BUSI 6908: International Banking

Economics

ECON 5250.06: Applied Development Economics
ECON 5251.03: Seminar in Development Studies
ECON 5252.03: From Disaster Relief to Development
ECON 5330: International Trade
ECON 5333.03: Theories of Economic Development
ECON 5334.03: Economic Development: Recent Debates, Controversies & Conflicts

ECON 5431.03: International Payments
ECON 5516.03: Resource Economics
ECON 5522.03: Labour I
ECON 5523.03: Labour II

English

ENGL 5522.03: The Modernist/Postmodernist Novel
ENGL 5918.03: The Politics of Representation

Environmental Studies

ENVI 5000.06: Introduction to Environmental Studies
ENVI 5020.03: Resource Systems and Economic Development
ENVI 5021.03: Fisheries Management and Development
ENVI 5030.03: Seminar on Management of Sustainable Development
ENVI 5031.03: Environmental/Ecological Economics
ENVI 5035.03: Research Methods
ENVI 5120.03: Environmental Ecology
ENVI 5180.03: Coastal Communities (cross-listed with SOSA 5520A)
ENVI 5601.03: Management of Marine Environment

Health Services Administration

HEAS 6370: International Comparative Health Care Systems
HEAS 5200: Principles of International Health

History

HIST 5320: Feminism/Postmodernism/Development
HIST 5430.03: The Making of Colonial Africa
HIST 5452.03: South Africa since the Mineral Revolution
HIST 5462.03: African Economic History
HIST 5461.03: Gender and Development in Africa
HIST 5470.03: Wars & Revolutions in 19th Century Africa
HIST 5473.03: African Intellectuals and the Modern Experience
HIST 5612.03: Women and Socialist Development

International Development Studies

*INTD 4010: Honours Essay Practicum
*INTD 4001 or 4002 or 4100: Topics in Development Studies
*INTD 4211.03: Gender & Development I
*INTD 4212.03: Gender & Development II
*INTD 5000: Advanced Topics in Development Studies
*INTD 5600: Gender and Development (offered only in Summer School)

(*Normally for qualifying year students only.)

Law

LAWS 5022: Law of the Sea
LAWS 5051: International Environmental Law
LAWS 5056: International Trade Law
LAWS 5068: Ocean Law & Policy: International Fisheries
LAWS 5200: Environmental Law

Marine Affairs

MARA 5001.06: Contemporary Issues in Ocean Management & Development
MARA 5003.03: Marine Science & Technology
MARA 5008.03: Integrated Maritime Enforcement

Political Science

POLI 5302.03: Comparative Development Administration
POLI 5315.03: African Politics
POLI 5340.03: Approaches to Development
POLI 5360.03: Politics of Latin America
POLI 5475.03: Democratic Theory
POLI 5531.03: UN in World Politics
POLI 5535.03: New International Division of Labour
POLI 5537.06: Management and Conservation of Marine Resources (Summer Only)
POLI 5540.03: Third World Foreign Policy
POLI 5544.03: Political Economy of Southern Africa
POLI 5585.03: Politics of the Environment
POLI 5590: Politics of the Sea

Public Administration

PUAD 6500.03: Business & Government
PUAD 6520.03: Program Evaluation Seminar
PUAD 6521.03: Program Evaluation Practicum
PUAD 6550: Design & Use of Projects
PUAD 6555: Technology & Public Administration

Social Work

SLWK 6365.03: Community Socio-Economic Development
SLWK 6385.03: Community and Social Change Analysis
SLWK 6390.09: The Theory and Practice of Community Work

Sociology & Social Anthropology

SOSA 5001.03: Survey Methods
SOSA 5002.03: Social Statistics
SOSA 5530.06: IDS through Shastri Summer Institute in India

Women's Studies

WOST 6010.03: Theories of Feminism
WOST 6020.03: Feminist Methodologies

Law

Location: Weldon Law Building
6061 University Avenue
Halifax, NS B3H 4H9
Telephone: (902) 494-3495
Fax: (902) 494-1316

Dean

Russell, D.A., BA (St. Thomas), MA, LLB (Dal), LLM (Cambridge)

Associate Dean

Yogis, J.A., QC, BA (SMU), LLB, LLM (Dal), LLM (Mich)

Professors Emeriti

Hutchins, C., QC, BA, LLB (Dal)
MacDonald, R.St.J., QC, BA (StFX), LLB (Dal), LLM (London), LLM (Harvard), LLD (McG)
Meagher, A.J., QC, BA, LLB (Dal)
Wilks, J., QC, BA (Oxon), LLD (Ottawa, Queen's, Dal, York)

Professors

Archibald, B.P., BA (King's), MA, LLB (Dal), LLM (Col), Graduate Coordinator
Black, V., BA, MA (Carleton), LLB (UofT), LLM (Calif, Berkeley)
Christie, I.M., BA, LLB (Dal), LLB (Cantab), LLM (Yale), (Sabb.Lv.)
Cromwell, T.A., B. Mus., LLB (Queen's), BCL (Oxon)
Darby, P.E., BA (MtA), LLB (Dal)
Girard, P.V., BA (Brock), LLB (McG), LLM (Cal, Berkeley)
Kaiser, H.A., BA, LLB (Dal), LLM (LSE)
Kindred, H.M., LLB (Bristol), LLM (London), LLM (Illinois)
MacKay, A.W., BA (MtA), MA (Florida), BEd (MtA), LLB (Dal)
O'Brien, H.L., QC, BCom, LLB (Dal), LLM (Chicago)
Thomas, P., LLB (Wales), LLM (Yale)
Thompson, D.A., BA (McG), LLB (Dal)
Trakman, L.E., BCom, LLB (Cape Town), LLM, SJD (Harvard)
VanderZwaag, D.L., BA (Calvin), MDiv (Princeton), JD (Arkansas), LLM (Dal)
Wiktor, C.L., LLM (U of Wroclaw), MS in LS (Col) Law Librarian
Wildsmith, B.H., BSc (Guelph), LLB (Dal), LLM (Harvard)
Woodman, F.L., BA (Dal), LLB (Queen's)
Yogis, J.A., QC, BA (SMU), LLB, LLM (Dal), LLM (Mich)

Associate Professors

Bankier, J.K., BA (UofT), LLB (Osgoode)
Devlin, R.F., LLB (Queen's, Ireland), LLM (Queen's, Ont)
McConnell, M.L., BA (Victoria, B.C.), LLB (Dal), PhD (Sydney)
Pothier, D.L., BA (Dal), MA (Carlton), LLB (Dal)
Russell, D.A., BA (St. Thomas), MA, LLB (Dal), LLM (Cambridge)

Assistant Professors

Ayiward, C., BA, LLB, LLM (Dal)
Chircop, A.E., BA, LLD, LLM (Malta), JSD (Dal)
Coughlan, S.G., BA (Ottawa), MA (UofT), LLB (Dal), PhD (UofT)
Downie, BA, MA (Queen's), MLITT (Cambridge), LLB (UofT)
Gibson, E.C., BA, LLB (Sask), LLM (UofT)
Ginn, D., BA (MtA), LLB (Queen's), LLM (Osgoode)
Macklin, A.M., BSc (Alta), LLB (UofT), LLM (Yale)
Saunders, P.M., BA, MA, LLB (Dal)
Scassa, T., BA (Con), BCL, LLB (McG), LLM, JSD (Mich)

Part-time Faculty

Charles, W.H., QC, BA (Sir Geo. Wms), LLB (Dal), LLM (Harvard), LLM (Mich)
Johnson, G.C., BCom, LLB (Dal), MBA (St. Mary's)
Van Penick, F., AB (Princeton), LLB (Dal)

Winham, G.R., BA (Bowdoin), Dip. Int'l Law (Manchester), PhD (North Carolina), major appointment in Political Science

Honorary Adjunct Professors

Gold, E., BA, LLB (Dal), PhD (Wales), MCIT, FNI, MRIN, Master Mariner (FG)

Harris, E.C., QC, BCom, LLB (Dal), LLM (Harvard), RIA, CA

Johnston, D.M., LLB (St. Andrews, Scotland), LLM, JSD (Yale)

Spicer, W., LLB (Dal)

I. Degree Programmes

A. Master of Laws (LLM)

A graduate programme in law leading to the Master of Laws degree is offered to well-qualified candidates by the Faculty of Law of the University. The programme is primarily intended for prospective law teachers and professional specialists. The programme may consist of either a combination of course work, seminars and a thesis, or a combination of course work and seminars involving substantial written papers. In either case taken on a full-time basis over one full academic year, or on a part-time basis over two full academic years. Applicants who plan to take the degree on the basis of course work, seminars and a thesis are required to submit outlines of their proposed thesis topic at the time of the application. Thesis topics may concentrate on any area of law in which faculty supervisors and library resources will support substantial and useful work. In recent years, thesis supervision has been provided in the following fields, among others: international law, administrative law, labour law, constitutional law, commercial law, tax law, tort law, criminal law and criminology, family law, health law, law of the sea, maritime law, and environmental law. The Law Faculty's academic plan recognizes the Law School's particular research capacity in the areas of public law and feminist legal scholarship. A particular interest has been developed in marine and environmental law which has been designated as a field of special emphasis in the Faculty of Law. The Sir James Dunn Law Library collection for the Marine and Environmental Law Programme is now one of the best in North America. In addition graduate work is being done under the aegis of the Health Law Institute which is a joint initiative of the Faculties of Law, Medicine, Health Professions and Dentistry.

1. Admission Requirements

Applicants for admission to the LLM programme should hold a first degree in law equivalent to the Dalhousie LLB, passed with at least a "B" average (or Upper Second Class Honours). The ability to conduct independent research and to work easily in the English language is a prerequisite for admission. Candidates from outside Canada whose native language is other than English will be required to pass the TORFL (Test of English as a Foreign Language). See Section 2 of this calendar.

2. Residency Requirements

The degree may be taken on the basis of either one academic year (September 1 to August 31) of full-time residence at Dalhousie, or two academic years of part-time residence at Dalhousie, after registration for the LLM degree. (It should be noted that the two year residence requirement for part-time candidates differs from that required elsewhere in the calendar of the Faculty of Graduate Studies.)

3. Course Requirements

The degree may be taken on the basis of either course work, seminars and a thesis, or course work and seminars only. Applicants are required to indicate at the time of formal application on which basis they would prefer to take the degree, but the Graduate Studies Committee of the Faculty of Law, at the time an offer of a place is made, will decide on which of the two alternative bases a place is offered. The availability of places for the thesis alternative is governed by the availability of adequate faculty supervision and library resources. All class work for the degree, whichever of the two alternative bases is decided upon, must be completed at an average of not less than B, with no grade below B-.

All candidates for the degree are required to take a graduate seminar especially designed for our graduate students in law. This seminar, which is led by a senior teacher in the Faculty of Law, is given in the fall term (and early part of the spring term) and requires

from the student a comprehensive class presentation based on a substantial written paper. Some students who have not had previous exposure to jurisprudence may be advised to take a graduate jurisprudence course.

If the degree is taken by course work, seminars and thesis, a candidate is required to (a) in addition to the graduate seminar, complete at least two additional one-term classes from the course and seminar offerings of the Faculty of Law (the choice of classes to be determined by the Law School's Graduate Studies Committee), and (b) present a well-researched substantial thesis of scholarly quality produced under the continuous supervision of a member or members of the law faculty.

Such a thesis would normally be 150-300 typescript pages in length (double-spaced). Five copies of the thesis, temporarily bound, must be submitted to the supervisor on or before the dates given in the almanac. The thesis requirements and regulations of the Faculty of Graduate Studies must be met. A thesis may be graded as either "Approved," or "Not Approved." In order to be "Approved," a thesis must normally be approved by the thesis supervisor and two co-readers.

If the degree is taken by class work and seminars without thesis, in addition to the graduate seminar, candidates are required to take at least an additional five one-term classes from the advanced class work and seminar offerings of the Law Faculty considered to be suitable as graduate classes and seminars by the Law Graduate Studies Committee. Of those five classes, at least three must be designated as "major paper courses" by the Faculty of Law, or be approved by the Graduate Studies Committee as having a substantial written component. A "major paper" or "substantial written component" would normally be independently supervised by a faculty member, and would usually consist of a well-researched work of 15,000 - 20,000 words in length, based on a seminar/class presentation.

At the discretion of the Graduate Studies Committee of the Faculty of Law, a candidate may be required to submit to an oral examination by the Committee or its nominees in the field of the thesis or that of any written paper presented by the candidate. The Graduate Studies Committee of the Faculty of Law may recommend the substitution of not more than two seminars or graduate level classes in a discipline other than law, which may be highly relevant to the candidate's thesis topic or area of specialization, provided that any such substituted course or seminar has, in the opinion of the Committee and the Dean of Graduate Studies, equivalence to the law classes being substituted.

Before deciding on the course work and seminars, or course work, seminars and thesis option, candidates who are contemplating future doctoral studies should note that some doctoral programmes may require the completion of a Master of Laws degree which includes a thesis.

4. General

The Graduate Studies Committee of the Faculty of Law may at any time require any candidate for the degree to show cause, in such manner as it may determine, why such candidate should be permitted to continue his or her candidacy.

It should be noted that candidates taking the degree on a part-time basis are not eligible for graduate scholarships.

A student is required to comply with the directions of the supervisor and the decisions of the Graduate Studies Committee of the Faculty of Law, as well as the rules and regulations of the Faculty of Graduate Studies.

A full description of programmes available in the Law School which may be of relevance to graduate students can be found in the general Law School Calendar and in its course selection materials.

B. Combined LLB and MBA Programme

See "Business Administration" entry in this calendar.

C. Combined LLB and MLIS Programme

See "Library and Information Studies" entry in this calendar.

D. Combined LLB/MPA Programme

See "Public Administration" entry in this calendar.

E. Doctor in the Science of Law Degree (JSD)

An advanced graduate programme in law leading to the JSD (Juris Scientiae Doctor) degree is offered to a very limited number of highly qualified candidates by the Faculty of Law of the University. Applicants who meet the admission requirements are invited to submit a detailed outline of their proposed thesis and a detailed description of their research plans with their application forms. Such topics will have to be limited to those areas of law for which faculty and library resources will support original and useful work. It is expected that such resources will normally be available in four subject areas:

- (i) Marine Law
- (ii) Environmental Law

These areas of the curriculum have been designated as a priority development by the Faculty of Law since 1974. As a result, considerable faculty expertise, library holdings, research projects and course offerings in these areas has been created. Consequently, the Faculty's Marine and Environmental Law Programme has achieved international prominence.

- (iii) International Law
- (iv) Comparative Law

These areas of specialization have grown with seminars in comparative criminal law, comparative constitutional law, international human rights law and European Community law.

1. Admission Requirements

Applicants for admission to the JSD programme must have demonstrated superior academic ability during their previous legal education. Normally it will be necessary to have (i) attained at least the equivalent of a Dalhousie A- average grade at the LLB level and (ii) completed successfully a Master's degree in law. Preference will be given to applicants with established credentials in published scholarship of a professional calibre. The ability to conduct independent research and work easily in the English language is a prerequisite for admission. Foreign candidates are required to pass the TOEFL (Test of English as a Foreign Language) to the satisfaction of the Graduate Studies Committee of the Faculty of Law prior to admission. Applicants seeking JSD funding from Dalhousie University should ensure that their completed applications are received by the University no later than January 1 of the year in which they intend to commence their studies.

2. Residency Requirements

Applicants must be prepared to spend at least one full academic year (12 months) in continuous residence at Dalhousie after registration for the JSD programme. The Graduate Studies Committee of the Law School reserves the right in certain cases to require the completion of a second year of residency. It is to be noted, however, that consistent with other doctoral programmes at Dalhousie University, JSD candidates must pay fees at the full-time rate for two years regardless of whether they have been required to spend a second year in residence at Dalhousie.

3. Course Requirements

Candidates for the JSD degree may be required by the Graduate Studies Committee of the Faculty of Law, on the recommendation of their thesis committee, to carry out advanced course work in the area of their thesis, or in a cognate area of a more general field of law, or in a discipline other than law, which is deemed to be highly relevant to their thesis topic. When undertaking such course work, JSD candidates must obtain an average standing of at least B⁺ in all classes designated as "required by the thesis committee", with no grade falling below B. A student who fails to meet these requirements is automatically dropped from the programme, but may apply for readmission immediately.

4. Preliminary Examination Requirements

Each candidate will also be required to pass a preliminary examination normally at the end of their first year of residence, and not less than 1 year before submitting the thesis. The preliminary examination may be oral, written, or both, at the discretion of the Graduate Studies Committee, and will cover the subjects relevant to the general area of the candidate's research. Failure to pass this

examination may result in dismissal. However, the student may be permitted to repeat the examination within the subsequent 12 (twelve) months. (For greater detail see the Dalhousie Law School "Guidelines for Preliminary Examinations - JSD Candidates").

5. Special Skill Examination Requirements

A candidate may, at the discretion of the thesis committee, be required to pass a special examination designed to demonstrate the examinee's proficiency in a foreign language, statistical method, computer analysis, or other skill deemed to be important for successful completion of the candidate's thesis in the chosen area.

6. Thesis Requirements

The primary requirement for the JSD degree is the completion of a substantial thesis which should not only display original scholarship of high standard, but also represent a significant and professional contribution to the literature of the chosen subject. In applying for admission, an applicant is required to satisfy the Graduate Studies Committee of the Faculty of Law that the suggested topic is suitable for development as a doctoral thesis. Normally, a JSD thesis should be between 350 and 500 typescript pages in length (double-spaced). After an applicant has been accepted, a thesis committee consisting of a supervisor and two advisors will be appointed by the Graduate Studies Committee of the Faculty of Law. All candidates are required to comply with the decisions of their thesis committees. In normal circumstances, the completed JSD thesis must be submitted to the Graduate Studies Committee of the Faculty of Law within five years of the date of original registration in the programme. Submission of the thesis must follow the rules and regulations laid down by the Faculty of Graduate Studies.

7. Thesis Defence Requirements

Each JSD candidate is required to defend the completed thesis in an oral examination. This defence shall be conducted in accordance with the Faculty of Graduate Studies Regulations for Oral Examination of a Doctoral Candidate.

8. Teaching Activities

The Graduate Studies Committee of the Faculty of Law may give permission to a JSD candidate to engage in teaching activities during the period of residency, if such activities are deemed to fall within the field of the candidate's thesis topic. Under no circumstances shall any JSD candidate be permitted to spend more than six hours per week in teaching activities and related preparations.

Library & Information Studies

Location: Killam Library
6225 University Avenue
Halifax, NS B3H 4H8
Telephone: (902) 494-3656
Fax: (902) 494-2451
e-mail: slis@ls.dal.ca
WWW: <http://www.mgmt.dal.ca/sliss>

Director of School
MacDonald, B.H.

Graduate Coordinator
Dunn, J.

Professor Emeritus
Ettlinger, J.R.T., MA (Oxon), BLS (McG)

Professors
Amey, L.J., BSc, BEd (Acadia), MEd (UNB), MS (Columbia), PhD (UofT)
Dykstra Lynch, M., BA (Calvin), MLS (Dal), PhD (Sheffield)

Associate Professors
Ireland, A., BA (Chatham), MSc (Car-Mel), MBA, PhD (Dal), CA, major appointment in School of Business Administration
Klapstein, R.E., BSc (Calgary), BA (Alta), MBA, LLB (Dal), LLM (Osgoode), CGA, major appointment in School of Business Administration
MacDonald, B.H., BSc (Acadia), MA, MLS, PhD (Western)

Assistant Professors
Dwire, A., BA, MA (Dal), major appointment in School of Resource and Environmental Studies
Rosenthal, E., BA (Queen's College of CUNY), MSc (Syracuse), major appointment at MSVU
Toms, E., BA, BEd (Mem), MLS (Dal)

Adjunct Professors
Beaumont, J., BSc (Carleton), Associate of the Library Association (UK)
Carroll, C., BA (StFX), MA (UNB)
Horrocks, N., BA (Western Australia), MLS, PhD (Pittsburgh), Fellow of the Library Association (UK), Associate of the Library Association of Australia
Leggott, M., BSc (SMU), MSc (Calgary), MLS (Dal)
Vagianos, L.G., BA (Hiram College), MA (Suffolk), MSLIS (Western Reserve), LLD (UPEI)
Weaver, M., BA (Exeter), DIS (CityU, London)

Lecturer
Grise, M.L., BCom (Queen's)

Associated Instructional Staff
Dunn, J., B Math (Waterloo), MLS (Dal)
Howard, V., BA, MA (UBC), MLIS (Dal)
Meagher, R., BAA (MSVU)
Wating, A., BEd (McG), MLIS (Dal)
Williams, C., BJ (King's), MLIS (Dal)

Students seeking further information or help in planning courses of study in the School of Library and Information Studies should address themselves to:

Graduate Coordinator
School of Library and Information Studies
Room 3621, Killam Library
Dalhousie University
Halifax, NS B3H 4H8

The goal of the School of Library and Information Studies is to provide graduate education within the Atlantic Provinces to qualified candidates which equips them for their first and subsequent positions as information professionals. This will be accomplished by exposing students to the theories, technologies and practices which comprise library and information studies. Within the programme, the local professional community is provided with opportunities to acquire new skills and career directions.

The student, therefore, is introduced to the development and significance of librarianship and related information fields, to the underlying principles of the profession, and to the techniques of information organization, analysis, retrieval, and use. Each student is challenged to explore and question through a curriculum which attempts to balance professional studies with supervised practical experience and advanced academic study or individual research.

I. Admission Requirements

Candidates must hold a Bachelor's Degree with at least a second class standing from a university recognized by the Senate of Dalhousie University.

All applicants are urged to submit completed documentation early in the year as this is a limited enrolment programme; many more applications are received than there are places to be allotted.

Students are admitted *only* in September. Students whose native language is English should have had the equivalent of two years of university study in a major language other than English or be prepared to demonstrate a reading knowledge of such a language before graduating from the School's programme.

Candidates whose native language is not English must submit a TOEFL score according to the regulations set out in Section 2.4 of this calendar. The School's booklet, *Information for Prospective Students*, which describes the programme in detail, is distributed to all applicants by the Registrar's Office. Write for a copy if one is not received with the application form.

A. Structure

The School operates on a 4-term system, which may be varied as follows:

Two-Year Programme

Full-time attendance during the Fall and Winter terms of two years.

Part-Time Programme

The degree is to be completed within six years. The School requires that a part time student take a minimum of two "required" classes during the Fall term at the beginning of the programme.

B. Field Trip

During some academic years the School of Library and Information Studies schedules a field trip to a city of major importance with regard to library activity. Students are urged to take this field trip. Consult *Information for Prospective Students*.

II. Degree Programmes

A. Master of Library and Information Studies (MLIS)

The degree of Master of Library and Information Studies is awarded upon satisfactory completion of:

1. Sixteen half credit classes (7 required, 9 electives)
2. Work experience of 100 hours in a selected library or other information agency under the supervision of a qualified information professional. This experience is designed to provide the student with exposure to everyday routines and problems as well as the opportunity to test and evaluate class theory, to contribute by actual participation, and to discover and explore areas of particular interest for course specialization

and future employment. Students may also elect to meet this requirement by such employment prior to graduation. Further details are available in *Information for Prospective Students*.

In addition, students are required to:

1. Attend the scheduled lectures series given by visiting experts in library, information and publishing fields;
2. Participate in the scheduled trips to relevant institutions within or near the metropolitan area of Halifax/Dartmouth.

B. Master of Library and Information Studies/Bachelor of Laws (LLB/MLIS)

This is a four-year programme leading to the degrees of Bachelor of Laws and Master of Library and Information Studies. The usual order of the programme is:

Year 1: first year classes of the MLIS programme (6 required, 2 elective)

Year 2: First year classes of the LLB programme

Year 3: Two MLIS classes (1 required, 1 elective); 25 hours of LLB classes

Year 4: 1 MLIS class each term; 23 hours of LLB classes

Candidates for the combined MLIS/LLB programme must also satisfy the entrance requirements of the Faculty of Law. For further information, contact the Director, School of Library and Information Studies.

C. One Year Master of Library and Information Studies (MLIS)

Applicants will be considered for a special programme, if they meet the requirement of the Faculty of Graduate Studies by possessing "an honours undergraduate degree in the same field as their graduate programme," i.e. BLS (Honours) or, in the opinion of Faculty, an equivalent qualification.

iii. Classes Offered

In the following list the required classes are numbered 5505.03-5580.03. 6000 and 6600 classes are electives. All classes with the 'O' prefix are non-credit; 7000 classes are experimental or occasional classes. Not all 6000 and 7000 level classes are offered each year. The curriculum has been organized with sufficient flexibility to allow students to pursue an individual research project, or to develop a subject specialty through reading classes for further academic work. There is also a thesis option.

If a student chooses as an elective a class offered by a department other than the School of Library and Information Studies, approval must be obtained from the head of the relevant department and the School.

LIBS 0600.00: Practical Printing

LIBS 0640.00: Hand-Binding

LIBS 5505.03: Information Systems and Technology. (Cross-listed with BUSI 5511.03)

LIBS 5510.03: Information Organization & Access

LIBS 5520.03: Research Methods

LIBS 5530.03: Information Sources & Retrieval

LIBS 5560.03: Collections Management

LIBS 5570.03: Organizational Management & Strategy

LIBS 5580.03: Systems Analysis (Cross-listed with BUSI 6514.03)

LIBS 6050.03: International Perspectives

LIBS 6150.03: History of the Book

LIBS 6250.03: Young Adult Literature and Media Interests

LIBS 6300.03: Government Information Resources

LIBS 6350.03: Classification and Indexing Systems

LIBS 6370.03: Records Management

LIBS 6450.03: Children's Literature and Media Interests

LIBS 6500.03: Users and Services

LIBS 6540.03: Database Management Systems (Cross-listed with BUSI 6516.03)

LIBS 6550.03: Bibliography

LIBS 6590.03: Information Sources in Science and Technology

LIBS 6600.03: Information Sources in the Humanities/Social Sciences

LIBS 6650.03-6680.03: Academic Courses

LIBS 6700.03-6710.03: Reading Courses

LIBS 6750.03: Health Sciences Literature & Information Sources

LIBS 6800.03: Archives

LIBS 6810.03: Information Literacy

LIBS 6820.03: Marketing and Public Relations

LIBS 6830.03: Information Retrieval

LIBS 6840.03: Automation and Networking

LIBS 7070.03: Library Management and Current Problems in Librarianship

LIBS 7320.03: Legal Literature and Librarianship

LIBS 7340.03: Sources for Business Intelligence

LIBS 7390.03: Quantitative Methods

LIBS 7400.03: Hypermedia and the Net

LIBS 7600.03: Entrepreneurship

LIBS 7610.03: Information Policy

LIBS 9000.00: Thesis (4 half credits)

School Publications

- *Information for Prospective Students* (annual)
- *Newsletter* (annual)
- Occasional Papers Series (Write to the Director for a list)
- *Y-A Hotline* (Irregular)
- Checklist of Canadian Copyright Deposits in the British Museum. Vols. I-III now available
- Monographic series with Scarecrow Press, Metuchen, NJ

Marine Affairs Programme

Location: 1234 Seymour Street
Halifax, NS B3H 3J5
Telephone: 902-494-3555
Fax: 902-494-1001
Telex: 019-21863
E-mail: Patricia.Roberts@dal.ca
Website: <http://www.dal.ca/mmm>

Coordinator

Chircop, A., LL.D (Malta), LL.M, JSD (Dal)

Teaching Faculty

Boyd, C.M., MA (Ind), PhD (Scrpps), Professor, Department of Oceanography
Brooks, M., BOT (McG), MBA (Dal), PhD (Wales), Professor, School of Business Administration
Cadigan, S., BA, MA, PhD (MUN), Junior Chair (Social Science) Ocean Studies, Assistant Professor, Department of History
Côté, R., BSc (Loyola), MSc (Memorial), Director, School for Resource and Environmental Studies
Crickard, F.W., BA, MA (Dal), (R-Adm., Ret'd), Research Associate, Department of Political Science
Dwire, A., BA, MA (Dal), Assistant Professor, School for Resource and Environmental Studies
Fournier, R.O., MSc, PhD (URI), Professor, Department of Oceanography, Associate Vice-President (Research and International Relations)
Grant, J., BSc (Duke), PhD (South Carolina), Associate Professor, Department of Oceanography
Lane, P.A., MSc, PhD (SUNY Albany), Professor, Biology Department
Mann Borgese, E., OC, DipMus (Zurich), LHD (MSVU), Professor Emeritus, Department of Political Science
Mazany, L., BSFS (Georgetown), PhD (UBC), Assistant Professor, Department of Economics
McAllister, R.L., MA (Oxon), MA (Cantab), Professor, Department of Economics
McConnell, M.L., BA, LLB (Dal), PhD (Sydney), Assistant Professor, Law School
Newkirk, G.F., PhD (Duke), Associate Professor (Research), Department of Biology
Ricketts, P.J., BA, PhD (Southampton), Professor, School for Resource and Environmental Studies, Dean, Faculty of Graduate Studies
Ruddick, B.R., BSc (Victoria), PhD (MIT), Professor, Department of Oceanography
Saunders, P.M., BA, MA, LLB (Dal), Assistant Professor, Law School
Scott, D.B., BSc, PhD (Dal), Associate Professor, Earth Sciences
Taggart, C.T., BSc, MSc, PhD (McG), Associate Professor, Department of Oceanography
VanderZwaag, D., BA (Calvin), MDiv (Princeton), JD (Arkansas), LL.M (Dal), Associate Professor of Law
Willison, J.H.M., PhD (Nottingham), Professor, Department of Biology
Wood, K.S., BA, MA (Oregon), Professor, School for Resource and Environmental Studies

Honorary Adjunct Professors

Day, D., BA, Dip Ed, PhD, Professor of Geography, Saint Mary's University
Gold, E., BA, LLB (Dal), PhD (Wales), MCIT, FNI, MRIN, Master Mariner (FQ), Adjunct Professor, Law School
Hertzman, O., BA, BSc, MSc (UBC), PhD (Washington), Honorary Adjunct Professor, Department of Oceanography
Hildebrand, L.P., BSCh, MES (Dal), Adjunct Professor

MacLellan, D.P., BA (Dal), APR, Adjunct Professor
Wells, P.G., BSc (McG), MSc (UofT), PhD (Guelph), Honorary Adjunct Professor, Resource and Environmental Studies

Marine Affairs is an interdisciplinary programme examining all aspects of the uses of the seas. The Master of Marine Management provides a theoretical and practical interdisciplinary basis for understanding ocean development, planning and regulatory issues affecting the optimal use of the seas and marine industries.

I. Master of Marine Management

The Master of Marine Management (MMM) is a one-year, professional, non-thesis, interdisciplinary degree. Students are expected to take required classes covering the marine and social sciences, as well as a number of electives from approved marine-related classes. Students are also required to prepare a graduate project.

Admission Requirements

Enrolment is limited. Applicants must satisfy general requirements for admission to the Faculty of Graduate Studies. These include a Bachelor's Degree from a university of recognized standing with honours or its equivalent with a minimum average of B (72%, GPA of 3.0 or second class honours, Upper Division). Selection criteria include relevant work experience and career objectives. Applicants from outside Canada whose native language is not English must also submit a Test of English as a Foreign Language (TOEFL) score, its equivalent, or have completed a university degree in English. Dalhousie sets a minimum acceptable TOEFL score of 580. Deadlines for applications are January 31st for applicants requesting financial assistance, and March 31st for all other applicants.

II. Classes Offered

A. Required Classes

MARA 5001.06: Contemporary Issues in Ocean Management and Development.

This class offers an introduction to ocean management. Subject areas addressed include coastal zone management, sea use planning, fisheries management, marine law and policy, maritime transport, development of non-living resources, protection and preservation of the coastal and marine environment, coastal tourism, maritime enforcement and conflict management. Instructors for the various subjects come from Halifax universities, federal and provincial government agencies and the private sector.

MARA 5002.06: Graduate Project.

Students are required to apply the knowledge gained through course work to a specific planning and management problem or issue. As part of the project, students participate in internship programs with a local public or private sector agency of relevance to the project topic.

MARA 5003.03: Marine Science and Technology.

This class provides a general introduction to the marine sciences and technology. Subject areas addressed include physical, chemical, geological, meteorological and biological oceanography, coastal zone, aquaculture, climate and ocean weather, remote sensing, toxins, fisheries, and ocean technology and management. Instructors are drawn from Halifax universities.

MARA 5004.00: Communications Management (non-credit).

This class develops skills of marine managers for handling information and communications, including crisis management, with decision-makers and various stakeholders in ocean development and management processes such as special interest groups, the media, business interests (shareholders), and the public at large.

B. Electives

Students select the remaining complement of classes from the broad range offered in the marine field at Dalhousie, St. Mary's University and the Technical University of Nova Scotia.

MARA 5005.03: Independent Readings.

This class is an option for MMM students who wish to pursue independent research into specific topics not covered in another class. The topic and area of research must be approved by the Marine Affairs Programme Coordinator and the research supervisor.

MARA 5008.03: Integrated Maritime Enforcement.

The aim of this class is to sensitize students to the complexities of maritime enforcement within a coastal and ocean management framework by building an understanding of the roles of maritime enforcement in integrated planning and management. In doing so, students are introduced to concepts, tools, techniques and procedures of enforcement.

MARA 5009.03: Coastal Zone Management.

This seminar is designed to introduce students to the concepts, principles, approaches, and issues associated with integrated management of coastal zones worldwide. This class addresses the legal, policy, and administrative frameworks prevailing in Canada, but will do so within the global context of coastal zone management. Case studies and examples from developed and developing countries are used to present practical approaches to the management of multiple uses in the coastal zone, including community-based management models.

Mathematics, Statistics, & Computing Science

Location: Chase Building
Halifax, NS B3H 3J5
Telephone: (902) 494-2572
Fax: (902) 494-5130
e-mail: mscs@cs.dal.ca

Chairperson of the Department

Gupta, R.P.

Professors Emeriti

Edelstein, M., MSc (Jerusalem), DSc (Technion-Haifa)
Swaminathan, S., MA, MSc, PhD (Madras)
Tingley, A.J., MA, PhD (Minnesota)

Professors

Clements, J.C., MA (UBC), PhD (UofT)
Coley, A.A., PhD (Lond)
Dunn, K.A., MSc, PhD (UofT)
Field, C.A., MSc, PhD (Northwestern)
Fillmore, P.A., MSc, PhD (Minn), FRSC
Gabor, G., MSc, PhD (Botvos)
Grunenfelder, L., PhD (ETH Zurich)
Gupta, R.P., MSc (Agra), PhD (Delhi)
Keast, P., PhD (St. Andrews)
Morlarty, K., MSc (Dal), PhD (Imp Col)
Nowakowski, R., MSc, PhD (Calgary)
Paré, R., MSc, PhD (McG)
Radjavi, H., MA, PhD (Minn)
Shepherd, M.A., MSc, PhD (Western)
Stewart, P.N., MA (Berk), PhD (UBC)
Sutherland, W.R.S., MSc, PhD (Brown)
Tan, K.K., PhD (UBC)
Thompson, A.C., PhD (Newcastle upon Tyne)
Wood, R.J., MSc (McM), PhD (Dal)

Associate Professors

Dilcher, K., MSc, PhD (Queen's)
Farrag, A.A., MSc (SFU), PhD (Alta)
Hamilton, D., MA, PhD (Queen's)
Hartzman, C.S., MS (Purdue), PhD (Colo)
Johnson, K.P., MSc (UofT), PhD (Brandeis)
Sastri, C.C.A., MSc (Andhra), PhD (NY)
Smith, B., MA (Calgary), PhD (Berk)
Thompson, K.R., MSc (Manchester), PhD (Liverpool)

Assistant Professors

Bowen, K., PhD (California)
Brown, J., MSc, PhD (UofT)
Gao, Q., MSc, PhD (Waterloo)
Manchester, L., MSc, PhD (UofT)
Ruan, S., PhD (Alta)
Sedgwick, A., PhD (UofT)
Srinivas, S., PhD (Inst. of Sci., Bangalore)

Postdoctoral Fellows

Almudevar, A., PhD (UofT)
Dascalescu, S., PhD (Bucharest)
Fronk, D., PhD (Utrecht)
Thandi, N., PhD (Wisconsin)

Honorary Adjunct Professors

Beattie, M.A., PhD (Queen's), Mount Allison University

Bennett, F., PhD (Man), Mount Saint Vincent University
Dawson, R., PhD (Dal), Saint Mary's University
Hartnell, B., PhD (Wat), Saint Mary's University
Muir, P., PhD (UofT), Saint Mary's University
Oliver, L., PhD (McG), Acadia University
Rahman, M., PhD (Windsor), Technical University of Nova Scotia
Rosebrugh, R., PhD (Dal), Mount Allison University
Trappenberg, T., PhD (Aachen)
Watters, C., PhD (TUNS), Acadia University
Zhuang, D., PhD (Dal), Mount Saint Vincent University

Information concerning programmes and classes in Mathematics follows immediately below. For information on programmes and classes in Computing Science and Statistics please refer to those sections of this calendar.

Mathematics

Location: Chase Building
Halifax, NS B3H 3J5
Telephone: (902) 494-2572
Fax: (902) 494-5130

Chair of Department
Gupta, R.P.

Director of Division
Wood, R.J.

Graduate Coordinator
Fillmore, P.A.

The department offers programmes leading to the degrees of MSc and PhD in the following areas: algebra, approximation theory, category theory, convex geometry, differential equations, functional analysis, graph theory, number theory, numerical analysis, operator theory, optimization, general relativity theory, stochastic modelling, topology.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

Candidates will normally be expected to hold a degree recognized by Dalhousie University as the equivalent of a Bachelor's degree with Honours in one of its own faculties.

GRE Aptitude and Advanced Mathematics scores are recommended for all applicants for graduate studies whose undergraduate work has been completed outside of Canada, and TOEFL scores are required for applicants whose native language is not English. Valid score reports must be received directly from the Educational Testing Service. To ensure consideration for scholarship funds, application should be made by January 31.

II. Degree Programmes

A. Masters

Requirements

1. At least three full-credit classes, not including seminar classes, at the graduate level to be chosen in consultation with a department adviser. In addition, students whose preparation in a particular area of mathematics is deficient will be required to complete appropriate classes which will be designated by the adviser.
2. Attendance and participation in seminars.
3. A satisfactory thesis.
4. Students are required to give an oral presentation of their thesis and at that time to answer questions about the thesis. This presentation will be made after the thesis is in the hands of the student's committee and will be taken into account when the committee makes its decision.

B. Doctor of Philosophy (PhD)

Requirements

NOTE: The minimum and maximum time required to complete this programme are set out in section 5 of the Faculty Regulations.

1. At least one full-credit class during each of the first two years of the programme.
2. Comprehensive examinations which must be taken for the first time within 12 months and successfully completed within 16 months of registration in the programme.

3. Attendance and participation in an appropriate seminar.
4. A demonstration of reading competence in one of the following languages: French, German, Russian.
5. Preparation and defence of a satisfactory research thesis.

NOTE: Students interested in pursuing a Master's degree programme in Applied and Computational Mathematics designed to prepare them for the work environment should consider the following classes:

- MATH 5220.03
- MATH 5230.03
- MATH 5270.03
- MATH 5300.03
- MATH 5310.03
- MATH 5350.03
- MATH 5400.03
- MATH 7400.03
- One of STAT 5080.03, STAT 5370.03, or STAT 5620.03

III. Classes Offered

A selection of the following graduate classes will be offered subject to demand:

- MATH 5010.03/4010.03: Introduction to Measure Theory and Integration
- MATH 5015.03/4015.03: Advanced Linear Algebra
- MATH 5020.03/4020.03: Analytic Function Theory
- MATH 5025.03/4025.03: Commutative Algebra I
- MATH 5035.03/4035.03: Commutative Algebra II
- MATH 5040.03: Homological Algebra
- MATH 5045.03/4045.03: Advanced Algebra I
- MATH 5055.03/4055.03: Advanced Algebra II
- MATH 5065.03/4065.03: Algebraic Geometry
- MATH 5070.03/4070.03: Topics in Number Theory
- MATH 5090.03/4090.03: Probability
- MATH 5120.03: Topics in Ordinary Differential Equations
- MATH 5130.03/4130.03: Analysis of Algorithms
- MATH 5135.03/4135.03: Introduction to Category Theory
- MATH 5140.03/4140.03: Introduction to Functional Analysis
- MATH 5150.03/4150.03: Functional Analysis
- MATH 5160.03/4160.03: Operator Theory
- MATH 5170.03/4170.03: General Topology
- MATH 5180.03/4180.03: Introduction to Algebraic Topology
- MATH 5185.03: Topics in Algebraic Topology
- MATH 5190.03/4190.03: Ordinary Differential Equations
- MATH 5195.03: Topics in Topology and Functional Analysis
- MATH 5200.03/4200.03: Differential Equations - Qualitative Theory
- MATH 5210.03: Topics in C^* - Algebras
- MATH 5220.03/4220.03: Introduction to Partial Differential Equations
- MATH 5225.03: Topics in Partial Differential Equations
- MATH 5230.03/4230.03: Partial Differential Equations
- MATH 5235.03: Topics in Operator Theory
- MATH 5240.03: Topics in Banach Spaces
- MATH 5270.03/4270.03: Numerical Software
- MATH 5290.03: Advanced Topics in Operator Theory
- MATH 5300.03/4300.03: Optimal Control Theory
- MATH 5310.03/4310.03: Nonlinear Programming
- MATH 5315.03: Convexity and Convex Programming
- MATH 5320.03: Topics in Optimization
- MATH 5330.03/4330.03: Topics in Graph Theory
- MATH 5350.03: Advanced Numerical Analysis
- MATH 5380.03: Approximation of Functions
- MATH 5400.03/4400.03: Applied Mathematics in Science and Industry
- MATH 5410.03/4410.03: Topics in Cosmology
- MATH 5650.03/4650.03: Relativity and Cosmology
- MATH 5660.03/4660.03: Automata and Computability
- MATH 5800.03/4800.03: Introduction to Mathematical Research
- MATH 5900.03/4900.03: Game Theory
- MATH 6000.03-6990.03: Reading Classes for Advanced Graduate Students
- MATH 7030.03: Algebra Seminar
- MATH 7190.03: Analysis Seminar
- MATH 7230.03: Operator Theory Seminar
- MATH 7400.03: Applied Mathematics Seminar
- MATH 7670.03: Optimization Seminar

Microbiology and Immunology

Location: Sir Charles Tupper Medical Building
Seventh and Tenth Floors
Halifax, NS B3H 4H7

Telephone: (902) 494-3587
Fax: (902) 494 5125

Head of Department

Johnston, G.C.

Professors

Anderson, R., PhD (Cologne) (Viral Pathogenesis) - Graduate Studies Coordinator

Hoffman, P.S., PhD (Virginia Polytech) (Microbial Pathogenesis)

Johnston, G.C., PhD (York) (Molecular Genetics: Regulation of Proliferation)

Lee, S.H.S., PhD (Dal) (Virology; Interferon)

Mahony, D.E., PhD (McG) (Bacteriology; Bacteriocins and Plasmids of Clostridia)

Roze, K.R., PhD (Dal), Dip Bact (UofT) (Microbial Pathogenesis; Epidemiology)

Stoltz, D.B., PhD (McM) (Insect Virology)

Stuttard, C., PhD (Dublin) (Microbial Genetics; Streptomyces)

Associate Professors

Bortolussi, R.A., MD (UofT), FRCP(C), Pediatrics (Neonatal Infection)

Carr, R.I., MD (UofT), PhD (Rockefeller), Medicine (Rheumatology)

Hoakn, D.W., PhD (McG) (Tumour Immunology; MHC-unrestricted Killer Cells)

Issekutz, A.C., MD (Dal), FRCP(C), Pediatrics (Inflammation)

Lee, S.E., BSc (Hons), PhD (Guelph)

Lee, T., PhD (Glasgow) (Immunoparasitology)

Marrie, T., MD (Dal), FRCP(C), Medicine (Infection; Pneumonia Disease)

Rajaraman, R., PhD (Dal), Medicine (Programmed Cell Death in Neoplasia)

Assistant Professors

Barnes, C., PhD (Dal) (Molecular Genetics)

Bezanson, G., PhD (Carleton), Medicine (Molecular Pathogenesis)

Duncan, R., PhD (Guelph) (Molecular Virology)

Faulkner, G., PhD (Dal) (Ultrastructure)

Kennedy, W.A., MDCM (McG), FRCP(C), Pediatrics (Parainfluenza and Coronavirus Respiratory Tract Infection Pathogenesis)

Schlach, W.F., MD (Cornell), FRCP(C), Medicine (Listeria; HIV Infection)

Stadnyk, A.W., PhD (McM) (Intestinal Inflammation; Cytokines)

Instructor

Murray, L.E., PhD (Dal) (Molecular Genetics)

I. Disciplines Within Microbiology

Graduate degrees can be pursued in the areas of Virology, Bacteriology, Molecular Pathogenesis, Microbial Genetics, Molecular Genetics and Immunology. Graduate students are expected to acquire a conceptual understanding of the disciplines in microbiology and an in depth knowledge of their particular area of specialization. Notwithstanding this, the existence of specified streams in Immunology, Virology, Microbial Pathogenesis and Molecular Genetics in the Department may allow well-qualified

students, with at least minimal training in Microbiology, but a strong background in the appropriate subject area, to concentrate their studies.

II. Admission Requirements

In conjunction with the general requirements for admission, candidates must have received sound basic instruction in Chemistry and Cell Biology and four credits in a relevant discipline or disciplines with a B average or better.

New students may be required to write a placement test to assist in the appropriate design of an individual programme of study.

iii. Degree Programmes

A. Master of Science (MSc)

For minimum time required to complete this programme, see Section 4 of the Faculty of Graduate Studies Regulations in this calendar. Normally, study equivalent to five credits at the graduate level is required. Attendance and participation in seminars is required. A research project must be completed, the result of which will be embodied in a thesis. The thesis can count for up to 3 of the required credits.

Part-time study is also allowed and conditions for admission to this programme are the same as for full-time students.

B. Doctor of Philosophy (PhD)

For minimum time required to complete this programme, see Section 4 of the Faculty of Graduate Studies Regulations in this calendar. Class and seminar requirements are the same as for the MSc programme.

Comprehensive knowledge of the area of specialty and an understanding of general microbiology and immunology must be demonstrated and will be assessed by oral examination.

Research of a high calibre is required, the results of which must be embodied in a thesis which makes a significant contribution to knowledge in the chosen field. An oral defense of the thesis before an external examiner is required.

C. Combined MD/PhD

For information on the combined MD/PhD programme see "Interdisciplinary and Joint Programmes" (page 64).

IV. Classes Offered

MICR 5001.06: Molecular Biology Seminars.

FORMAT: Seminar
INSTRUCTOR: R. Anderson

MICR 5004.06: Pathobiology of Cancer.

FORMAT: Lecture 2 hours
INSTRUCTOR: P. Hoffman

MICR 5006.06: Advanced Topics in Immunology.

FORMAT: Seminar
INSTRUCTOR: T. Lee

MICR 5007.06: Advanced Topics in Molecular Pathogenesis.

FORMAT: Seminar
INSTRUCTOR: P. Hoffman

MICR 5024.03: Microscopy.

INSTRUCTOR: G. Faulkner, D.B. Stoltz

MICR 5026.03: The Mammalian Cell as a Microorganism.

FORMAT: Lecture 3 hours, lab 3 hours
INSTRUCTOR: R. Rajaraman

MICR 5027.03: Molecular Mechanisms of Cancer.

FORMAT: Lecture 3 hours
INSTRUCTOR: R. Rajaraman, D. Guernsey

MICR 5037.03: Genetics of Industrial Bacteria.

Not offered in 1997/98
FORMAT: Lecture/seminar, 3 hours
INSTRUCTOR: C. Stuttard

MICR 5038.03: Molecular Biology of Yeast.

FORMAT: Lecture/seminar, 4 hours.
INSTRUCTOR: C. Barnes, G.C. Johnston

MICR 5103.03: Infectious Diseases of Aquatic Organisms.

See listing in Biology section of this calendar.

MICR 5114.03: Advanced Topics in Molecular and Medical Virology.

FORMAT: Lecture/presentation/discussion 3 hours
INSTRUCTOR: R. Duncan

MICR 5115.03: Immunology of Host Resistance.

FORMAT: Lecture/discussion 3 hours
INSTRUCTOR: D.W. Hoskin

MICR 5118.03: Molecular Pathogenesis.

FORMAT: Lecture 2 hours
INSTRUCTOR: P. Hoffman, G. Bezanson

MICR 5301.03: Immunobiology.

FORMAT: Lecture, student presentation, discussion
INSTRUCTOR: R.I. Carr

MICR 5302.03: Molecular Immunology.

Not offered in 1997/98
FORMAT: Lecture 1 hour, presentation 2 hours
INSTRUCTOR: T. Lee

MICR 5303.03: Granulocytes and the Immune Response.

FORMAT: Lecture 1 hour, discussion 2 hours
INSTRUCTOR: T. Lee

MICR 5601.03: Laboratory Techniques in Molecular Biology I.

See listing in Biochemistry section of this calendar.

MICR 5602.03: Laboratory Techniques in Molecular Biology II.

FORMAT: Lab 6 hours
INSTRUCTOR: L.E. Murray

MICR 9000.00 MSc Thesis

MICR 9530.00 PhD Thesis

- PHYL 5520.03: Cellular Biophysics and Physiology
- PHYL 5521.03: Cell and Molecular Physiology
- PSYO 6270.03: Comparative Neurobiology
- PSYO 6370.03: Neuroscience Laboratory

Neuroscience

Contact: Dr. R. Croll
 Department of Physiology & Biophysics
Telephone: (902) 494-6417
Fax: (902) 494-1685
 or Graduate Coordinator of individual departments

The University offers a graduate programme leading to the Master of Science and/or Doctor of Philosophy degree. This interdisciplinary programme is coordinated with the departments of Anatomy and Neurobiology, Biochemistry, Pharmacology, Physiology and Biophysics, and Psychology with the degree being awarded in Anatomy/Neuroscience, Biochemistry/Neuroscience, etc. Over forty faculty members in these five departments are involved in Neuroscience research and can serve as supervisors in this programme. The student must be accepted first by the Departmental Graduate Programme Committee and then by the Neuroscience Programme Committee.

The programme is designed to give the student a broad knowledge of the field of Neuroscience in addition to specialized training in one field of research. Normally, the student must take at least two half classes in neuroscience outside the department in which they are registered, which would replace some of the departmental course requirements. The student's Supervisory Committee will be selected by the Departmental Graduate Programme Committee and the Neuroscience Programme Committee; the Supervisory Committee is primarily responsible for designing and approving the programme that will best meet the student's needs.

I. Admission Requirements

In order to be admitted into the Neuroscience programme, a student must have a 4-year honours bachelor's degree with an average of A- or better in two most recent years, or equivalent. Students with a BSc degree wishing to do a PhD should be registered initially in the MSc programme, but may be considered for transfer into the PhD programme after successful completion of the MSc class requirements. Students with strong undergraduate training in Neuroscience may apply to have some of the course requirements waived.

II. Classes Offered

- ANAT 5060.03/NESC 5060.03: Neurobiology and Neurological Disorders
- ANAT 5062.03/NESC 5062.03: Autonomic Regulation: Central Mechanisms
- ANAT 5063.03/NESC 5063.03: Neurobiology of the Peripheral Autonomic Nervous System
- ANAT 5070.03: Chemical Neuroanatomy
- ANAT 5090.03 Cellular Development in the Nervous System
- ANAT 5100.03: Neuroanatomy
- BIOC 5301.03: Biochemical Communication
- NESC 5070.03: Chemical Neurobiology
- NESC 6000.03: Selected Topics in Neuroscience
- NESC 6100.06: Principles of Neuroscience
- PHAC 5405.03: Advanced Pharmacology
- PHAC 5600 series Neuropharmacology
- PHAC 5603.03: Neuropharmacology of Pain
- PHAC 5605.03: Extracellular Actions of ATP and Adenosine in the Nervous System
- PHAC 5609.03: Neural Transplantation
- PHAC 5619.03: The Autonomic Nervous System and its Pharmacology
- PHYL 5494.03: Synaptic Transmitters
- PHYL 5511.03: Neurophysiology

Nursing

Location: Forrester Building, First Floor
5869 University Avenue
Halifax, NS B3H 3J5

Telephone: (902) 494-2535
Fax: (902) 494-3487
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Director
Black, E.J.

Professors

Keddy, B.A., BScN (MCSV), MA, PhD (Dal), RN
Ritchie, J.A., BN (UNB), MN, PhD (Pitts), RN
Stewart, M., BScN (McM), MN, PhD (Dal), RN, Associate Dean,
Faculty of Graduate Studies

Associate Professors

Arklie, M., BN (Dal), MS (Boston), PhD (Texas), RN
Black, E.J., EdD (UBC), MEd (Boston), BN (Dal)
Downe-Wamboldt, B., BN, MEd (Dal), PhD (Texas), RN
Gregor, F., BN, MN, PhD (Dal), RN, Associate Director,
Co-ordinator, Graduate Programme
Hart, G.A., BN (McG), MSN (UBC), RN
Horrocks, M.J., BSN (UBC), MS (Psych N), MS (PHN), D.CMHN
(UCSF), AED (UofT)
Hughes, J.M., BN (Dal), MS (Boston) RN
Smillie, C., BScN (UBC), BEd (MSVU), MSc (Dal), RN
Sommerfeld, D., BScN (MSVU), MSN (UBC), RN
Tamlyn, D.L., BN (McG), MEd (Ottawa), PhD (Dal), RN
Wong, S., BScN (MSVU), MScN (Western), PhD (Dal), RN

Assistant Professor

Meagher-Stewart, D., BScN (MSVU), MS (McM), RN

Honorary Adjunct Professor

Butler, L., BScN (MSVU), MN (Dal), PhD (UofT)

I. Admission Requirements

All applicants must be licensed to practice as registered nurses (active practitioner) in a province in Canada or in a foreign country. Applicants must have a Bachelor's degree with a minimum "B" standing. The Graduate Record Examination (Aptitude Test) must be taken and the results forwarded to the Graduate Programme Coordinator before a decision on admissibility can be made. Basic preparation including work experience for the clinical specialization study is required, as are introductory classes in research and statistics. Three letters of reference are also required.

II. Degree Programmes

A. Master of Nursing (MN)

Dalhousie University School of Nursing offers a two-year research-oriented programme preparing graduates to demonstrate leadership in nursing. The programme consists of 8 credits. Following completion of core classes which include advanced preparation in clinical nursing, students choose among three streams:

- A thesis is intended for those students seeking to conduct independent and/or collaborative research,
- A practicum is intended for those students seeking to increase knowledge and skills in health care policy development, implementation or evaluation, or

- An advanced practitioner option is intended for those students seeking preparation as an advanced nursing practitioner.

Prospective applicants are encouraged to consult the School of Nursing to identify specific clinical offerings in any academic year. Elective class(es) may be chosen, in consultation with the academic advisor, from a variety of fields.

The MN programme is accepted by MPHEC as the regional programme for the Maritime Provinces. Non-nursing electives may be taken at other universities (prior approval must be obtained from the School of Nursing). Graduate nursing classes within the programme are also offered by distance education modes to other Maritime regional centres.

B. Master of Nursing with Master of Health Services Administration (Combined MN/MHSA)

The combined MN/MHSA programme is a three-year programme which enables students to select classes leading to degrees of Master of Nursing and Master of Health Services Administration. The MN/MHSA programme is designed to enable students to:

- Advance knowledge in the area of nursing management;
- Analyze, implement, and evaluate theories and models relevant to nursing;
- Conduct independent, and/or collaborative research;
- Work collaboratively with other health professions in planning, implementing, and evaluating health care; and
- Demonstrate leadership in nursing and society.

The method of delivery includes traditional classroom seminar/classes, professional clinical experiences, a residency in administration in a nursing area and a thesis with an administrative focus. The thesis committee will include faculty committee members from the Schools of Nursing and/or Health Services Administration. The integrity of both programmes is maintained by the design of the three year MN/MHSA programme. However, the number of credits required is reduced by electing to take this joint programme.

Candidates for the MN/MHSA programme must satisfy the entrance requirements of both programmes, and may obtain further information about the combined programme by contacting either the School of Health Services Administration or the School of Nursing. For admission, students must apply to both the School of Health Services Administration and the School of Nursing individually. Students applying for the MN/MHSA programme may submit GRE results in lieu of the GMAT results.

III. Classes Offered

NURS 5000.03: Intermediate Statistics. Math Dept.
NURS 5100.03/NURS 5120.03: Research Methods I and II.
NURS 5200.03: Health Care Reform and Its Impact on Nursing.
NURS 5310.03: Social Organization of Nursing Knowledge.
NURS 5330.03: Theoretical Concepts & Competencies Related to the Helping Relationship in Advanced Nursing Practice.
NURS 5410.03: Advanced Study of Biopsychosocial Phenomena.
NURS 5420.03: Advanced Study of Nursing Approaches to Biopsychosocial Phenomena.
NURS 5510.03: Advanced Clinical Practicum I.
NURS 5530.03: Advanced Clinical Practicum II.
NURS 5610.03: Advanced Practitioner Role Development.
NURS 5620.06: Advanced Practice Role Practicum.
PREREQUISITE: NURS 5540.03
NURS 5730.03: Pathophysiology & Pharmacology for Advanced Nursing Practice.
NURS 5740.03: Advanced Health Assessment.
PREREQUISITE: NURS 5730.03
NURS 5800.06: Reading Class.
NURS 5810.03/NURS 5820.03: Reading Class.
NURS 5900.06: Reading Class.
NURS 5910.03A/N5920.03: Reading Class.
NURS 7000.06: Nursing Practicum.
NURS 9000.00 Thesis

Nursing Electives

*NURS 5160.03: Analysis of Research.
NURS 5850.03: Women and Aging.

*NURS 5860.03: Grounded Theory.
 *NURS 5770.03: Mind and Body in Nursing Practice.
 NURS 5830.03: Death and Dying/Palliative Care.
 *NURS 5898.03: Health Promotion/Primary Health Care and Professional Practice.
 *NURS 5960.03: Social Support. M. Stewart
 NURS 5950.03 A or B: Self-directed Learning in Nursing.
 NURS 5990.03: Interdisciplinary Human Nutrition.
 *NURS 6000.03A/MHSA 6000.03: Nursing Administration and Leadership.

*Not offered every year

A minimum registration of three students is normally required for any class to be offered.

Oceanography

Location: Life Sciences Centre
 1355 Oxford Street
 Halifax, NS B3H 4J1
Telephone: (902) 494-3557
Fax: (902) 494-3877
e-mail: Oceanography@Dal.Ca
WWW: <http://www.phys.ocean.dal.ca>

Chair of Department

Bowen, A.J.

Graduate Studies Co-ordinator

Grant, J.

Professors

Beaumont, C., BSc (Sussex), PhD (Dal), INCO Fellow of the CIAR
 Bowen, A.J., MA (Cantab), PhD (Scripps), FRSC
 Boyd, C.M., MA (Ind), PhD (Scripps)
 Chylek, P., Diploma (Physics) (Charles, Prague), PhD (Calif), joint appointment in Physics
 Cullen, J., AB (Calif, Santa Cruz), PhD (Scripps) (NSERC/Satlantic Research Chair)
 Doyle, R.W., MSc (Dal), PhD (Yale), cross appointment with Biology
 Fournier, R.O., MSc (Wm. & Mary), PhD (URI)
 Hay, A., BSc, MSc (Western), PhD (UBC) (NSERC/Satlantic Research Chair)
 Lewis, M.R., BS, MS (Maryland), PhD (Dal)
 Mills, E.L., BSc (Carl.), MS, PhD (Yale), FLS
 Moore, R.M., BA (Oxon.), PhD (Southampton)
 Ruddick, B.R., BSc (Victoria), PhD (MIT)

Associate Professors

Boudreau, B.P., BSc (UNB), MS (Texas A&M), PhD (Yale)
 Grant, J., BSc (Duke), PhD (South Carolina)
 Loudon, K.B., BA (Oberlin), MEd. (Temple), PhD (MIT)
 Taggart, C.T., BSc (Carleton), MSc (York), PhD (McG)
 Thompson, K.R., BSc, MSc (Manchester), PhD (Liv), major appointment in Math, Stats, and Computing. Sc.

Associate Professor (Research)

Johnson, B.D., BEng (NC State), MEng (TUNS), PhD (Dal)

Assistant Professors

Folkens, I., BSc (Dal), MSc, PhD (UofT), joint appointment with Physics
 Fu, Q., MSc (Peking), PhD (Utah)
 Hill, P.S., AB (Dartmouth), MSc, PhD (Wash)
 Kelley, D., BSc (MtA), PhD (Dal)
 Miller, W., BA (Wake Forest), MSc (S. Florida), PhD (URI)

Honorary Adjunct Professors

Cembella, A., BSc (Simon Fraser), PhD (UBC), NRC
 Craigie, J.S., BA, MA, PhD (Queen's), NRC
 Frank, K.T., BSc, PhD (Toledo), Dept. of Fisheries & Ocean, BIO
 Hargrave, B.T., BSc, MSc (Dal), PhD (UBC), BIO, Fisheries & Oceans
 Hertzman, O., BA, BSc, MSc (UBC), PhD (Washington)
 Isaac, G., BSc, MSc, PhD (McG), Atmospheric Environment Service
 King, M., BA (Colorado College), MS, PhD (Arizona), NASA, Goddard Space Flight Center
 Mayer, L., BS (Rhode Island), PhD (Scripps), Ocean Mapping Group, UNB
 Oakley, N.S., BSc (McG), MSc (Sask), PhD (McM), BIO
 Pearre, S., BSc (Virginia), MSc, PhD (Dal)
 Piper, D.J.W., BA, MA, PhD (Cantab), BIO

Sathyendranath, S., BSc (St. Teresa's College), PhD (Univ. P & M Curie)
Smith, J.N., BSc (McG), MSc (Chicago), PhD (UofT), BIO
Smith, P.C., BSc MS (Brown), PhD (MIT/Woods Hole
Oceanography Inst), Atlantic Oceanographic Laboratory, BIO
Wangersky, P., BSc (Brown), PhD (Yale)
Wright, D.G., BSc (Laurentian), PhD (UBC), Atlantic Oceanographic
Laboratory, BIO

Honorary Research Associates

Dobson, F., BSc, MSc (Dal), PhD (UBC), Atlantic Oceanographic
Laboratory, Environment Canada
Gershey, R., BSc (Scranton), MSc (Texas), PhD (Dal), BDR Research
Ltd.
Harrison, W.G., BSc, PhD (NC State Univ), BIO, Ocean Sciences
Division
Head, E. BA (Cambridge), MPhil (Lond), PhD (Wales), Dept. of
Fisheries and Oceans, BIO
Lader, J., BSc (Acadia), PhD (Dal), Dept. of Fisheries and Oceans, BIO
Sinclair, M., BSc (Hons) (Qu), MSc (Southampton), PhD (Scripps),
Fisheries and Oceans

I. Admission Requirements

A good Honours degree, or its equivalent, is required for admission to the Oceanography Department.

Undergraduate preparation may be in any of the basic sciences - Biology, Chemistry, Physics or Geology. Degrees in Atmospheric Science, Meteorology, Mathematics or Engineering are also acceptable if the undergraduate work includes a reasonably good background in relevant basic science.

II. Degree Programmes

A. Master of Science (MSc)

For minimum time required to complete this programme, see Section 4, of the Faculty of Graduate Studies Regulations in this calendar.

Minimum course requirements are a total of 5 half-credit classes at the 5000 level or higher, at least three of which must be chosen from the introductory classes (5110.03-5140.03, 5520.03).

Additional classes may be required to strengthen a student's background in basic science.

Research and a thesis are required.

B. Doctor of Philosophy (PhD)

For minimum time required to complete this programme, see Section 5. In addition to completion of four of the five introductory half-classes (5110.03-5140.03, 5520.03), at least four half-credit classes in advanced classes, ordinarily in the area of the candidate's special interest are normally required. More classes will frequently be desirable.

Candidates must write and defend a proposal for thesis research.

Research and a thesis are required.

III. Classes Offered

Classes marked * are not offered every year. Please consult timetable upon registration.

*OCEA 5080.03: Time Series Analysis II. K. Thompson; Cross-listed with STAT 5400.03.

OCEA 5110.03: Introduction to Geological Oceanography. P. Hill, K. Loudon

OCEA 5120.03: Introduction to Physical Oceanography. B. Ruddick

OCEA 5130.03: Introduction to Chemical Oceanography. R.M. Moore

OCEA 5140.03: Introduction to Biological Oceanography. M. Lewis

*OCEA 5160.03: Fisheries Oceanography. C. Taggart

*OCEA 5210.03: Time Series Analysis. K. Thompson

*OCEA 5221.03: Ocean Dynamics. B. Ruddick

*OCEA 5222.03: Estuary, Coast and Shelf Dynamics. A.J. Bowen

*OCEA 5223.03: Ocean Waves. B. Ruddick

*OCEA 5230.03: Biology of Phytoplankton. M. Lewis

OCEA 5250.03: Introduction to Acoustical Oceanography. A. Hay

*OCEA 5270.03: Special Topics in Biological Oceanography. staff

*OCEA 5280.03: Chemical Sedimentology & Early Diagenesis. B. Boudreau

OCEA 5285.03: Marine Geochemical Processes. W. Miller

*OCEA 5290.03: Advanced Chemical Oceanography. R. Moore

*OCEA 5292.03: Chemical Methods in Oceanography. R. Moore

*OCEA 5293.03: Advanced Marine Particles. P. Hill

*OCEA 5295.03: Solution Chemistry for Oceanographers. B. Boudreau

OCEA 5311.03: Fluid Dynamics I. D. Kelley

*OCEA 5312.03: Fluid Dynamics II. A.J. Bowen

*OCEA 5330.03: Benthic Ecology. J. Grant

*OCEA 5331.03: History of Marine Science. E.L. Mills

*OCEA 5350.03: Marine Geophysics. K.E. Loudon

*OCEA 5380.03: Marine Modelling. M. Lewis

*OCEA 5411.03: Dynamic Meteorology I. Q. Fu

CROSS-LISTING: PHYC 5441.03

*OCEA 5412.03: Dynamic Meteorology II. Q. Fu

CROSS-LISTING: PHYC 5412.03

*OCEA 5500.03: Atmospheric Physics I. Staff.

CROSS-LISTING: PHYC 5500.03

*OCEA 5510.03: Atmospheric Physics II. Staff

CROSS-LISTING: PHYC 5510.03

OCEA 5520.03: Introduction to Meteorology. TBA

CROSS-LISTING: PHYC 5520.03

*OCEA 5530.03: Introduction to Radiation and Climate. P. Chylek.

CROSS-LISTING: PHYC 5530.03

*OCEA 5541.03: Synoptic Meteorology. Staff

*OCEA 5555.03: Radar and Satellite Meteorology. Staff

*OCEA 5560.03: Mesoscale Dynamics. Staff

CROSS-LISTING: PHYC 5560.03

OCEA 5570.03: Light Scattering and Radiative Transfer. P. Chylek

*OCEA 5575.03: Topics in Atmospheric Radiation. Q. Fu

OCEA 5580.03: Cloud Physics. P. Chylek

*OCEA 5590.03: Paleoclimatology. TBA

OCEA 5595.03: Atmospheric Chemistry. I. Foldvik

OCEA 5600.03: Invertebrate Fisheries and Aquaculture. J. Grant, G. Newkirk

OCEA 9000.00: MSc Thesis

OCEA 9530.00: PhD Thesis

In addition to the weekly oceanographic departmental seminar, each of the oceanographic subdisciplines has a regular seminar in its specialty. At the seminar, topics of specific interest are discussed and examined. Students are required to attend both the general departmental seminar and the specialty seminar in their field of interest.

Oral and Maxillofacial Surgery

Location: 5981 University Avenue
Halifax, NS B3H 3J5
Telephone: (902) 494-1679

Chair
Precious, D.S.

Professors
Cohen, M.M., Jr., AB (Mich), DMD (Tufts), MSD (Minn), MPH (Boston), PhD (Minn), FCCMG
Coonan, T.J., MD, FRCP(C)
Holness, R., BSc, FRCS(C), DABNS
Janigan, D., BSc, MD, CM
Lovely, F.W., DDS (Dal), MS (Mich), FRCD(C) FICD, FACD
Marrie, T., MD, FRCP(C), FACP
Precious, D.S, DDS, MSc (Dal), FRCD(C), FICD, FADI, Programme Director

Associate Professors
Alexander, D., MD, FRCS(C)
Amirault, D., MD, FRCS(C)
Forward, K., MD, FRCP(C)
Hamilton, K., MBBS, FRCP
Howes, W., MD, FRCS(C)
Leahey, L., MD, FRCS(C)
Lovas, J.G.L., BSc, DDS (Tor), MSc (Western), FRCD(C)
Mann, E., BSc, MD, FRCP(C)

Assistant Professors
Drysdale, A.A., MDCM, FRCP(C), (Emeritus)
Goodday, R.H.B., DDS, MSc (Dal), FRCD(C)
Goulding, J., BSc, MD, MCFP(EM), FACEP
Hung, O., MD, Cert. in Anaesthesia, FRCP(C)
Michael, R., BSc, MD, FRCP(C), FCCP
Morrison, A.D., DDS, MSc, FRCD(C)
Pass, B., MSc, PhD, DDS
Wright, B.A., BDS (Lond), LDS, RCS (Eng), DDS (Dal), MS (Indiana), MD (Dal), FRCP(C)
Yabsley, R.H., MD, BSc (Med), FRCS(C), FACS

The six-year programme in Oral and Maxillofacial Surgery which starts on June 1st each year is designed to provide students with a comprehensive background for the practice and teaching of Oral and Maxillofacial Surgery, and to qualify them for examination by the Royal College of Dentists of Canada.

Particular emphasis is placed upon the basic sciences and clinical hospital surgery practice.

I. Admission Requirements

Candidates to be considered must possess both a DDS or DMD and the be eligible for Licensure in the Province of Nova Scotia (as granted by the Provincial Dental Board of Nova Scotia).

Candidates must register for the entire six years of the programme and pay full tuition for the first five years and thesis only registration for the sixth year.

Application must be completed prior to June 30 of the year preceding commencement of the programme.

II. MD/MSc Degree Programme Requirements

1. Satisfactory completion or credit for the prescribed classes
2. Satisfactory knowledge and skills in all the phases of clinical oral and maxillofacial surgery
3. Satisfactory completion of a research study and submission of the results in the form of a thesis acceptable to the Director of the programme

In addition to the requirements for successful completion of the MD degree, the following classes are required to complete the MSc component of the programme.

III. Curriculum

Year 1

ORAL 5000.06: Anatomy - 1 credit
ORAL 5010.06: Surg Anatomy - 1 credit
ORAL 5060.06: Oral Pathology - 1 credit
ORAL 5070.06: Seminar - Audit
ORAL 5080.06: Clinical Oral Surgery - 1 credit

Year 2

ORAL 6000.06: Anaesthesia - 1 credit
ORAL 6010.06: Medicine - Audit
ORAL 6030.06: Oral Pathology - 1 credit
ORAL 6040.06: Seminar - Audit
ORAL 6050.06: Clinical Oral Surgery - 1 credit
ORAL 6060.06: Orthopedics - Audit
ORAL 6070.06: Infectious Diseases - Audit
ORAL 6080.06: Emergency Medicine - Audit
ORAL 6090.06: Neurosurgery - Audit

Year 3

ORAL 7000.06: Oral Pathology - 1 credit
ORAL 7010.06: Seminar - 1 credit
ORAL 7020.06: Clinical Oral Surgery - 1 credit
ORAL 7030.06: Research - 1 credit

Year 4

ORAL 8000.06: Clinical Oral Surgery - 1 credit
ORAL 8010.06: Seminar - 1 credit
ORAL 9000.00: MSc Thesis

Pathology

Location: Sir Charles Tupper Building, 11th Floor
5859 University Avenue
Halifax, NS B3H 4H7
Telephone: (902) 494-2091
Fax: (902) 494-2519

Head of Department
Moss, M.A.

Professors

Fraser, A.D., BA (Houghton), PhD (Boston), FCACB, DABCC
Givner, M.L., BSc, MSc, PhD (McG)
Guernsey, D.L., BA (Lehigh), MS (Bridgeport), PhD (Hawaii)
Moss, M.A., MB, BS (London), MSc (Dal), FRCP(C)
Rowden, G., BSc (Exeter), MSc, PhD (Lond), DSc (Lond), FRCP
(UK), MRC Path
van Velaen, D., MD, PhD (Amsterdam)

Associate Professors

Greer, W.L., BSc, PhD (Western), FCCMG - Graduate Studies
Coordinator
Gupta, R., MB, BS (India), FRCP(C)
Nassar, B.A., BSc (Beirut), PhD (Newcastle), MB, BCh (Cairo),
FRCP(C)
Neumann, P.E., MD, BA (Brown), (major appointment in Anatomy
and Neurobiology)
Riddell, D.C., BSc, PhD (Queen's)
Trillo, A.A., MD (Nat'l Univ Mexico), PhD (Western)
Wright, Jr., J.R., BS, MA, MD, PhD (Ohio State)
Zayed, E.Z.M.A., MB, BCh (Egypt) FRCP(C)

Assistant Professors

Dooley, K.C., PhD (UBC)
Dymond, L.C., BSc (Memorial), MSc, MD (Dal), FRCP(C)
Fraser, R.B., MSc, MD (Dal), FRCP(C), FCAP, PP
Guha, A.K., BSc, MD, MSc, PhD (Dal), FRCP(C)
McAlister, V., BCh, DCh, MB (Dublin), FRSC(I), FRCS(C), (major
appointment in Department of Surgery)
Resch, L., MD (Dal), FRCP
Wright, B.A., BDS (Lond), LDS, RCS (Eng), DDS (Dal), MS (Indiana),
MD (Dal), FRCP (C)

Research for the MSc degree may be conducted in experimental pathology and/or allied fields of medical sciences (e.g. clinical chemistry, hematology or histopathology) for those planning a career as a laboratory scientist.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. In addition, candidates with the MD degree may be admitted.

II. Master of Science (MSc)

This programme is intended to give the student a strong background in the experimental approach in pathology. Although the programme may be completed in 12 months, most students require 24 months.

The research work and thesis defence are valued at 2½ credits. All students are required to attend and participate in the research seminar programme (PATH 5091.03). In addition, two other credits are required, in a subject related to the thesis or in the laboratory

field chosen. Other classes may be required depending upon the background preparation of the student, the nature of their thesis, or the student's career goals.

Candidates must participate as appropriate in the weekly series of conference seminars in Pathobiology, Laboratory Medicine, Surgical and Autopsy conferences or molecular pathology/genetics.

Research and a thesis are required. The thesis must be defended by oral examination which covers the candidate's area of study and research. Yearly presentations to the Department are required of every candidate.

II. Classes Offered

PATH 5000.03: General Pathology.

A reading/discussion class covering basic systems and processes in pathology.
INSTRUCTOR: J. Wright

PATH 5001.03: Advanced Mechanisms of Pathology.

This class will provide an indepth study of such topics as cell injury, adaptation and repair, inflammation, fluid and hemodynamic derangements, free radical damage, environmental pathology and aging.

PATH 5011.03: Biochemistry of Disorders I.

This class is an introduction to the pathophysiology of disease. It provides the clinical and biochemical background to disease groups and system disorders and the laboratory approach to their diagnosis. Topics include cardiovascular, renal, gastrointestinal and hepatobiliary disorders, in addition to acid-base, blood and immune abnormalities.

INSTRUCTOR: B.A. Nassar

CROSS-LISTING: BIOC 4811.03/5811.03

PATH 5012.03: Biochemistry of Disorders II.

This class is an introduction to the pathophysiology of disease. It uses the same approach as PATH 5012.03 but different groups of diseases are discussed. Topics include carbohydrate, lipid and amino acid disorders; indocrine and rheumatological diseases, as well as tumor markers and toxicology.

INSTRUCTOR: B.A. Nassar

CROSS-LISTING: BIOC 4812.03/5812.03

PATH 5027.03: Molecular Mechanisms of Cancer.

An indepth study of the molecular and genetic basis of cancer. The multi-step nature of carcinogenesis will be the broad basis for studying oncogenes, tumour suppressor genes, genes regulating differentiation and apoptosis, and cancer susceptibility genes. Certain molecular biology techniques will be discussed in order to fully understand the molecular events of cancer.

INSTRUCTORS: D. Guernsey, R. Rajaraman

CROSS-LISTING: MICR 5027.03/4027.03

PATH 5040.03: Pathobiology of Cancer.

This class will outline the pathobiology of neoplasia. It will discuss both normal and abnormal mechanisms of cell growth and differentiation since cancer is ultimately a disease of these processes. The basic biology of carcinogenesis and behaviour of tumours will be highlighted. The clinical aspects of cancer management will also be presented. (Not offered in 1997/98.)

INSTRUCTOR: A. Guha

PATH 5050.03: Immunopathology.

This class will explore the intricacies, functions and abnormalities of the immune system. Both the humeral and cellular arms of the immune system will be detailed. Immunological deficiencies and autoimmune diseases will be discussed. Clinical aspects of topics such as transplantation and tumour immunology will also be presented.

INSTRUCTOR: A. Guha

PATH 5051.03: Special Topics: Molecular Pathology and Molecular Genetics.

INSTRUCTOR: C. Riddell

PATH 5060.06: Special Topics: Morphometrics and Stereology.

PATH 5070.06: Special Topics: Electron Microscopy.

Introduction to diagnostic electron microscopy. Coverage of virology, renal pathology and tumour diagnosis.

INSTRUCTOR: G. Rowden

PATH 5080.06: Special Topics: Immunocytochemistry and Histochemistry.

Basics of immunostaining technique including fluorescent and peroxidase methods, FACS analysis. Applications in various fields of diagnostic surgical pathology. In situ DNA/RNA hybridization methods for infectious agents.

INSTRUCTOR: G. Rowden

PATH 5091.03: Pathology Research Seminar Series.

The objectives of this class are: 1) to provide a forum for graduate students to develop skills at presenting seminars; 2) to provide constructive evaluation of their research; and 3) to promote interaction between students and faculty.

INSTRUCTOR: W.L. Greer

PATH 9000.00 MSc Thesis

III. Seminars - Conferences

A series of weekly seminars, journal clubs, and conferences is conducted throughout the year in various areas of pathology, and laboratory medicine.

IV. Areas of Specialization for MSc Thesis

- Computerization and instrumental methods; diagnostic enzymology; screening for metabolic disease: K.C. Dooley
- Interference in digoxin assays; hypouricemic states: L.C. Dymond
- Clinical toxicology; therapeutic drug monitoring: A.D. Fraser
- Animal models of diabetes: R.B. Fraser
- Hormone replacement therapy: M.L. Givner
- Human molecular genetics; molecular diagnosis of cancer: W.L. Greer
- Molecular oncology; genetic basis of human disease; molecular neurobiology: D.L. Guernsey
- Autoimmune disease testing and use of monoclonal antibodies for cancer detection and therapy: A.K. Guha
- Kidney transplantation-chronic rejection; uropathology: R. Gupta
- Clinical transplantation; recipient's immune conditioning and chronic rejection: V. McAlister
- Environmental pathology: M.A. Moss
- Essential fatty acids and prostaglandins; molecular diagnosis of hyperlipidemias; familial cancers; porphyrias: B. Nassar
- Developmental neurogenetics: P.E. Neumann
- Computerized image analysis: L. Resch
- Tumour suppressors; human molecular genetics: D.C. Riddell
- Dermatopathology with emphasis on the immune system of the skin: G. Rowden
- Cardiopathology; atherosclerosis; nephropathology; ultrastructural pathology: A.A. Trillo
- Head and neck pathology; oral disease and diseases of salivary glands: B.A. Wright
- Experimental diabetes; islet transplantation; perinatal pathology: J. Wright
- Coagulation and platelet disorders: E.Z.M.A. Zayed

Pharmacology

Location: Sir Charles Tupper Building, Sixth Floor
5859 University Avenue
Halifax, NS B3H 4H7
Telephone: (902) 494-3435
Fax: (902) 494-1388

Head of Department

Robertson, H.A.

Professors

Downie, J.W., BSc, PhD (Man)
Ferrier, G.R., BSc, PhD (Man)
Gray, J.D., BSc, MD, (Alta), FRCP(C), Medicine
Renton, K.W., BSc (Sir Geo Wms), PhD (McG)
Robertson, H.A., BA, MSc, (Western), PhD (Cantab)
Sawynok, J., BSc, MSc (Melb), PhD (Queen's)
Vohra, M.M., BPhm, MPhm, PhD (Ban)
White, T.D., BSc, MSc (Western), PhD (Bristol) Graduate Studies
Coordinator

Associate Professors

Howlett, S.E., BSc (Concordia), MSc, PhD (Memorial)
Kelly, M.E.M., BSc, PhD (Southampton)
McKenzie, G.M., BSc (Windsor), MSc, PhD (Dal)

Assistant Professors

Blay, J., BSc (Brad), PhD (Cantab)
Hong, M., BSc, MSc, PhD (Queen's), Major Appointment in Surgery
Tatton, N., BSc, MSc, PhD (UofT)

Cross Appointments

Hall, R.I., BSc Pharm, MD (Dal), FRCP(C), FCC, Major Appointment in Department of Anesthesia
Hung, O.R., BSc Pharm, MD (Dal) FRCP(C), Major Appointment in Department of Anesthesia
Kopala, L.C., BSc (Alta), MD (Calgary), Major Appointment in Department of Psychiatry
Peterson, T.C., BSc (SMU), MSc, PhD (Dal), Major Appointment in Department of Medicine
Ruedy, J., MDCM (Queens), FRCP(C), Major Appointment Dean Faculty of Medicine at Dalhousie
Rusak, B., BA (Tor), PhD (Berkeley), Major Appointment in Department of Psychology

Adjunct Appointments

Marshall, W., BSc (Acadia), PhD (UBC), Major Appointment in Department of Biology at St. FX University
Cribb, A., DVM (Saskatchewan), PhD (UofT), Major Appointment in Department of Anatomy / Physiology at UPRI

Post-Doctoral Fellows and Research Associates/Assistants 1996

Armstrong, J., BSc (Laurentian), MSc, PhD (Carleton)
Babity, J., BSc, PhD (UBC)
Denovan-Wright, E., BSc, PhD (Dal)
Du, H., PhD (Beijing)
Guido, M., BSc, PhD (Cordoba, Argentina)
Kelly, M.E., BA (Western), MSc, PhD (Carleton)
Zhu, J., PhD (Tongji)

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. Students registered in the Faculty of Medicine may, upon completion of the second year of studies, be admitted to a PhD programme.

Normally, a previous class in Biochemistry and in Physiology will be expected; however, applicants are advised to consult the department as to the appropriateness of their specific academic background. With departmental permission, specific classes in these subjects may be taken as part of a graduate programme in Pharmacology.

II. Degree Programmes

A. Master of Science (MSc)

Candidates must satisfactorily complete the following classes or their equivalents: PHAC 5406.03A, PHAC 5407.03B, PHAC 5405.03B, PHAC 5506.03R, and a minimum of two half credit courses in the PHAC 5600 series. A course in statistics may be required if an appropriate course has not been successfully completed before entrance to the program. This may be taken during the course of the graduate program. An ancillary course chosen from courses offered by other departments in the Faculty of Graduate Studies may be required. Students are expected to attend all research seminars within the department. Thesis research and preparation and oral defense of a thesis are required.

Pharmacology/Industrial Research Experience

There is a possibility for MSc students to take a three-four month Industrial Research Rotation (PHAC 5514.00R) in a pharmaceutical company or government laboratory. This rotation will be under the joint guidance of a faculty member and a supervisor within the industrial / government laboratory and must be approved by the Department.

B. Doctor of Philosophy (PhD)

A qualifying examination for entrance into the PhD program may be required. Candidates must satisfactorily complete the course requirements listed for the MSc degree, plus PHAC 5507.03R and two additional half credit courses in the 5600 series. A course in statistics may be required if an appropriate course has not been successfully completed before entrance to the program. An ancillary course chosen from courses offered by another department in the Faculty of Graduate Studies is required. Students are required to demonstrate laboratories, give 2 lectures at the undergraduate level (PHAC 5507.03R) and to attend all research seminars within the department. A comprehensive examination must be passed within the first year of admission into the PhD program. Thesis research and preparation and oral defense of a thesis are required.

C. Graduate Programmes in Pharmacology/ Neuroscience

Pharmacology also offers MSc and PhD programs in Pharmacology/Neuroscience through the Interdisciplinary Neuroscience Program.

D. Doctor of Philosophy/Doctor of Medicine (MD/PhD)

Selected medical students with superior academic records who intend to pursue careers in biomedical research will be permitted to withdraw temporarily from medical school to pursue a program of study leading to the PhD degree. Students will then return to medical school to complete the MD degree. The candidate must have a demonstrated interest in research.

The following courses are required: PHAC 5405.03B advanced pharmacology, 1 ancillary course, 3 specialty courses (PHAC 5600 series), PHAC 5507.03R practice teaching, comprehensive examination, thesis research, preparation and oral defense of a thesis. Other courses may be required.

III. Areas of Research Specialization

Faculty research interests include: Cardiac electrophysiology and pharmacology, polypeptide growth factors and signal transduction, general anaesthetics, neurotransmitter receptor mechanisms,

autonomic physiology and pharmacology, behavioural pharmacology, general anaesthetics, nerve regeneration, molecular biology, mechanisms of analgesia, drug metabolism, and experimental therapeutics.

III. Classes Offered

Three or four classes in the 5600 series are offered each term on a two-year rotating cycle as indicated below.

- PHAC 5405.03: Advanced Pharmacology
- PHAC 5406.03: Introduction to Pharmacology I
- PHAC 5407.03: Introduction to Pharmacology II
- PHAC 5408.03: Experimental Pharmacology.
- PHAC 5506.03: MSc Practice Teaching.
- PHAC 5507.03: PhD Practice Teaching.
- PHAC 5514.00: Industrial Research Rotation
- *PHAC 5602.03: Cardiac Excitation and Contraction; Physiology and Pharmacology. G.R. Ferrier
- *PHAC 5609.03: Anatomical and Molecular Neuropharmacology of the Basal Ganglia: the Scientific Basis for Grafting and Neural Transplantation. H.A. Robertson, I. Mendez
- *PHAC 5610.03: Anesthesia. R. Hall
- *PHAC 5612.03: Clinical Trial Design. J. Gray
- *PHAC 5613.03: Pharmacology of Autocoids. M.M. Vohra
- *PHAC 5615.03: Transmembrane signal transduction in vertebrate cells. M.E. Kelly
- *PHAC 5623.03: Clinical Pharmacology. J. Gray
- *PHAC 5621.03: Pharmacology of Drug Abuse. G. McKenzie
- PHAC 9000.00: MSc Thesis
- PHAC 9530.00: PhD Thesis

Offered in 1998-99*

- PHAC 5605.03: Extracellular Actions of ATP and Adenosine. T.D. White
- PHAC 5607.03: Pharmacology of Congestive Heart Failure. S.E. Howlett
- PHAC 5611.03: Drug Metabolism. K.W. Renton
- PHAC 5619.03: The Autonomic Nervous System and its Pharmacology. J. Downie
- PHAC 5623.03: Clinical Pharmacology. J. Gray
- PHAC 5603.03: Neuropharmacology of Pain. J. Sawynok
- PHAC 5616.03: Molecular neuropharmacology. H. Robertson
- PHAC 5617.03: Pharmacology of Cell Growth. J. Blay
- PHAC 5618.03: Pharmacology of Selected Cytokines in Disease. T.C. Peterson

*Classes offered are subject to change. Please contact the department.

Pharmacy

Location: Burbidge Building
5968 College Street
Halifax, NS B3H 3J5
Telephone: (902) 494-2378
Fax: (902) 494-1396

Director of College
Chandler, R.F.

Professors Emeriti

Duff, J.G., BSP, MSc (Sask), PhD (Fla)
Mezei, M., DipPharm (Bud), PhD (Oregon)

Professors

Butler, E., BSc (Chem), MSc (Chem), PhD (Colloid Chem, Bp)
Chandler, R.F., BSc Pharm, MSc (Alta), PhD (Syd)
Sketris, I.S., BSc (Pharm) (UofT.), PharmD (Minn), MPA (HSA) (Dal)
Yeung, P.K.F., BSc (Pharm), MSc (Man), PhD (Sask)
Yung, D.K., BA, BSP, MSc (Sask), PhD (Alta)

Associate Professors

Abraham, I., BPharm, MPharm (UST Kal), PhD (Neb)
Farmer, P.S., BSP, MSc (Sask), PhD (Portsmouth), Graduate Studies
Co-ordinator
Wneian, A.M., BSc(Pharm) (Dal), PharmD (MUSC)

Assistant Professors

Janke, K.K., BA (Psych) (St. Olaf), PhD (Pharm.Ad.) (Minn)

Honorary Adjunct Professors

Jones, D., BSc, PhD (Birm), F.I.Ceram, FIM, C.CHEM, FRSC(UK),
FADM, D.O.hc., major appointment in Faculty of Dentistry
A.K. Kirumira, BSc (Mosul), MSc (Reading), PhD (Murdoch)
P.T. Pollak, BSc, MD, PhD (UWO), FRCP
M. Quilliam, BSc, PhD (Manitoba)

There will be no new admission in 1997/98 to the MSc and PhD in Pharmacy programme. All graduate students currently enrolled in Masters and Doctoral programmes should refer to the 1996/97 Graduate Studies calendar for programme regulations and class descriptions.

Philosophy

Location: 1400 Henry Street
Halifax, NS B3H 3J5
Telephone: (902) 494-3810
Fax: (902) 494-3518
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Chairperson of Department
Campbell, R.M.

Professor Emeritus

Braybrooke, D., BA (Harvard), MA, PhD (Cornell) FRSC

Professors

Burns, S.A.M., BA (Acad), MA (Alta), PhD (Lond), Graduate
Co-ordinator
Campbell, R.M., BA (Harvard), PhD (Cornell)
Martin, R.M., BA (Columbia), MA, PhD (Mich)
Schotch, P.K., PhD (Wat)
Sherwin, S.B., BA (York), PhD (Stanford)

Associate Professors

Brett, N.C., BA (New Hampshire), MA, PhD (Wat)
MacIntosh, D., BA (Queens), PhD (UofT)
Vinci, T., BA (UofT), PhD (Pitts)

Assistant Professors

Campbell, S., BA, MA (Alta), PhD (UofT)
Hogan, M., AB (UC Berkeley), MA, PhD (Wisconsin)
Maitzen, S.A., BA (Northwestern), MA, PhD (Cornwall)

Honorary Adjunct Professor

Byrne, C.J., PhD (UofT) St. Francis Xavier

Candidates are expected to have some acquaintance with several areas of philosophy, including modern logic and the history of philosophy. Each student's programme is arranged individually in consultation with the department in relation to the student's interests and preparation. Enquiries should be addressed to the Graduate Studies Co-ordinator, in the Department.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

II. Degree Programmes

A. Master of Arts (MA)

One Year

For students with an Honours BA or equivalent in philosophy. Requirements include three classes* and a thesis.

Two Year

For those with a BA in philosophy or an honours degree in a related field. Requirements include four classes* in the first year, three in the second, and a thesis.

* NOTE: A "class" means one full-year or two half-year classes.

B. Doctor of Philosophy (PhD)

For minimum time required to complete this programme, see Degree Requirements under general Faculty regulations. Normally, the doctoral student will be required to attend three graduate seminars beyond the requirements for the MA. Reading knowledge

will usually be required in one language other than English in which a significant body of philosophical literature exists. There are three comprehensive examinations to be completed in (1) ethics and political philosophy; (2) metaphysics, epistemology, philosophy of language and science; (3) logic and philosophy of logic. Completion of the programme requires original research on a project of substantial dimensions, culminating in the submission and oral defence of a thesis. This research should be in an area already well-established as a speciality by members of the department, such as, political and social philosophy, ethics, philosophy of mind, epistemology, philosophy of language, or logic.

iii. Classes Offered

The Philosophy Department offers four kinds of graduate classes: adjunct, general, seminar, and directed reading. Adjunct classes presuppose no prior preparation in the area covered by the class. Thus, a graduate student with no previous training in modern symbolic logic could take the combination 2130.03 and 2140.03 which provides a comprehensive introduction to this subject. These classes, since they are not intended for advanced study in the area designated, are open to graduate students in philosophy only in special cases and by permission of the Department. General classes cover a wide range of topics and presuppose some previous study in the area covered by the class. They are suitable for graduate students who want to deepen their understanding of a general area of study but have not specialized in it as an undergraduate. Seminar classes are relatively narrow in focus and presuppose extensive previous study in the area. Directed Reading classes are developed jointly by a student and an instructor in special cases to suit individual interests and needs. These are subject to departmental approval.

NOTE: The classes listed are half-year, unless otherwise indicated, and not all are given in any one year. Instructors in seminar classes are likely to vary from year to year. Consult the department for further information.

A. Adjunct Classes

- PHIL 2130.03: Logic: Deduction. R.M. Martin, P.K. Schotch
- PHIL 2140.03: Logic: Logical Theory I. P.K. Schotch
- PHIL 2160.03: Philosophical Issues of Feminism. S. Sherwin, S. Campbell
- PHIL 2260.03: Philosophy of Art. S.A.M. Burns
- PHIL 2350.03: History of Philosophy: Ancient Philosophy I. T. Vinci and S.A.M. Burns
- PHIL 2370.03: History of Philosophy: Ancient Philosophy II
- PHIL 2410.03: Philosophy of Psychology. T. Tomkow
- PHIL 2550.03: Marxist Theory. Staff
- PHIL 2610.03: History of Philosophy: The Rationalists. S. Campbell, S.A.M. Burns
- PHIL 2620.03: History of Philosophy: The Empiricists. S.A.M. Burns, T. Vinci, D. MacIntosh
- PHIL 2700.06: Philosophy in Literature. R. Martin
- PHIL 2705.03: Philosophy in Literature. R. Martin

B. General Classes

- PHIL 5051.03: Theory of Knowledge. T. Vinci, D. MacIntosh
- PHIL 5060.03: Logic: Logical Theory II. P.K. Schotch
- PHIL 5100.06: Ethics. R. Campbell
- PHIL 5105.03: Ethics. N. Brett
- PHIL 5170.03: Theories of Feminism. S. Sherwin
- PHIL 5211.03: Philosophy of Law. N. Brett
- PHIL 5265.03: Aesthetics. S.A.M. Burns
- PHIL 5300.03: Philosophy of Language. M. Hogan, R. Martin
- PHIL 5420.03: Philosophy of Biology. R. Campbell
- PHIL 5440.03: Philosophy of Mind. S. Campbell
- PHIL 5460.03: Mind and Brain.
- PHIL 5530.03: Freedom, Action and Responsibility. P.K. Schotch
- PHIL 5630.03: History of Philosophy: Kant. T. Vinci
- PHIL 5640.03: History of Philosophy: 20th Century Philosophy. D. MacIntosh
- PHIL 5650.03: Modern Philosophy. T. Vinci
- PHIL 5670.03: Philosophy of Science. D. MacIntosh, T. Vinci
- PHIL 5801.03: Ethics and Health Care. S. Sherwin
- PHIL 5851.03: Metaphysics. S. Maltzen

PHIL 5900.03: Logic: Logic and Philosophical Analysis.

C. Seminar Classes

- PHIL 5055.03: Topics in Epistemology
- PHIL 5070.03: Topics in Philosophical Psychology
- PHIL 5080.03: Topics in Logical Theory
- PHIL 5115.03: Topics in Ethics I
- PHIL 5120.03: Theory of Rational Decision
- PHIL 5125.03: Topics in Ethics II
- PHIL 5190.03: Topics in the History of Philosophy I
- PHIL 5191.03: Topics in the History of Philosophy II
- PHIL 5192.03: Topics in the History of Philosophy III
- PHIL 5200.03: Topics in Normative Theory
- PHIL 5215.03: Topics in Philosophy of Law
- PHIL 5220.03: Contemporary Philosophical Issues
- PHIL 5430.03: Game Theory as a Foundation for Ethics & Politics
- PHIL 5470.03: Utilitarianism, Liberalism, & Democracy
- PHIL 5480.03: Social Choice Theory
- PHIL 5500.03: Topics in Feminist Philosophy
- PHIL 5510.03: Topics in Philosophy of Language
- PHIL 5600.03: Philosophy of Religion Seminar
- PHIL 5680.03: Topics in Philosophy of Science
- PHIL 5855.03: Topics in Metaphysics

Directed Reading Classes

- PHIL 5960.03/5980.03 ; 5970.06/5990.06
- PHIL 9000.00 MA Thesis
- PHIL 9530.00 PhD Thesis

Physics

Location: Sir James Dunn Science Building
Halifax, NS B3H 3J5
Telephone: (902) 494-2337
Fac: (902) 494-5191
WWW: www.physics.dal.ca
e-mail: physics@dal.ca

Chairperson of Department
Kiang, D.B.I.

Graduate Advisor
Cordes, J.G.

Professors Emeriti

Archibald, W.J., MA (Dal), PhD (Virg), DSc (UNB), DSc (Dal), FRSC
Betts, D.D., BSc, MSc (Dal), PhD (McG), FRSC - Research

Professors

Blackford, B.L., BSc (Acadia), MSc (MIT), PhD (Dal)
Calkin, M.G., BSc, MSc (Dal), PhD (UBC)
Chylek, P., Physics Diploma (Charles, Prague), PhD (Calif, Riverside), joint appointment with Oceanography
Coley, A.A., PhD (Lond), cross appointment with Mathematics, Statistics and Computing Science
Dahn, J.R., BSc (Dal), MSc, PhD (UBC), cross appointment with Chemistry
Dunlap, R.A., BS (Worcester), AM (Dartmouth), PhD (Clark)
Geldart, D.J.W., BSc (Acadia), PhD (McM), FRSC - Research
Jericho, M.H., BSc, MSc (Dal), PhD (Cantab), George Munro Professor of Physics
Kiang, D.B.I., BSc (MtA), MSc, PhD (McM)
Kreuzer, H.J., MSc, DSc (Bonn), FRSC - Faculty of Science Killam Professor, A.C. Fales Professor of Theoretical Physics
Langstroth, G.F.O., BSc (Alta), MSc (Dal), PhD (Lond), Assistant Dean, Faculty of Science
Paton, B.E., BSc, MSc (Waterloo), PhD (McG)
Reynolds, P.H., BSc (UofT), PhD (UBC), cross appointment with Earth Sciences
Simpson, A.M., BA (Cantab), MSc, PhD (Dal)
Stroink, G., BSc, MSc (Delft), PhD (McG), PEng, cross appointment in Physiology and Biophysics
White, M.A., BSc (UWO), PhD (McMaster), cross appointment in Chemistry

Associate Professors

Cordes, J.G., BSc, MSc (Dal), PhD (Cantab)
Goble, D.F., BSc, MSc (Alta), PhD (UofT), BEd (Dal)
Tindall, D.A., BA, PhD (Cantab)

Assistant Professors

Folkins, I., BSc (Dal), MSc, PhD (UofT), cross appointment with Oceanography
Fu, Q., BS, MS (Peking), PhD (Utah), cross appointment with Oceanography
Hale, M.E., BSc, PhD (UNB), cross appointment with Radiation Oncology
Labrie, D., BSc (Montreal), MSc, PhD (McM)

Honorary Adjunct Professors

Jan, N., PhD (Cambridge), Physics, StFX
Pink, D.A.H., PhD (UBC), Physics, StFX
Purcell, C.J., PhD (Dal), Defense Research Establishment Atlantic
Steinitz, M., PhD (Northwestern), Physics, StFX

Research Associates

Das, A.K., DPhil (Oxon)
Payne, S.H., PhD (Cantab)
Senba, M., PhD (Rutgers)
Wang, R.L., PhD (Dal)
Xing, W., PhD (Simon Fraser)

Postdoctoral Fellows

Ferguson, A.S., PhD (Case Western Reserve)
MacKay, G., PhD (Dal)
Pawltzek, R., PhD (ETH)
Tao, W., PhD (Stevens Inst. of Tech.)
Wang, M., PhD (Utah)
Xu, W., PhD (Dal)
Zheng, T., PhD (Simon Fraser)

MacGregor Teaching Fellows

Billyard, A. Courtney, I.
Flynn, J. Jardine, J.
McKay, H. Patchedjiev, S.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. An MSc is the normal admission requirement for the PhD programme. It is recommended that all international students provide the Department with an official copy of the Advanced Graduate Record Examination in Physics. In some cases this will be made a precondition to consideration of the student's application for admission.

II. Degree Programmes

A. Master of Science (MSc)

For minimum time required to complete this programme, see Section 5 of the Faculty of Graduate Studies regulations in this calendar.

At least two full credit classes are required, of which at least one must be at the 6000 level.

Research, preparation, and oral defense of a thesis are required.

B. Doctor of Philosophy (PhD)

For minimum time required to complete this programme, see Section 5 of the Faculty of Graduate Studies regulations in this calendar.

At least two full credit classes are normally required and additional classes may be specified by supervisory committees.

A preliminary oral examination must be completed successfully.

Research and the preparation and oral defense of a thesis are required.

The PhD degree will be granted primarily on the basis of the candidate's ability to carry through original investigation. Part of the evidence of this will be acceptance of scientific material for publication in refereed journals and the preparation of a satisfactory thesis.

III. Classes Offered

5000-level classes are fourth-year undergraduate classes which may be taken for graduate credit in certain circumstances. They are normally taken by new graduate students having background deficiencies in specific areas. 6000-level classes are full graduate classes.

All graduate students are required to attend and participate in regular departmental seminars.

A selection of the following graduate classes (*) will be offered subject to demand.

PHYC 5100.03: Electrodynamics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 2010.03/4160.03 and MATH 3110.03/3120.03, or the permission of the instructor

PHYC 5151.03: Quantum Mechanics II.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 3140.03 or permission of instructor

PHYC 5152.03: Quantum Mechanics III.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 5151.03

PHYC 5160.03: Mathematical Methods of Physics.

FORMAT: Lecture 3 hours

PREREQUISITE: MATH 3110.03/3120.03 or permission of instructor

PHYC 5170.03: Topics in Mathematical Physics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 5160.03, or permission of instructor

PHYC 5180.03: Nuclear and Particle Physics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 3140.03 or permission of instructor

***PHYC 5220.03: Microcomputer Based Instrumentation.**

FORMAT: Lecture 2 hours, lab 3 hours

PREREQUISITE: PHYC 3810.03 or permission of instructor

PHYC 5230.03: Introduction to Solid State Physics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 3140.03 or permission of instructor

PHYC 5311.03/5312.03: Fluid Dynamics I/II.

FORMAT: Lecture 3 hours

CROSS-LISTING: OCEA 5311.03/5312.03

PHYC 5411.03/5412.03: Dynamic Meteorology I/II.

FORMAT: Lecture 3 hours

PREREQUISITE: Permission of instructor

CROSS-LISTING: OCEA 5411.03/5412.03

PHYC 5460.03: Optics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 3440.03 or permission of instructor

***PHYC 5480.03: Applied Group Theory.**

FORMAT: Lecture 3 hours

PHYC 5500.03/5510.03: Atmospheric Physics I/II.

FORMAT: Lecture 3 hours

PREREQUISITE: Permission of instructor

CROSS-LISTING: OCEA 5500.03/5510.03

PHYC 5520.03: Introduction to Meteorology.

FORMAT: Lecture 3 hours

PREREQUISITE: Permission of instructor

CROSS-LISTING: OCEA 5520.03.

PHYC 5540.03/5550.03: Synoptic Meteorology I/II.

FORMAT: Lecture 3 hours, tutorial-laboratory 3 hours

PREREQUISITE: At least 1 third year level physics

PHYC 5560.03: Mesoscale Dynamics.

CROSS-LISTING: OCEA 5560.03

PHYC 5650.03: General Relativity.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 2000.03/2010.03, MATH 3050.06, or permission of instructor

PHYC 5660.03: Cosmology.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 2000.03/2010.03, MATH 3050.06, or permission of instructor

CROSS-LISTING: MATH 5410.03

PHYC 6121.06: Quantum Theory.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 4151.03, 4152.03 or equivalent

PHYC 6141.03: Advanced Quantum Theory.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 6120.06, which may be taken concurrently

PHYC 6201.03: Solid State Physics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 5230.03, 4151.03

PHYC 6241.03: Advanced Solid State Physics.

PHYC 6261.03: Statistical Mechanics.

FORMAT: Lecture 3 hours

PREREQUISITE: PHYC 3210.03, 4151.03 or their equivalent

PHYC 6300.06: Electromagnetism.

FORMAT: Lecture 3 hours

PHYC 6270.03: Order-Disorder Phenomena and Phase Transitions.

PREREQUISITE: Basic knowledge of quantum statistical mechanics

PHYC 6271.03: Field Theoretical Methods in Critical Phenomena.

PHYC 6280.03: Superconductivity.

FORMAT: Lecture 2 hours

PHYC 6291.03: Surface Science I.

PHYC 6292.03: Surface Science II.

PHYC 6350.03: Selected Topics in Physical Metallurgy.

FORMAT: Lecture 2 hours

PHYC 6421.03: Radiological Physics.

PHYC 6422.03: Radiation Therapy Physics.

PHYC 6500.03: Magnetism.

FORMAT: Lecture 1.5 hours

PHYC 6545.03: Boundary Layer Meteorology.

CROSS-LISTING: OCEA 5545.03

PHYC 6550.03: Radar and Satellite Meteorology.

CROSS-LISTING: OCEA 5555.03

PHYC 6570.03: Light Scattering and Radiative Transfer.

CROSS-LISTING: OCEA 5570.03

PHYC 6575.03: Topics in Atmospheric Radiation.

CROSS-LISTING: OCEA 5575.03

PHYC 6580.03: Cloud Physics.

CROSS-LISTING: OCEA 5580.03

PHYC 6600.03/6601.03/6602.03: Topics in Physics.

PHYC 6710.03: Introduction to Disordered Materials.

PHYC 6971.06: Selected Topics in Particle Physics.

FORMAT: Lecture 2 hours

PHYC 9000.00: MSc Thesis.

PHYC 9530.00: PhD Thesis.

Physiology and Biophysics

Location: Sir Charles Tupper Building, Third Floor
Halifax, NS B3H 4H7
Telephone: (902) 494-3517
Fax: (902) 494-1685

Head of Department
French, A.S.

Professors Emeriti

Issekutz, Jr., B., MD (Szeged), DSc (Budapest)
MacLeod, E., MD (Dal)
Szarb, J.C., MD (Munich), FRCP(C)

Professors

Armour, J.A., BSc (McG), MD (Western), PhD (Loyola)
Croll, R.P., BSc (Tufts), PhD (McG)
Fine, A., AB (Harvard), VMD, PhD (Penn)
French, A.S., MSc, PhD (Essex)
Guernsey, D., PhD (Hawaii), Major appointment in Pathology
Horacek, B.M., MSc(Eng) (Prague), PhD (Dal)
Horackova, M., MSc, PhD (Prague)
Klassen, G.A., MD (UBC), FRCP(C), major appointment Dept. of
Medicine
Makrides, L., MCSP, BPT (Sask), MSc (Ottawa), PhD (McM), major
appointment, School of Physiotherapy
McDonald, T.F., BSc (Alta), PhD (Dal), DIC (Imperial College)
Meinertzhagen, I.A., BSc (Aberdeen), PhD (St. Andrews), major
appointment, Dept. of Psychology
Moger, W.H., BS (Cornell), PhD (Calif)
Oulton, M.R., BA (Acadia), PhD (Dal), major appointment,
Obstetrics/Gynecology
Pelzer, D., Dr Med (Heidelberg), Priv-Doz in Physiology (Homburg)
Rasmussen, D., BA (Colo C), MA, PhD (Dal), Graduate Studies
Co-ordinator
Wilkinson, M., BSc (Southampton), PhD (Lond), major appointment
in Obstetrics/Gynecology
Wolf, H., Dipl Ing (Munich), PhD (Dal)
Wong, A.Y.K., MSc, PhD (Dal)

Associate Professors

Brown, R.E., BSc (Victoria), MA, PhD (Dal), major appointment in
Psychology
Dudar, J.D., MSc (Alta), PhD (Dal)
Hirsch, D., MD (Dal), Major appointment, Department of Medicine
Kozey, C.L., BPE (UNB), MSc (Waterloo), PhD (Dal)
Morgunov, N., BSc, MSc, PhD (UofT)
Murphy, M.G., MSc, PhD (Dal)
Murphy, P.R., MSc, PhD (Dal)
Pelzer, S., BSc, MSc, PhD (Freiburg)
Rittmaster, R., MD (Tufts Med Sch), major appointment Dept of
Medicine
Stroink, G., PhD (McG), Major appointment, Dept. of Physics

Assistant Professors

Chauhan, B., PhD (Wales), Major appointment, Department of
Medicine
Landymore, K., BSc, MD, PhD (Dal), major appointment
Obstetrics/Gynecology
Villarreal, A., BS, MS (Chile), PhD (UCLA)

Information on research interests in the Department and openings
for graduate and post-PhD or post-MD study should be requested
from the Graduate Coordinator of the Department.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to
the Faculty of Graduate Studies.

The following constitutes the minimum entrance requirements for
the graduate programme in Physiology and Biophysics:

- (a) An average mark of B+, with no mark below B- in the following
basic undergraduate courses or their equivalent:
- MATH 1000.03/1010.03 (differential and integral calculus)
 - PHYC 1100.06 (using differential calculus)
 - CHEM 1010.06 (general chemistry)
 - STAT 1060.03/1070.03 (basic statistics for scientists)
 - BIOL 1000.06 (general biology)
 - Expository English (essay writing class)
- (b) A minimum average mark of A- over the last two years of the
student's undergraduate programme.

Unless exempted, applicants must also provide the Department
with an official copy of the results of the Graduate Record
Examination General (Aptitude) Test and one Subject (Advanced)
Test.

II. Degree Programmes

A. Master of Science (MSc)

For the minimum time required to complete this programme, see
Section 4. However, students should expect to spend two years
working toward the MSc.

Students who have not completed upper level classes in human
physiology with at least a grade of B- will be required to complete
PHYL 4403.06: Cellular Physiology. Students are also required to
take Cellular and Molecular Physiology 5502.06, Graduate Seminar
5517.03 and two half courses, one of which must be from the classes
listed below.

A research thesis which constitutes two credits is required.

B. Doctor of Philosophy (PhD)

For minimum time required to complete this programme, see
Section 4.

Selected classes of this or other departments may be required.

A preliminary examination in the field of thesis research is required.

Research and the preparation and defense of a thesis are required.

A candidate must demonstrate the ability to carry out research of
high quality leading to an advance in knowledge of physiology and
biophysics.

C. Doctor of Philosophy/Master of Science (MSc/PhD) in Physiology and Biophysics/ Neuroscience

Physiology and Biophysics also offers a PhD in Physiology and
Biophysics/Neuroscience through the Interdisciplinary
Neuroscience Programme.

D. Doctor of Philosophy/Doctor of Medicine (MD/PhD)

For information on the combined MD/PhD programme
Interdisciplinary and Joint Programmes (page 64)

III. Teaching Requirements

Teaching undergraduate physiology, in laboratories, tutorials, or
reviews is considered an integral part of graduate training. All
students will be expected to perform a minimum amount of
undergraduate teaching, regardless of the source of their financial
support. Students are expected to present 1 lecture to an
undergraduate class during their second year in the programme and
2 lectures in subsequent years. This teaching will be evaluated by
the class director and a copy of the evaluation placed in the
student's file.

IV. Classes Offered

Biophysics

The following classes are given by the Biomedical Engineering Institute at the Technical University of Nova Scotia:

- BIOP 5900.03: Biomedical Engineering I
- BIOP 5910.03: Biomedical Engineering II
- BIOP 5930.03: Digital Signal Processing I
- BIOP 5940.03: Digital Signal Processing II
- BIOP 5950.03: Biomechanics I
- BIOP 5960.03: Biomechanics II
- BIOP 5970.03: Directed Studies in Electrical Engineering

Neuroscience

The following classes are offered through the interdisciplinary neuroscience programme:

- NESS 6100.03: Principles of Neuroscience. R. Croll (offered yearly)

Physiology

- PHYL 4403.06: Cellular Physiology. N. Morgunov
- PHYL 5459.03: Activity of Excitable Cells and Tissues. A. Wong. Offered every second year, next offered in 1998/99.
- PHYL 5494.03: Synaptic Transmitters. K. Semba. Offered every second year, next offered in 1998/99.
- PHYL 5502.06: Cellular and Molecular Physiology. P. Murphy Offered every year.
- PHYL 5508.03/5509.03/5510.03: Directed Reading in Physiology and Biophysics. Staff
- PHYL 5512.03: Physiology and Biophysics of the Heart and Circulation. D. Armour. Offered every second year, or on demand, next offered 1998/99.
- PHYL 5513.03: Endocrine Physiology. W. Moger. Offered every second year, next offered in 1998/99.
- PHYL 5514.03: Reproductive Physiology. M. Wilkinson. Offered every second year, next offered in 1997/98.
- PHYL 5517.03: Physiology and Biophysics Graduate Seminar. Graduate Co-ordinator
- PHYL 5518.03: Ligand-gated Ion Channels. A. Villarroel
- PHYL 5520.03: Cellular Biophysics. P. Murphy. Offered every year.
- PHYL 5521.03: Molecular Physiology. P. Murphy. Offered every year.
- PHYL 5608.06/5609.06/5610.06: Directed Reading Graduate Seminar. Staff
- PHYL 9000.00: MSc Thesis
- PHYL 9530.00: PhD Thesis

Physiotherapy

Location: Forrest Building
Halifax, NS B3H 3J5
Telephone: (902) 494-2524
Fax: (902) 494-1941

Director

L. Makrides, BPT (Sask), MSc (Ottawa), PhD (McM), MCSP

Graduate Coordinator

C. Kozey, BPE (UNB), MSc (Waterloo), PhD (Dal)

Professors

D. Egan, Dip. T.P. (England), MSc (UWO), PhD (Curtin)
L. Makrides, BPT (Sask), MSc (Ottawa), PhD (McM), MCSP
G.I. Turnbull, MSCP, DipTP, BPT (Man), MA (Dal), PhD (Rhodes)
J.M. Walker, Certs Phys. Ther. (NZ), DipTP, BPT, MA (Man), PhD (McM)

Associate Professor

C.L. Kozey, BPE (UNB), MSc (Waterloo), PhD (Dal)

Assistant Professors

M. Earl, BScPT (UWO), BSc, MSc, PhD (Waterloo)
A. Fenety, BSc (UNB), DPT (Manitoba), MSc (Alta), PhD (Dal)

I. Introduction

A programme of study leading to a Master of Science in Physiotherapy is offered through the School of Physiotherapy. In addition to the requirements for the Faculty of Graduate Studies, applicants must be licensed physiotherapists with a university degree and a B average or higher in four Physiotherapy undergraduate courses taken at the university level. Applicants must include a statement of goals and graduate research area with their application to the programme. Successful applicants will be chosen by the School's Graduate Committee. Foreign applicants must meet the English language competency requirements as outlined by Graduate Studies.

II. Application

Applicants must

- a) Complete the application form for admission to the Faculty of Graduate Studies
- b) Include a one page statement of experience, goals and objectives with the application
- c) Meet the English language competency requirements as outlined by Graduate Studies.
- d) Include two academic references. A work reference from someone who may comment objectively on your goals may be included in addition to the two required academic references.

In addition applicants are strongly advised to

- a) Include a copy of a recent paper authored in the area in which the applicant is planning to pursue studies (if available)
- b) Submit a recent GRE score

III. Admissions and Programme Requirements

A. Programme Requirements

Students registered in the programme will be expected to obtain a minimum of five (5) credits as follows:

- Thesis: 2 credits
- Course work: 3 credits

B. Course Work

Three half credit classes are required. The other three half credit classes will be selected based on the individual programme of study approved by the Supervisory Committee.

C. Residency

It is expected that upon completion of the course work an additional year will be required to complete the thesis. Students are expected to spend at least one year full-time in the program.

D. Scholarship Deadlines

Applicants who wish to be considered for scholarships are strongly urged to have their applications completed by January 1 for University Scholarships

For School of Physiotherapy Scholarships: March 1

A limited amount of money is available from the School of Physiotherapy and this will be distributed on a competitive basis. Applicants are encouraged to seek external funding. Further information for sources of funding may be obtained from the Graduate Studies office.

In order to qualify for scholarship consideration a student is expected to hold a first-class honours degree in an appropriate field and to enter a full-time graduate programme.

E. Application Inquiries

For more information regarding admission and program requirements, please write to the Graduate Coordinator, School of Physiotherapy, Dalhousie University, Halifax, NS, B3H 3J5.

IV. Classes Offered

An approved half credit class in Statistical Methods and/or Research Design (required).

PHYT 5002.03: Instrumentation and Measurement.

This class is aimed at providing the student with the theoretical basis and practical experience associated with measurement techniques used in Physiotherapy Research. The content of the class will focus on the fundamentals of instrumentation and measurement of biomechanical and physiological measures. The objective of this class is to gain the necessary knowledge and skills for data acquisition, processing and interpretation of electrophysiological, kinematic and kinetic data. (Required.)

INSTRUCTOR: C. Kozey

FORMAT: Lecture/lab and discussion

PHYT 5010.03: Special Topics in Musculoskeletal II.

PHYT 5030.03: Special Topics in Neurology I.

PHYT 5070.03: Directed Studies.

PHYT 5080.03: Directed Studies.

Special Topics in Physiotherapy I, II, III

PHYT 5090.03: Foundations Seminar.

This class will provide students with the opportunity to study the development of the profession of physiotherapy from ancient times to the present. Models of physiotherapy delivery will be evaluated and novel approaches formulated which will be relevant to emerging health care needs both in developed and Third World countries utilizing a framework of clinical care, education and research. Methods of using new technologies to enhance the time and cost efficiency of total physiotherapy care will be considered as will the influencing of health care policy formulation. Emphasized will be the delivery of physiotherapy to a variety of client populations in non-institutional contexts. (Required.)

INSTRUCTOR: G. Turnbull

PHYT 9000.00: Thesis

(Required)

Political Science

Location: Arts & Administration Building
Third Floor
6299 South Street
Halifax, NS B3H 4H6
Telephone: (902) 494-2396
Fax: (902) 494-3825
WWW: <http://www.dalgrad.ca/homepage.htm>

Chairperson of Department

Cameron, D.M.

Graduate Co-ordinator

Boardman, R.

Professors Emeriti

Beck, J.M., BA (Acadia), MA, PhD (UofT), LL.D. (Dal), FRSC
Braybrooke, D., BA (Harvard), MA, PhD (Cornell), FRSC
Bays, J.G., BA (UofT), AM, PhD (Col), FRSC
Mann Borgese, E., DipMus (Zurich), LHD (MSVU)

Professors

Aucoin, P.C., BA (SMU), MA (Dal), PhD (Queen's), jointly with
Public Administration
Bakvis, H., BA (Queen's), MA, PhD (UBC), jointly with Public
Administration
Boardman, R., BSc, PhD (Lond)
Cameron, D.M., BA (Queen's), MA, PhilM, PhD (UofT)
Middlemiss, D.W., BA, MA, PhD (UofT)
Shaw, T.M., BA (Sussex), MA (East Africa, Prin.), PhD (Princeton),
Director, Centre for Foreign Policy Studies
Stairs, D.W., BA (Dal), MA (Oxon), PhD (UofT), FRSC
Winham, G.R., BA (Bowdoin), Dip Int Law (Manchester), PhD (N
Car), FRSC, Eric Dennis Memorial Professor of Government and
Political Science

Associate Professor

Fleribeck, K., BA (Alta), MA (York), PhD (Cantab)
Finbow, R.G., BA (Dal), MA (York), MSc, PhD (Lond)
Harvey, F., BA, MA, PhD (McG)
Smith, J., BA (McM), MA, PhD (Dal)

Assistant Professors

Black, D., BA (Trent), MA, PhD (Dal)
Carbert, L., BA (Alta), MA, PhD (York)

Honorary Adjunct Professors

Heard, A., Simon Fraser University
Pyrz, G., Acadia University

I. Admission Requirements

Applicants must satisfy the minimum requirements set by the Faculty of Graduate Studies.

Successful applicants for the MA programme will have an Honours BA in Political Science, or its equivalent, with first-class or high second-class standing (GPA of 3.30 or higher).

Admission decisions are based on academic transcripts, letters of reference, a sample of written work submitted by the applicant, and the capacity of the Department to supervise a thesis in the applicant's proposed field of research.

Successful applicants for the PhD programme will have an MA in Political Science with first-class standing (GPA of 3.70 or higher). Admission decisions are based on the same considerations as apply to the MA programme, but PhD students are admitted only when a faculty member is prepared to supervise the applicant's programme, including the proposed thesis topic.

Applicants who do not meet all of the above requirements, but who have superior academic qualifications, may be considered for admission to the MA or PhD programmes, but may be required to satisfy additional requirements within the programme. All such requirements will be specified at the time of admission.

Applicants whose native language is not English must demonstrate a minimum TORFL score of 600, or the equivalent score on a comparable test.

II. Degree Programmes

A. Master of Arts (MA)

The MA is a one-year (12 month) programme consisting of three full-credit classes (or the equivalent in half-credit classes) and a thesis. Classes include at least two of the core graduate seminars, other graduate classes (including directed reading classes and graduate classes in other departments), and not more than one credit of classes cross-listed as undergraduate/graduate (3000/5000). The MA may be completed on a full-time or part-time basis.

B. Doctor of Philosophy (PhD)

The PhD programme requires two years of full-time residency, and can be completed in three to four years. The two principal requirements consist of comprehensive examinations in two fields (a major and minor field) and an original thesis. Course work will be required as appropriate to prepare the student for her or his comprehensive examinations. These examinations will include both written and oral components: Before proceeding to the thesis, a student must present and defend a thesis proposal. Also, reading competence in a second language, usually French, must be demonstrated before the student begins work on the thesis. The thesis is written under the direction of a committee comprising the supervisor and two other members, and may include qualified faculty members from other departments and other universities. The completed thesis is subject to a public, oral defence.

III. Classes Offered

Classes offered by the Department are organized into four fields, as follows:

- Canadian Politics
- Comparative Politics
- Political Theory
- International Relations and Foreign Policy

Each field contains classes offered as core graduate seminars, and classes cross-listed at the undergraduate/graduate level. The latter usually contain a majority of undergraduate students, and graduate students will be required to satisfy appropriately higher standards. In addition, directed reading classes may be arranged on an individual or small group basis with appropriate faculty members. This will often be particularly appropriate in areas closely related to a student's thesis research, in conjunction with the thesis supervisor.

Not all classes are offered each year. A more accurate timetable will be available in the spring of each year.

A. Canadian Government and Politics

Core Graduate Seminar:

POLI 5204.06: Advanced Seminar in Canadian Politics. P. Aucoin and D. Cameron

Cross-listed Classes:

POLI 5205.03: Canadian Political Thought. J. Smith
POLI 5206.03: Constitutional Issues in Canadian Politics. J. Smith
POLI 5216.03: Local and Regional Government. D. Cameron
POLI 5220.03: Intergovernmental Relations in Canada. H. Bakvis
POLI 5224.03: Canadian Political Parties. H. Bakvis

POLI 5228.03: Interest Groups: Representation, Management and Function. H. Bakvis

POLI 5233.03: Canadian Political Economy. R. Finbow

POLI 5235.03: Regional Political Economy in Canada. R. Finbow

POLI 5240.03: Policy formation in Canada. P. Brown

POLI 5241.03: Introduction to Policy Analysis. TBA

B. Comparative Politics

Core Graduate Seminars:

POLI 5301.03: Comparative Theory. R. Finbow

POLI 5340.03: Approaches to Development. T. Shaw

Cross-listed Classes:

POLI 5302.03: Comparative Development Administration. D. Black

POLI 5304.03: Comparative Federalism. H. Bakvis

POLI 5311.03: Sport and Politics. D. Black

POLI 5315.03: African Politics. D. Black

POLI 5325.06: European Politics. R. Boardman

POLI 5360.03: Latin American Politics. R. Finbow

POLI 5379.06: U.S. Constitution, Government, and Politics. J. Smith

C. Political Theory and Methodology

Core Graduate Seminar:

POLI 5400.03: Advanced Seminar in Philosophy. K. Fierbeck

Cross-listed Classes:

POLI 5431.03: The Political Imagination in Literature. TBA

POLI 5445.03: Entitlement and Property. K. Fierbeck

POLI 5475.03: Democratic Theory. K. Fierbeck

POLI 5479.03: Classical Liberalism and Democracy. TBA

POLI 5496.03: Philosophy of the Social Science. TBA

D. International Relations & Foreign Policy

Core Graduate Seminar:

POLI 5520.06: Theories of International Relations. G. Winham

Cross-listed Classes:

POLI 5525.03: Comparative Foreign Policy Simulation. F. Harvey

POLI 5531.03: The United Nations in World Politics. TBA

POLI 5535.03: The New International Division of Labour. T. Shaw

POLI 5537.06: Management and Conservation of Marine Resources. E.M. Borgese. (summer class only)

POLI 5540.03: Foreign Policies in the Third World. T. Shaw

POLI 5544.03: Political Economy of Southern Africa. T. Shaw

POLI 5550.03: Japanese Foreign Policy. R. Boardman

POLI 5570.06: Canadian Foreign Policy. D. Stairs

POLI 5571.06: Strategy and Canadian Defence Policy. D. Middlemiss

POLI 5574.03: American Foreign Policy. G. Winham

POLI 5575.03: Nuclear Weapons and Arms Control in World Politics. D. Middlemiss

POLI 5581.03: Diplomacy and Negotiation. G. Winham

POLI 5585.03: Politics of the Environment. R. Boardman

POLI 5589.03: The Politics of the Sea. E.M. Borgese

POLI 5596.06: Theories of War and Peace. F. Harvey

POLI 5636.03: Nationalism and Statecraft. D. Stairs

E. Directed Reading Classes

Graduate students taking directed reading classes register under one of the following designations, depending on whether the class extends for the first term, the second term, or the full academic year:

POLI 5601.06: Readings in Political Science

POLI 5602.03: Readings in Political Science

POLI 5603.03: Readings in Political Science

F. Thesis

Students register for the thesis under the appropriate designation, as follows:

POLI 9000.00 MA Thesis

POLI 9530.00 PhD Thesis

Psychology

Location: Life Sciences Centre
1355 Oxford Street
Halifax, NS B3H 4J1
Telephone: (902) 494-3417
Fax: (902) 494-6585

Chairperson of Department
Moore, C.

Professor Emeritus

Honig, W.K., BA (Swarthmore), PhD (Duke)

Professors

Brown, R.E., BSc (Victoria), MA, PhD (Dal)
Connolly, J.F., AB (Holy Cross), MA (Sask), PhD (Lond)
Croll, R., BSc (Tufts), PhD (McG), major appointment in
Physiology/Biophysics
Dunham, P.J., BA (DePauw), MA, PhD (Missouri)
Fentress, J.C., BA (Amherst), PhD (Cantab)
Klein, R.M., BA (SUNY), MA, PhD (Oregon), Graduate Programme
Coordinator
Kutcher, S., BA, MA, MD (McMaster), major appointment in
Psychiatry
LoLordo, V.M., AB (Brown), PhD (Penn)
McGrath, P., BA, MA (Sask), PhD (Queen's), Clinical Programme
Coordinator
Melnertzhagen, I.A., BSc (Aberdeen), PhD (St. Andrews)
Mitchell, D.E., BSc, MAppSc (Melb), PhD (Berkeley)
Moore, C., BA, PhD (Cantab)
Nakajima, S., BA (Chiba), MA (Wash), PhD (McG)
Phillips, D.P., BSc, PhD (Monash)
Robertson, H., MSc (Western), PhD (Cantab), major appointment in
Pharmacology
Rusak, B., BA (UofT), PhD (Berkeley), joint appointment in
Psychiatry
Samba, K., BEd, MA (Tokyo), PhD (Rutgers), major appointment in
Anatomy and Neurobiology
Shaw, S.R., BSc (Lond), PhD (St. Andrews)
Tatton, W.G., BSc, MD (Alta), PhD (UofT), Killam Chair in
Neuroscience
Yoon, M.G., BS (Seoul), PhD (Berkeley)

Associate Professors

Barresi, J., BS (Brown), MA (S. Calif), PhD (Wisc)
Clark, J.W., BA, MA (McG), PhD (Queen's)
Earhard, B., BA, MA, PhD (UofT)
Finley, G.A., BSc, MD (Dal), major appointment in Anaesthesiology
Kopala, L., BSc (Alberta), MD (Calgary), major appointment in
Psychiatry
Lyons, R., BA (Dal), MEd (StFX), PhD (Oregon), major appointment
in the School of Recreation, Physical and Health Education
McGlone, J., BA, MA, PhD (Western)
McMullen, P., MSc (UofT), PhD (Waterloo)
Moore, B.R., AB (Emory), PhD (Stanford)
Ozier, M., BA, MA, PhD (UofT)
Sullivan, M., MA, PhD (Concordia)

Assistant Professors

Adamo, S., BSc (UofT), PhD (McG)
Sentor, D., BA (Western), PhD (McG)
Stewart, S., BSc (Dal), PhD (McG)

Senior Instructors

Hoffman, R.S., BSc (Col Coll), MA (Dal)
Leary, J., BSc (Dal), MSc (MUN), PhD (Adelaide)

Honorary Adjunct Professors

Backman, J., MA, PhD (Carleton), Psych/IWK - Grace Health Centre
Bilsbury, C., BSc, PhD (Liverpool), Psych/QEII Health Sciences
Centre
Bryson, S.E., BA (Guelph), PhD (McG), Psych/York
Byrne, J.M., MA, PhD (Kansas), Psych/IWK - Grace Health Centre
Catano, V.M., BSc (Drexel), MSc, PhD (Lehigh), Psych/Saint Mary's
Chipuer, H., BA (Sask), MA (UofT), PhD (Penn), Psych/Saint Mary's
Cohen, A.J., BA (McG), MA, PhD (Queen's), Psych/UPEI
Davidson, K., BA (Queen's), MAsc, PhD (Waterloo), Psych/Alabama
Ellsworth, C., MA, PhD (Queen's), Psych/IWK - Grace Health
Centre
Eskes, G.A., BA, PhD (Berkeley), Psych/QEII Health Sciences Centre
Farmer, M., BSc (MSVU), MSc, PhD (Dal), Psych/IWK - Grace
Health Centre
Flak, J., BSc, MA, PhD (Western), Psych/QEII Health Sciences Centre
Harvey-Clark, C., BSc (Victoria), DVM (Western College of Vet.
Medicine), Dalhousie Director of Animal Care
Howes, J., BA (Dal), MA, PhD (Western), Psych/QEII Health
Sciences Centre
Leter, M., BA (Duke), MA (Vanderbilt), PhD (Oregon),
Psych/Acadia
MacDonald, G.W., BA (StFX), MA, PhD (Windsor), Psych/IWK -
Grace Health Centre
McCormick, P.A., BSc (Dal), MA, PhD (Waterloo), Psych/StFX
McLeod, P., BSc (Mt.A), MSc (MUN), PhD (Dal), Psych/Acadia
McNulty, J.A., BA, MA, PhD (UofT)
O'Neill, P., MSc, PhD (Yale), Psych/Acadia
Pretty, G., BSc, MSc (Acadia), PhD (Western), Psych/Saint Mary's
Renner, K.E., BS (Penn), MA, PhD (Northwest), Psych/Carleton
Ritvo, P., MA (Calif State), PhD (Calif Sch Prof Psych),
Psychology/Psychiatry/UofT Hospital
Rodger, R.S., MA (Edin), PhD (Queen's, Belfast)
Schwartz, M., BSc (McG), MA, PhD (Waterloo), Psych/QEII Health
Sciences Centre
Symons, D., BSc (McM), MA, PhD (Western), Psych/Acadia
Symons, S., BSc (Dal), MA, PhD (Western), Psych/Acadia
Vallis, T.M., BSc (Dal), MA, PhD (Western), Psych/QEII Health
Sciences Centre

Honorary Research Associates

Doane, B., BA (Princeton), MD, MA (Dal), PhD (McG), Psych/QEII
Health Sciences Centre
Frohlich, A., Diplom. Dr. rer. Nat. (Freie Universität Berlin), MSVU
Palameta, B., BSc (McG), PhD (Cantab), Psych/UNB
Pyza, E., PhD (Jagiellonian Univ), Inst. of Zoology, Jagiellonian Univ.
Trappenberg, T., MSc, PhD (RWTH Aachen), Zev Productions

Postdoctoral Fellows

Barnet, R., PhD (SUNY, Binghamton)
Chen, B., PhD (Okayama)
Guido, M., PhD (Univ Nac Cordoba)
Schellinck, H., PhD (Dal)
Shore, D., PhD (UBC)
Sun, X.-J., PhD (Univ. de Paris, Sud)

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

II. Degree Programmes

The Department of Psychology offers graduate training leading to MSc and PhD degrees in Psychology, MSc and PhD degrees in Psychology/Neuroscience, and to a PhD degree in Clinical Psychology. Master's level students in Psychology and Psychology/Neuroscience are expected to advance into the corresponding PhD programmes. The Department does not have a "terminal" Master's programme nor does it offer a Master's degree in Clinical Psychology.

A. Psychology (Experimental)

The graduate programmes in Psychology emphasize training for research. They are best described as "apprenticeship" programmes in which students work closely with a faculty member who has

agreed to supervise the student's research. Compared with many other graduate programmes, the Department places less emphasis on course work and greater emphasis on research, scholarship and independent thinking.

1. Master of Science (MSc) in Psychology

In addition to the Master's thesis (PSYO 9000.00), which is the major requirement of this programme, the Master's student must complete the following classes:

- PSYO 6001.03: Fundamentals of Statistics and Experimental Design
- PSYO 7500.06: Proseminar - Methods of Psychological Inquiry
- At least one other full credit of elective seminar(s)

During each residency year Master's students must register for and attend the weekly colloquium series (PSYO 8000.06R) and are required to do some teaching in the undergraduate programme. The minimum amount of teaching is the equivalent of no more than 10 hours/week for one term. This consists of working as a laboratory instructor, seminar leader, or teaching assistant.

2. Doctor of Philosophy (PhD) in Psychology

Students are expected to conduct research leading to empirical, methodological and/or theoretical advances in their field of study, some or all of which will be included in their dissertation and defended publicly. In addition to the dissertation (PSYO 9530.00), which is the major requirement of this programme, students in the PhD programme must complete the following classes (unless they were completed as part of the Master's programme):

- PSYO 6001.03: Fundamentals of Statistics and Experimental Design, and at least one other 1/2 credit class in the quantitative/analytic area
- PSYO 7100.03: Seminar in Teaching Effectiveness
- PSYO 7500.06: Proseminar: Methods of Psychological Inquiry
- 1 full credit of elective (with approval, this may be taken outside the department)

During each year in the PhD programme students are required to register for Dissertation Research (PSYO 9530.00) and are encouraged to enrol in graduate seminars. During each residency year students must register for and attend the weekly colloquium series (PSYO 8000.06) and do some teaching in the undergraduate programme (see Master's programme description). At least one year before submission of the dissertation students must also satisfy the comprehensive examination requirement. This requirement, which is administered by an examination committee of between three and five faculty members, entails completing at least three comprehensive 'projects' that are not directly related to the student's dissertation research.

B. Psychology/Neuroscience

The graduate programmes in Psychology/Neuroscience are coordinated by the Psychology Department and an Interdisciplinary Neuroscience Programme Committee with representation from the Departments of Anatomy and Neurobiology, Biochemistry, Pharmacology, Physiology and Biophysics, and Psychology (see Neuroscience calendar entry). They are also designed as "apprenticeship" programmes in which students work closely with a Neuroscience faculty member who has agreed to supervise their research. Emphasis is placed on interdisciplinary research, scholarship and independent thinking rather than on course work.

1. Master of Science (MSc) in Psychology/Neuroscience

In addition to the Master's thesis (PSYO 9000.00), which is the major requirement of this programme, the Master's student must complete the following classes:

- PSYO 7500.06: Proseminar: Methods of Psychological Inquiry
- One full credit of Neuroscience (the core curriculum)
- Students are expected to take at least 1/2 credit of class work in the quantitative/analytical area

During each residency year Master's students must register for and attend a weekly colloquium series offered by one of the participating departments (such as PSYO 8000.06) and are required to do some teaching in the undergraduate programme. The minimum amount of teaching is the equivalent of no more than 10 hours/week for one term. This consists of working as a laboratory instructor, seminar leader, or teaching assistant. Master's students

must register for PSYO 9000.00 (Thesis). The Neuroscience and Psychology Graduate Programme Committees, in collaboration with the student and supervisor, will assess the needs of the student and determine any other requirements beyond the minimum outlined above.

2. Doctor of Philosophy (PhD) in Psychology/Neuroscience

Students are expected to conduct research leading to empirical, methodological and/or theoretical advances in their field of study, some or all of which will be included in their dissertation and defended publicly. In addition to the dissertation (PSYO 9530.00), which is the major requirement of this programme, students in the PhD programme must complete the following classes (unless they were completed as part of the Master's programme):

- PSYO 7100.03: Seminar in Teaching Effectiveness
- PSYO 7500.06: Proseminar: Methods of Psychological Inquiry

During each year in the PhD programme students are required to register for Dissertation Research (PSYO 9530.00) and are encouraged to enrol in graduate Neuroscience and/or Psychology seminars. During each residency year students must register for and attend a weekly colloquium series offered by one of the participating departments (such as PSYO 8000.06), and do some teaching in the undergraduate programme (see Masters programme description). The Neuroscience and Psychology Graduate Programme Committees, in collaboration with the student and supervisor, will assess the needs of each student and determine any other requirements beyond the minimum outlined above. At least one year before submission of their dissertation students must also satisfy the comprehensive examination requirement. This requirement, which is administered by an examination committee of between three and five faculty members, entails completing at least three comprehensive 'projects' that are not directly related to the student's dissertation research.

C. Doctor of Philosophy (PhD) in Clinical Psychology

The PhD programme in Clinical Psychology is cooperatively administered by the Psychology Department and the Clinical Programme Committee with representation from Acadia University, Dalhousie University, Mount Saint Vincent University, Saint Mary's University and professional psychologists from the teaching hospitals. It is an APA/CPA accredited, structured, five-year programme which follows the "scientist-practitioner" model. It considers clinical psychology as part of the science of psychology and therefore emphasizes research.

During the first four years of the Clinical Psychology programme, students complete required and elective classes, conduct supervised and thesis research, and gain clinical experience through field placements (PSYO 8333.06, a minimum of 600 hours are required). Students are involved in research from the outset, and are expected to conduct research leading to empirical, methodological and/or theoretical advances in their field of study, some or all of which will be included in their dissertation and defended publicly. In the fifth year, students are placed in a full-year clinical internship. Upon admission, students are assigned to a faculty member who will supervise their thesis and other research projects. The Department does not offer a Master's degree in the Clinical PhD programme, but students entering with a Master's degree in Psychology may receive advanced standing.

The following classes are required:

- PSYO 6001.03: Fundamentals of Statistics and Experimental Design. At least one other 1/2 credit class in the quantitative/analytic area.
- PSYO 6201.03: Psychological Assessment: Child
- PSYO 6202.03: Psychological Assessment: Adult
- PSYO 6205.06: Interviewing and Intervention
- PSYO 6215.06: Psychopathology and Treatment
- PSYO 6220.06: Seminar: Advanced Clinical Intervention
- PSYO 6800.03: Clinical Neuropsychology
- PSYO 7100.03: Seminar in Teaching Effectiveness
- PSYO 7500.06: Proseminar: Methods of Psychological Inquiry
- PSYO 8005.03: Research Seminar
- PSYO 8201.03: Ethics and Professional Decision-Making
- At least two credits of elective seminars must also be completed.

Students in year one of the programme are required to register for PSYO 5000.06 (Supervised Research). During each subsequent year in the PhD programme students are required to register for Dissertation Research (PSYO 9530.00). During each residency year students must register for and attend the weekly colloquium series (PSYO 8000.06), Clinical Rounds/Case Conference (PSYO 8010.06) and do some teaching in the undergraduate programme. The minimum amount of teaching is the equivalent of no more than 10 hours/week for one term. This consists of working as a laboratory instructor, seminar leader, or teaching assistant. At least one year before submission of their dissertation students must also satisfy the comprehensive examination requirement. This requirement, which is administered by an examination committee of between three and five faculty members, entails completing at least three comprehensive 'projects' that are not directly related to the student's dissertation research.

iii. Classes Offered

Required classes are offered on a regular basis. Other classes are offered, and seminar topics chosen, on the basis of faculty interests and student needs.

- PSYO 5000.06: Research Assignment. Staff
 PSYO 5001.03: Independent Study. Staff
 PSYO 5002.03: Independent Study. Staff
 PSYO 6001.03: Fundamentals of Statistics and Experimental Design. M. Sullivan
 PSYO 6003.03: Multivariate Methods. D. Santor
 PSYO 6040.06: Animal Learning. V.M. LoLordo
 PSYO 6050.06: Perception. D.E. Mitchell
 PSYO 6051.03: Neural Basis of Perception. D. Phillips, D.E. Mitchell
 PSYO 6060.03: Biological Basis of Mental Illness. J. Connolly, B. Rusak
 PSYO 6071.03: Physiological Psychology. Staff
 PSYO 6081.03: Topics in Personality and Social Psychology. J. Barresi
 PSYO 6090.06: Biosocial Issues in Development. P. Dunham
 PSYO 6091.03: Topics in Child Development. P. Dunham, C. Moore
 PSYO 6100.03: Instrumentation and Computers in Psychology. R. Hoffman
 PSYO 6130.06: Cognitive Psychology. R. Klein
 PSYO 6160.03: Comparative Psychology. R. Brown, J. Fentress, S. Adamo
 PSYO 6201.03: Psychological Assessment: Child. Staff
 PSYO 6202.03: Psychological Assessment: Adult. S. Stewart
 PSYO 6205.06: Interviewing and Intervention. Staff
 PSYO 6211.03: Topics in Assessments. J. Connolly
 PSYO 6215.06: Psychopathology and Treatment. J. Connolly, P. McGrath
 PSYO 6218.03: Topics in Psychopharmacology. R. Brown, S. Stewart
 PSYO 6220.06: Advanced Clinical Intervention. P. McGrath
 PSYO 6230.03: Psychology of Reading. R. Klein
 PSYO 6240.03: Topics in Animal Learning. V.M. LoLordo
 PSYO 6270.03: Comparative Neurobiology. I.A. Meinertzhagen, S.R. Shaw
 PSYO 6300.06: Cognitive Neuropsychology. R. Klein
 PSYO 6313.03: Topics in Cognitive Psychology. R. Klein, P. McMullen
 PSYO 6370.03: Neuroscience Laboratory. M.G. Yoon
 PSYO 6410.03: Topics in Therapeutic Intervention. Staff
 PSYO 6420.03: Topics in Health Psychology. Staff
 PSYO 6470.03: Developmental Neuroscience. I.A. Meinertzhagen, S.R. Shaw
 PSYO 6580.06: History of Psychology. Staff
 PSYO 6800.03: Clinical Neuropsychology. Staff
 PSYO 6801.03: Dissociative Disorders. R. Klein
 PSYO 6802.03: Topics in Schizophrenia. J. Connolly
 PSYO 6803.03: Topics in Psychopathology. M. Sullivan
 PSYO 6804.03: Topics in Neuropsychology. J. McGlone
 PSYO 6810.03: Topics in Clinical Research Methods. P. McGrath
 PSYO 7100.03: Seminar in Teaching Effectiveness. P. Dunham
 PSYO 7500.06R Proseminar: Methods of Psychological Enquiry. R. Klein
 PSYO 8000.06: Psychology Colloquium. Staff
 PSYO 8005.03: Research Seminar.
 PSYO 8010.06: Clinical Rounds/Case Conference.
 PSYO 8120.03: Clinical Methods and Issues. Staff

- PSYO 8201.03: Ethics and Professional Decision Making. Staff
 PSYO 8333.06: Field Placements. Staff
 PSYO 8801.03: Topics in Clinical Research Methods. P. McGrath
 PSYO 8820.03: Topics in Community Psychology. Staff
 PSYO 9000.00: MSc Thesis
 PSYO 9100.00: Pre-Doctoral Internship. P. McGrath, Coordinator of Clinical Programme
 PSYO 9530.00: PhD Thesis

Public Administration

Location: 6152 Coburg Road, Sixth Floor
Halifax, NS B3H 3J5
Telephone: (902) 494-3742
Fax: (902) 494-7023

Director of School
Cassin, A.M.

Graduate Co-ordinator
Siddiq, F.K.

Professors

Aucoin, P., BA (SMU), MA (Dal), PhD (Queen's), jointly with
Political Science
Bakvis, H., BA (Qu), MA (UBC), PhD (UBC), jointly with Political
Science
Brown, M.P., BA (MtA), MA (Dal), PhD (UofT)
McNiven, J.D., MSc, PhD (Michigan), jointly with Business
Administration
Poel, D.H., BA (Calvin), MA (W Mich), PhD (Iowa)
Sullivan, K.C., BSc, BEd (Dal), MEd, PhD (Alia)

Associate Professors

Ricker, E., BA, MEd (UBC), PhD (UofT)
Siddiq, F.K., BA, MA (Dhaka), PhD (Dal)

Assistant Professor

Cassin, A.M., BA (Man), MA (UBC), PhD, (UofT)

Honorary Adjunct Professors

Durler-Copp, M., BA, MA, PhD (McG)
Farjoy, E., BSc (Hons) (UNB)
Lopes, B., BA (SMU)
O'Brien, A., BSc, LLD (Dal)
Pross, A.P., BA, MA (Queen's), PhD (UofT)
Regan, T., BA (UofT), MA, PhD (Duke) (Sociology, Acadia
University)

Special Lecturers

Carroll, R., BBA, BEd (StFX), MBA, PhD (Dal), CGA
Gilbert, M., BSc (SMU), MBA (Dal), PhD (Brad)

Students seeking further information or help in planning courses of study in the School of Public Administration should address themselves to:

Graduate Co-ordinator
School of Public Administration
6152 Coburg Road
Halifax, NS B3H 3J5
Telephone: (902) 494-3742
Fax: (902) 494-7023

I. Degree Programmes

The graduate programmes of the School are designed to provide the professional education essential to a career in modern public service. They are offered to students who either are preparing for initial employment or are returning to university with work experience. The School's location in Dalhousie's Faculty of Management allows students to develop an MPA programme that links public administration to business, the environment and the information sciences.

The programmes are professional in that they equip students with both the administrative skills required in public sector management and an understanding of the organization, process, and activities of government. Each component is essential, and consequently required of all students. They are expected to achieve an expanded awareness of the public interest and a personal appreciation of the ethical standards appropriate to a career in the service of the public. The professional requirements have been developed in consultation with senior officials of all levels of government (including graduates of the School).

Admission requirements for the GDPA and the MPA are those of the Faculty of Graduate Studies, and its standards must be maintained throughout the duration of the programme. The quantity and quality of work expected in individual classes will reflect the high scholarly standards of graduate education.

The curriculum encompasses the essential components of financial, personnel and statistical techniques on the one hand, and economic, organizational and policy analysis on the other. The Graduate Diploma programme and the first year of the two year MPA programme require students to complete courses in these basic fields.

The second year of the MPA programme offers the student the opportunity to select one of the following concentrations:

- (a) Public policy
- (b) Public management.

Each student, at the start of the second year of studies (or the equivalent for part-time studies), will declare one of the above as an area of concentration. A minimum of six (including projects and directed readings, if any) of the nine elective classes will be selected from the area of concentration. The other three classes, designated as free standing, may be selected from elsewhere. These include classes from the other area of concentration, cross-listed classes taught by non-SPA members, and classes from other academic units at Dalhousie or other universities provided they have some public sector content. The offerings of related programmes and disciplines, such as business administration, economics, health services administration, law, planning, political science, sociology, and social work can be used by students subject to the approval of the Graduate Co-ordinator. Students who receive some advanced standing or exemptions on the basis of their previous course work will take at least two-thirds of the elective classes from their area of concentration.

A one-year MPA, consisting of five full credits of course work, may be considered for students who have completed, with a first-class standing, a BA honours degree in public administration, political science or economics. Admission to the one-year MPA may also be based on completion, with first-class standing, of an MA degree in these academic areas or a professional graduate-level degree in a field relevant to public administration (i.e., with public sector content). Course work in the honours degree and/or the masters programme must have included at least three of the five course credits required in the first year of the two-year MPA programme.

Students in the one-year MPA programme will select their area of concentration at the start of the programme and may take up to one elective class, from outside the area of concentration.

The School and the Faculty of Law offer a joint LLB/MPA programme. The programme allows students to take the two degrees simultaneously and to complete them in four years, rather than in five years as is the case if each is taken independently. Students interested in entering the joint programme should apply separately to both the School of Public Administration and the Faculty of Law, indicating on their applications that they wish to enter the MPA/LLB programme. The closing date for applications for the LLB is the end of February.

Students in the LLB/MPA programme will be eligible to take up to one of the five elective classes from outside the area of concentration. The Senior Seminar: Ethics in the Public Service (PUAD 6000.03) class is not a required class for LLB/MPA students, but may be taken as an elective class.

II. Applications Procedure

Application forms are available from the Admissions Office of Dalhousie University. Applications should be submitted as early as possible and not later than June 1 in the academic year in which studies are to commence.

A. General Admission Requirement for GDPA and MPA

Enrolment in the School is limited. In general, competitive applicants will have attained a good second class standing (B+ average) in their previous university work.

Admission is based on an assessment of:

- Professional experience and/or promise;
- All previous academic work;
- Letters of reference;
- TOEFL for foreign students (Test of English as a Foreign Language), a minimum score of 580 is required for acceptance in the Faculty of Graduate Studies. The TOEFL score must be submitted at the time of application;

Therefore, it is imperative that in addition to your application we receive:

- A statement of career interest (one page should be sufficient);
- A current résumé;
- At least two letters of reference (one of which should be academic);
- A TOEFL score (if applicable)

Students may submit a score from the Graduate Management Admission Test (GMAT) in support of their application. In the case of North American candidates, applications for the test are accepted by the ETS in Princeton until approximately six weeks before test dates. For candidates in other countries, closing dates are eight weeks before test dates.

The Dalhousie School of Public Administration GMAT Number is 0957.

Applicants for the test should use an order form obtainable from the Registrar's Office of the nearest University, Dalhousie University, or you may write to the address below to obtain an information bulletin and registration form for the GMAT. If the order form is lost or omitted from the materials you receive, you should write directly to:

Graduate Management Admission Test
Educational Testing Service
Box 966
Princeton, NJ, 08540, U.S.A.

Students are required to demonstrate at an early stage in their studies that they are proficient in writing reports and essays in English. Candidates from countries outside Canada whose mother tongue is not English will be required to take the Test of English as a Foreign Language as a requirement for admission. (See section 2 of this calendar.)

For further information, contact the Administrative Secretary of the School.

B. Part-time Study

The programmes offered through the School are available to students on a part-time basis. A part-time student may enrol in up to two and one-half full credit classes during the 12 months, September to August.

In order to ensure that graduate students benefit from a reasonable concentration of their studies, part-time programmes leading to the GDPA must be completed within four years, and part-time programmes leading to the MPA must be completed within six years.

III. Degree Programmes

A. Graduate Diploma in Public Administration (GDPA)

The Graduate Diploma in Public Administration is a one-year graduate programme designed for public servants who hold a first degree, and for students wishing to obtain professional preparation for a career in public administration.

Course Requirements

The GDPA requires the successful completion of five credits:

- PUAD 5100.03: Government Structure and Organization
- PUAD 5110.03: Public Sector Management
- PUAD 5120.03: Introduction to Public Policy
- PUAD 5121.03: Introduction to Policy Analysis
- PUAD 5130.03: Applied Economics I
- PUAD 5131.03: Applied Economics II
- PUAD 5140.03: Quantitative Methods I
- PUAD 5141.03: Quantitative Methods II
- PUAD 5150.03: Public Sector Accounting
- PUAD 5151.03: Public Sector Financial Management

When a student has a demonstrated competence in the area of a required class, an alternate class may be substituted if approved by the Graduate Co-ordinator.

B. Master of Public Administration (MPA)

The MPA is a graduate programme designed for individuals prepared to undertake advanced professional study. Individual programmes will vary in content to reflect each student's background and interests, while at the same time recognizing the central principles and functions of public administration.

Course Requirements

The two-year MPA will require the successful completion of 11 classes, which must include:

- PUAD 5100.03
- PUAD 5110.03
- PUAD 5120.03
- PUAD 5121.03
- PUAD 5130.03
- PUAD 5131.03
- PUAD 5140.03
- PUAD 5141.03
- PUAD 5150.03
- PUAD 5151.03
- PUAD 6000.03

The remaining credits will be electives, depending primarily on the student's area of concentration. Some advanced standing, resulting in a reduction of up to two and a half full-credits, may be granted to well qualified candidates.

The one-year MPA will require the successful completion of five credits, including up to two credits from the 5000-level classes, the Senior Seminar: Ethics in the Public Service (6000.03), and at least two and a half elective credits.

C. The LLB/MPA Programme

The combined LLB/MPA programme is a four-year programme which enables students to select classes leading to degrees of Master of Public Administration and Bachelor of Laws. The suggested order of the programme is:

Year 1

- First year classes of the MPA programme

Year 2

- First year classes of the LLB programme

Year 3

- One and a half credits from the MPA programme
- Civil Procedure
- Constitutional Law
- 16 hours of classes from the LLB programme.

Year 4

- One credit from the MPA programme

- A minimum of 23 hours of classes from the LLB programme, which must include The Legal Profession and Professional Responsibility.

Candidates for the LLB/MPA programme must satisfy the entrance requirements of both programmes, and may obtain further information about the combined programme by writing to the School of Public Administration and the Faculty of Law. For admission, students must apply to both the School of Public Administration and the Law School individually. Students applying for the MPA programme may submit LSAT results in lieu of GMAT results.

Advanced Standing

Advanced Standing of up to five credits (one year) may be granted to students who have completed graduate level classes which are relevant to the Masters in Public Administration Programme but which have not been used towards another degree. Students are advised to seek advanced standing when they apply for admission.

The Internship Programme

The Internship provides for formal integration of practical public service experience with academic studies in the MPA programme. It involves work by students for employers in the public sector on projects deemed to be significant by the employer and appropriate to the skills of career-oriented graduate students. The terms of reference are established through consultation between the student, the participating employer, and the School.

The opportunity for an internship placement is available to students who have completed one year of course work.

Previous work placements have been in the federal, provincial and municipal levels of government, international and non-governmental organizations and in the private sector.

IV. Classes Offered

- PUAD 5100.03: Government Structure and Organization. P. Aucoin
- PUAD 5110.03: Public Sector Management. P. Aucoin
- PUAD 5120.03: Introduction to Public Policy. P. Brown
- PUAD 5121.03: Introduction to Policy Analysis. J. McNiven
- PUAD 5130.03: Applied Economics I. F. Siddiq
- PUAD 5131.03: Applied Economics II. F. Siddiq
- PUAD 5140.03: Quantitative Methods I. D. Poel
- PUAD 5141.03: Quantitative Methods II. H. Bakvis
- PUAD 5150.03: Public Sector Accounting. R. Carroll
- PUAD 5151.03: Public Sector Financial Management. R. Carroll
- PUAD 6000.03: Senior Seminar: Ethics in the Public Service. P. Brown

Public Policy Concentration Classes

- PUAD 6100.03: Financial Administration and Budgeting. D. Poel
- PUAD 6110.03: Public Sector Auditing. Staff
- PUAD 6230.03: Intermediate Applied Economics. F. Siddiq
- PUAD 6235.03: Issues in Applied Economics. F. Siddiq
- PUAD 6300.03: Privatization and Public Policy. P. Brown
- PUAD 6500.03: Business and Government. J. McNiven
- PUAD 6505.03: Interest Groups. H. Bakvis
- PUAD 6510.03: Policy Analysis Project. F. Siddiq
- PUAD 6537.03: Environmental Policy. P. Brown
- PUAD 6540.03: Canadian Regional Development Policy. Staff
- PUAD 6545.03: Provincial and Municipal Business Development. J. McNiven
- PUAD 6750.03: Intergovernmental Relations. H. Bakvis
- PUAD 6755.03: Comparative Federalism. H. Bakvis
- PUAD 6785.03: Advanced Quantitative Methods. F. Siddiq

Public Management Concentration Classes

- PUAD 6100.03: Financial Administration and Budgeting. D. Poel
- PUAD 6110.03: Public Sector Auditing. Staff
- PUAD 6410.03: Municipal Management. Staff
- PUAD 6420.03: Municipal Financial Administration. M. Gilbert
- PUAD 6520.03: Programme Evaluation Seminar. D. Poel
- PUAD 6521.03: Programme Evaluation Practicum. D. Poel
- PUAD 6530.03: Natural Resource Administration. Staff
- PUAD 6535.03: Politics and Administration of Fisheries Management. Staff
- PUAD 6550.03: Design and Use of Projects. K. Sullivan

- PUAD 6555.03: Technology in Public Administration. K. Sullivan
- PUAD 6560.03: Education and Personnel Management. K. Sullivan
- PUAD 6600.03: Personnel Administration. M. Cassin
- PUAD 6610.03: Compensation and Collective Bargaining. Staff
- PUAD 6620.03: Women, Men and Management. M. Cassin
- PUAD 6625.03: Topics in Human Resource Management. M. Cassin

Cross-Listed Classes

- PUAD 2000.06: Administrative Law. Staff
- PUAD 5518.03: Antitrust Economics. C. Marfels
- PUAD 6300.03: LIBS Government Information Resources. Staff
- PUAD 6240.03: Social Cost-Benefit Analysis. T. Pinfold
- PUAD 6400.03: Local Government. D. Cameron
- PUAD 6775.03: Management of Sustainable Development. Staff
- PUAD 6780.03: Comparative Development Administration. D. Black
- PUAD 6925.03: Management Information Systems. Staff
- PUAD 6800.06: Projects and Directed Readings. Staff
- PUAD 6850.06: Co-op. M. Cassin
- PUAD 6900.06: Directed Reading. Staff
- PUAD 6910.03: Directed Reading. Staff
- PUAD 6920.03: Directed Reading. Staff

Not all classes are offered each year. Consult the School for current year offerings. In addition to the above, classes may be selected from other schools, departments, or faculties, subject to the approval of the Graduate Co-ordinator.

Recreation Physical & Health Education

Location: 6230 South Street
Halifax, NS B3H 3H5
Telephone: (902) 494-2152
Fax: (902) 494-5120

Director of School
Maloney, T.L.

Professor Emeritus
Belzer, Jr., E.G.

Professors

Beazley, R.P., BA, BEd (Acadia), BPE (McM), MPE (Dal), EdD (Tennessee)
Holt, L.E., BS, MS (Springfield), PhD (S Illinois)
Keddy, B., BScN (MSVU), MA, PhD (Dal), RN, major appointment in the School of Nursing
Lyons, R.F., BA (Dal), MEd (Xavier), PhD (Oregon)
Makrides, L., MCSP, BPT (Sask), MSc (Ottawa), PhD (McM), major appointment in School of Physiotherapy
Richards, A., Dip PE (Carnegie Schl PE, England), Teach Cert (Trent Park Col), MSc (Dal), EdD (Colorado)
Singleton, J.F., BA (Waterloo), MS (Penn State), PhD (Maryland)
Young, A.J., BS (West Chester State Col), MS, PhD (Maryland)

Associate Professors

Campagna, P.D., BPHE (Windsor), BEd (Queen's), MEd (SUNY-Buffalo), PhD (Alta)
Elder, G.C.B., DipPE Adv (St. Mary's, London), MEd (Georgia Southern), PhD (McM)
Hood, C.D., BPE (Calgary), MS, PhD (Illinois)
Ipson, N.M., BA, MS, PhD (Brigham Young)
Kirby, R.L., MD (Dal), FRCP(C), major appointment in Medicine
Kozey, C.L., BPE (UNB), BSc (Waterloo), PhD (Dal), major appointment in the School of Physiotherapy
Maloney, T.L., BPE, BEd (Alta), MA (Western), PhD (Alta)
McCabe, J.F., BPE, BA (UNB), MS, EdD (Tenn)
McIntyre, L.L., MD, MHSc (UofT), FRCP(C), Dean of the Faculty of Health Professions, joint appointment in Health Services Administration
Putnam, C.A., BPE (Man), MS (Wash), PhD (Iowa), Associate Director (Graduate Studies)
Richards, P.D., Teach Cert (Trent Park Col), Laban Arts of Movement Centre Cert (England), MA (Colorado)
Savoy, C.A., BPE (UNB), EdM (Boston), PhD (Tenn)
Turnbull, G.I., MCSP, DipTP, BPT (Man), MA (Dal), PhD (Rhodes), major appointment in Physiotherapy
Verabloff, L.J., BA, BPHE (Queen's), MS (Mich), PhD (Ohio State)

Assistant Professors

Barnes, L.J., BPE, MSc (Dal)
Earl, M., BScPT (Western), BSc, MSc, PhD (Waterloo), major appointment in Physiotherapy
McGuire, D.P., BA (Wright State), MA (Cincinnati)

Honorary Adjunct Professor

Mangham, C.R., BEd, MA (UBC), PhD (Oregon)
Travers, K.D.R., BScHEC, MAHEC (MSVU), PhD (Dal), PDt, major appointment at Mount St. Vincent University

The mission of the School is to develop leaders and scholars who can generate, disseminate, and apply knowledge that helps to maintain and enhance health. It does this by: engaging in research

related to well-being; preparing leaders in education, scholarship and social action to maintain and enhance well-being; and playing an educational and advocacy role, with and beyond the University, to affect social change that maintains and enhances well-being.

The School of Recreation, Physical, and Health Education offers master's degree programmes in three areas: Master of Arts in Health Education, Master of Science in Kinesiology and Master of Arts in Leisure Studies. There are ongoing research programmes conducted in each of the areas of health education (basic health-related research and evaluation of health education/health promotion policies, programmes, practices and content), kinesiology (exercise physiology, neuromuscular physiology, ergonomics, motor behaviour, biomechanics) and leisure studies (leisure and social groups such as older adults, youth or persons with disabilities; historical analysis of leisure and sport; analysis of sport and recreation administration and cultural services).

For more detailed information on the regulations regarding these programmes, students are referred to the Graduate Student Handbook of the School of Recreation, Physical and Health Education, which is available from the Associate Director (Graduate Studies).

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

Students seeking admission to any of the master's programmes should have earned an excellent record during four years of undergraduate study. Candidates for the Master of Science in Kinesiology should have an honours or honours equivalent degree which includes the completion of an independent research project. An honours or honours equivalent degree is recommended for candidates for the Master of Arts in Health Education or Leisure Studies. Those with appropriate qualifications are normally registered in the one-year master's programme. Students from undergraduate programmes in related fields (other than Health Education, Kinesiology, or Leisure Studies) will be considered for graduate study in the School, but may be required to register in the two-year master's programme.

Qualifying work may be required of applicants whose background for advanced studies in Health Education, Kinesiology, or Leisure Studies is judged deficient.

Programme Requirements

One full academic year (12 months) of resident study at Dalhousie University is a minimum requirement for the one-year master's degrees. Although the MA and MSc degree programmes officially have a one-year residency requirement, students should expect to take from 18 to 24 months of full-time work to complete the degree. Ordinarily, for full-time students, the degree must be completed within three year of first registration.

Five credits (30 credit hours) at the graduate level are required in all programmes - 18 credit hours of classes and 12 credit hours of thesis work. Required and elective classes for each programme are listed below. Each class is normally worth 3 credit hours. Electives may be chosen from the lists of classes below, or from graduate classes offered by other departments at Dalhousie University, or, to a limited extent, at other universities.

Students may take a maximum of 6 credit hours of ancillary classes above and beyond the required programme of study.

The thesis topic will be determined by the student and academic advisor. A thesis proposal must be approved by the candidate's thesis examination committee, which consists of at least three voting members (at least two of whom are members of the School's graduate faculty), before the thesis research may be undertaken. The candidate's advisor (i.e., research supervisor) is not a voting member of this committee.

Once the proposal has been approved by the thesis examination committee, it shall be submitted to the appropriate ethics committee for consideration. Only after approval has been received from both the thesis examination committee and the ethics committee, may the student proceed with data collection.

The thesis examination committee is responsible for approving the completed thesis after a final oral presentation by the student covering the nature and findings of the research.

Completion of the degrees is also possible through part-time study. However, financial assistance is not available for students undertaking the degree on a part-time basis.

The School holds research-oriented seminars during the academic year. It is expected that students will attend and participate in these seminars as discussants and presenters.

II. Degree Programmes

A. Master of Arts (MA) in Health Education

While the general goal of health education is to promote the maintenance and enhancement of individual, family, and community health through educational processes, the Master of Arts (Health Education) focuses on the evaluation of health education and health promotion policies and programmes. Its graduates are prepared to assume major roles and responsibilities in evaluation of and research concerning health education activities.

Required Classes: 24 credit hours

- HEED 5503.03: Intermediate Statistics for Health Sciences (Staff) OR EDUC 625B: Intermediate Statistics & Research Design (Mount St. Vincent University). Prerequisite: Before entering either LEIS 5503.03 or EDUC 625 students must have completed an introductory course in statistics with at least a "B" grade.
- HEED 5514.03: Trends in Health Education (Staff) OR HEED 5516.03: Theoretical & Scientific Bases of Health Education (D. McGuire).
- HEED 5595.03: Measurement & Evaluation in Health Education and Health Promotion (R. Beazley).
- HEED 9000.00: Thesis. 12 credit hours
- LEIS 5501.03: Advanced Research Methods in the Social and Natural Sciences (C. Hood) OR comparable class approved by the thesis advisor

Elective Classes: 6 credit hours

- HEED 5600.06/5601.03/5602.03: Independent Studies. Open to independent completion of study. Interested students should consult the Associate Director (Graduate Studies).
- HEED 5620.03: Topics in Health Psychology. Cross-listed with PSYO 6420.03.

Students are encouraged to elect classes outside the School that may help in the development of their research and/or professional interests, as well as courses within Health Education. Electives must be approved by the student's advisor.

B. Master of Science (MSc) in Kinesiology

Required Classes: 21 credit hours

- KINE 5501.03: Advanced Research Methods in the Social and Natural Sciences (C. Hood)
- Two of:
 - KINE 5510.03: Cardiorespiratory Dynamics in Exercise (P.D. Campagna)
 - KINE 5516.03: Neuromuscular Physiology (G.C.B. Elder)
 - KINE 5523.03: Biomechanics of Human Motion (C.A. Putnam)
 - KINE 5530.03: Cognitive Ergonomics (J.F. McCabe)
- KINE 9000.00: Thesis. 12 credit hours

Elective Classes: 9 credit hours

- KINE 5503.03: Intermediate Statistics for Health Sciences (Staff) Prerequisite: Students must have completed an introductory class in statistics with at least a "B" grade.
- KINE 5572.03: Topics in Human Performance (J.F. McCabe)
- KINE 5600.06/5601.03/5602.03: Independent Studies. Open to independent completion of study. Interested students should consult with the Associate Director (Graduate Studies).

Elective classes can be taken from within or outside the School. All classes must be approved by the student's advisor.

C. Master of Arts (MA) in Leisure Studies

Required Classes: 21 credit hours

- LEIS 5501.03: Advanced Research Methods in the Social and Natural Sciences. C. Hood
- LEIS 5503.03: Intermediate Statistics for Health Sciences. Staff OR another intermediate statistics class approved by the student's advisor. Prerequisite: Students must have completed an introductory class in statistics with at least a "B" grade.
- LEIS 5592.03: Interdisciplinary Basis of Leisure Science. R.F. Lyons
- LEIS 9000.00: Thesis. 12 credit hours

Elective Classes: 9 credit hours

PLEASE NOTE: not all classes listed below are offered every year. Please consult the timetable for a current list of classes offered. Elective classes may also be taken outside the School.

- LEIS 5512.03: Lifestyles of Ill and Disabled Persons. R.F. Lyons
- LEIS 5550.03: Historical Analysis of Sport and Culture. A.J. Young
- LEIS 5561.03: Gender, Leisure and the Family. C. Hood
- LEIS 5562.03: New Perspectives on Youth. A. Richards
- LEIS 5563.03: Leisure Behaviour and the Older Adult. J.F. Singleton
- LEIS 5600.06/5601.03/5602.03: Independent Studies. Open to independent completion of study. Interested students should consult with the Associate Director (Graduate Studies).

Social Work

Location: 6414 Coburg Road
Halifax, NS B3H 3J5
Telephone: (902) 494-3760

Director of the School

Drover, G. (beginning June 1997)
Wien, F. (Acting Director January - May 1997)

Graduate Coordinator

Wien, F.

MSW Off-Campus Programme Coordinator

Nasser, S.

Coordinator of Admissions

Densmore, J.L.

Professors

Carlson, R.W., BS, MSW (Penn), PhD (Chicago)
Drover, G., BA (UofT), MSW (Fordham), PhD (London School of Economics)
Wien, F.C., BA (Queen's), MA, PhD (Cornell)

Associate Professors

Gilroy, J., BA (Dal), MSW (King's), MA (UofT)
MacDonald Scipp, G., BA (Dal), MSW (King's)
O'Day, R., BA (UBC), MA, PhD (Michigan)

Assistant Professors

Bernard, W.T., BA (MSVU), MSW (Dal), PhD (Sheffield)
Duplisa, J., BA, MSW (MtA)
Harbison, J., BA, BSoc Stud (Dublin Trinity Coll), Grad Dip SW (Edinburgh), PhD (UofT)
MacDonald, M.M., BA (StFX), BJ (Carleton), MSW (Dal)
Neal, R., BA/BSW (McM), MA (OISE/UofT), PhD (UofT)
Richard, B.K., BA (MtA), MSW (Dal)
Sexton, A., BA (St. Thomas), MSW (Dal)
Thomas-Bernard, W., BA (MSVU), MSW (Dal), PhD (Sheffield)

Honorary Adjunct Professors

Cummings, J., BA (Dal), MSW (StFX), PhD (UofT)
Kerans, D.P., BA (Loyola), MA (St. Louis), STL (Innsbruck), DRS (Strasbourg)
Moore, D., Dip Soc Stud (London), BA, MA (Dal), PhD (Boston)
Williams, D., AB (Calif State, Chico), MSW (Calif, Berkeley), PhD (Brandeis)
Williams, R., BA (Acadia), MA (UofT), DBEd (Oise)

Lecturer

Nasser, BA, BSW (McG), MSW, MPM (Minnesota)

Sessional Instructors

Lambert, C., BA, MA (Goddard), BSW, MSW (McG)
MacDonald, M.J., BA (UNB), MSW (Dal)
MacDougall, G., BA (Western), MSW (King's)
McKeigan, D., BSW (Dal), MSW (Carleton)
Moore, B., BA (MtA), MSW (Dal)
Peers, M., BA (Western), MSW, LLD (Dal)

I. The Maritime School of Social Work

The Maritime School of Social Work was founded in 1941 as an independent school serving the needs of the region for professionally educated social workers. The political, social,

cultural, and economic conditions of the Maritime provinces have continued to give direction to the School's teaching programmes since its amalgamation with Dalhousie University in 1969. It has pioneered in developing theories of practice that take account of systemic inequalities based on factors such as gender, sexual orientation, race, culture, ethnicity, class and (dis)ability.

Both the undergraduate and graduate programmes are accredited by the Canadian Association of Schools of Social Work. The School also offers a diversified Continuing Education programme.

II. Master of Social Work (MSW) Degree

The Master of Social Work degree programme provides professional education for advanced, specialized social work practice and leadership positions in the practice field.

In order to practice social work in Nova Scotia, all persons must have a social work degree (BSW or MSW) AND be approved for practice by the Board of Examiners of the Nova Scotia Association of Social Workers. Persons applying to the Board to practice social work should contact the address below for further information:

The Registrar of the Board of Examiners
Nova Scotia Association of Social Workers
Halifax, NS B3J 2G8
Telephone: (902) 429-7298

Opportunity for in-depth learning is provided both in the classroom and in the field. The student's critical ability to assess the nature and utility of interventions is developed in relation to social work values, especially with regard to social justice. Elective classes focus on skills development in an area of special interest to the student.

A. The Specializations

Two areas of specialization for the development of practice are offered:

- Community Practice, and
- Individual and Family Practice, in either of two concentrations: Physical and Mental Health or Family and Child Welfare

1. Community Practice

The Community specialization provides graduate students with an opportunity to work with community groups. It also invites them to investigate and evaluate community action and community social work in relation to social movements and to social work values.

The specialization seeks to meet the theoretical and practical concerns of the particular students in the programme. The Community specialization also examines how social work practice is shaped by the interrelationships of place, class, race, ethnicity, gender and sexual orientation in diverse communities.

2. Individual and Family

This specialization increases the student's ability to evaluate the efficacy and benefits of social work interventions by considering legislation, policies, and service delivery issues in relation to theories and models of practice interventions.

In the Family and Child Welfare concentration, the focus is on the family as a social entity and on child welfare. There is an emphasis on social analysis and policy.

In the Physical and Mental Health concentration, the focus is on theory, knowledge, and issues as they relate to social work practice in the areas of adult health and mental health.

B. Programme Objectives

The Maritime School adheres to the principles of adult learning in its educational approach. This has special application for students of relative maturity with previous or concurrent professional social work experience. In the course of their study, MSW students are encouraged to identify and pursue their learning goals within the parameters of the curriculum and the objectives of the programme, which include the following:

- Development of an understanding of the methods for critical appraisal and systematic inquiry related to existing practice theories, models of intervention and personal practice experiences and abilities;
- Application of these means to existing and new knowledge regarding practice contexts, practice-related issues, practice theories, models of intervention and personal practice experience and abilities;
- Acquisition of new knowledge with respect to practice contexts, theories and interventions, including an area of practice of particular interest to the student;
- Integration of the new knowledge acquired into practice situations which support the development of personal and social change.

III. Admission Requirements

All applicants must satisfy the admissions requirements of the Faculty of Graduate Studies, Dalhousie University as stated in this calendar. These include an undergraduate degree from an accredited university with no less than a "B" level average. Applicants from outside Canada whose first language is not English must submit a Test of English as a Foreign Language (TOEFL) prior to the application deadline of February 1st, with a minimum acceptable score of 580.

A. MSW Degree Programme Prerequisites

The MSW programme of advanced study in the theory and practice of Social Work is primarily intended for persons with a baccalaureate degree in Social Work and at least two years of social work experience. Successful candidates are able to complete the programme in one calendar year of full-time or three years of part-time study.

Prerequisites for the one-year MSW degree programme include:

- A baccalaureate degree in Social Work;
- A cumulative academic GPA of 3.00 (on a 4.30 scale), or an equivalent cumulative average of at least B;
- Two years of full-time employment in a social work position, following the BSW degree (see also Selection Criteria below);
- Personal suitability for the study and practice of social work.

B. Qualifying Year

Persons who do not have a Bachelor of Social Work degree may apply for a qualifying year provided that they have the following prerequisites:

- An outstanding employment background in social work or related community work for a duration of approximately five years;
- An undergraduate or graduate degree in a related academic discipline, with content that facilitates a five-credit preparatory year of Social Work study;
- Personal suitability for social work education and practice.

Only a very limited number of applicants have the academic and employment backgrounds to be admitted to a qualifying year, which consists of five credits of study. A modified application for admission to the MSW degree programme is required on completion of the qualifying year credits, at which time the student's academic performance and personal suitability is reviewed by the Admission Committee.

Persons who meet the above prerequisites and who hold a graduate degree in a closely related discipline may be admitted to the first year of a two year MSW programme. During this first year, they need to satisfactorily complete certain advanced undergraduate social work classes.

C. Special Students

Special student status is not available for enrolling in graduate classes in Social Work. Classes are normally restricted to students who have applied and been accepted to the MSW qualifying year and the MSW degree programme, except in those cases where the instructor grants permission.

D. Full-time and Part-time Study

The graduate programme, including the qualifying year, may be taken on a full-time or part-time basis. Classes begin in September. Full-time MSW students who choose to do the Master's project may complete the programme by late July and graduate in October. Full-time thesis students may need an additional six to twelve months for completion. Graduation is possible in either May or October. Continuation as a 'Thesis Only' (which includes 'project only') student requires annual registration and payment of continuation fees. (In 1996/97, this fee was \$780 for 6 months, \$1340 for 12 months).

Each full-time year normally requires three years of part-time study. Part-time students who choose the thesis option need to allow an additional twelve to eighteen months for completion. Annual registration and an annual fee for continuing as a part-time 'thesis only' (including 'project only') student is required. (In 1996/97, the part-time thesis only fee was \$680 for six months, \$1240 for 12 months). It is important for prospective part-time students to note that most MSW core classes and the requisite agency field placement are available during daytime hours only.

E. Selection Criteria

The number of places offered each year to graduate students is limited. Candidates are selected according to their qualifications and the number of places that will be available for each specialization and concentration in the Fall academic session. The MSW Admissions Committee makes its selection on the basis of the following criteria:

- Academic performance, with particular reference to the Bachelor of Social Work degree;
- Two years of full-time employment in a social work position following the BSW degree. Applicants who do not meet this criteria will be considered but they need to give evidence of: (a) A clearly defined field of practice related to social work; (b) A (professional) leadership role in their work or volunteer experience; (c) Maturity and intellectual capacity demonstrated in a thoughtful and reflective personal statement (proposal of study); and (d) An understanding of the complexity of the learning process, including a recognition of the limitation of their prior learning;
- Strength of academic, work and personal references;
- Appropriateness of educational/professional goals to the School's class offerings;
- Personal suitability for social work.

F. Proposal for Study

The student's plan of study is presented in a formal Proposal for Study, which is an important component of the MSW application material. Candidates specify their choice of specialization (and concentration); develop an in-depth focus of intended study; and indicate the relationship of their background experience to the chosen area of specialization. Applicants for the qualifying year are assessed on similar standards of excellence as candidates for the one-year MSW degree.

G. Personal Suitability

Aptitude and fitness for the profession of Social Work, as determined by the MSW Admissions Committee, is a requirement for admission as well as for continuation in the programme. (See Section V: Required Withdrawal on Grounds of Unsuitability section.)

H. Affirmative Action Policy

The Maritime School of Social Work has an affirmative action policy for residents of the three Maritime provinces who belong to regional Aboriginal, Acadian and indigenous Black populations, and for persons with disabilities. The School is committed to admitting and graduating the highest possible number of students who qualify under this policy.

The admissions prerequisites described in the above sections are similar for all applicants. Each candidate who applies under the affirmative action policy is, however, considered on the basis of her/his qualifications for graduate study in Social Work rather than in relation to other candidates.

I. Application Procedure

Applications for admission are reviewed once a year following the application deadline date of February 1st.

MSW application packages include instructions, the three required reference forms, work/volunteer experience summary sheets, and guidelines for the Proposal for Study. The cover sheet for the letter includes a place for eligible candidates to indicate whether they wish to apply under the Affirmative Action policy. MSW application packages are available on request from the Dalhousie University Registrar's Office.

Incomplete and late applications can not be considered. Each applicant is notified by mail early in April of the Admission Committee's final recommendation to the Dean of Graduate Studies. Acceptances are conditional on the approval of the Dean followed by official notification from the University Registrar. First-time enrolment occurs in September only.

J. Scholarships, Bursaries, Teaching Assistantships and Financial Aid

For information on prizes, bursaries, scholarships and loans available to graduate students, consult the relevant section of this graduate calendar and the School's MSW brochure.

K. Sexual Harassment

The Maritime School is governed by the Sexual Harassment Policy and Procedures of Dalhousie University. For more information, see Graduate Calendar: Resources and Services - Advisory Committee on Sexual Harassment.

IV. Curriculum Requirements

A. Qualifying Year

Students who meet the requirements for acceptance to a qualifying year undertake a five-credit programme of preparatory study based on individual needs as assessed by the Graduate Coordinator. Classes consist primarily of BSW class content offered in the regular Fall/Winter academic session.

B. MSW Degree Programme

BSW graduates are admitted directly to the regular one-year MSW programme. The course of study also applies to those students who have successfully completed their Qualifying Year requirements.

The professional MSW degree programme consists of five Social Work credits and a non-credit colloquium. This requirement cannot be reduced by advanced standing or transfer credit in relation to any graduate classes taken prior to MSW registration.

Students register for the core classes that apply to the specialization and concentration to which they have been accepted:

Individual and Family Practice Specialization

- SLWK 6001.03: Theory and Practice of Anti-Oppressive Social Work (0.5 credit)
- SLWK 6020.06: Master's Project in Individual and Family Practice (1 credit) OR SLWK 9000.00: Master's Thesis (1.5 credits)
- SLWK 6335.06: Theory and Methods of Intervention (1 credit)
- SLWK 6340.06: Social Work in Family and Child Welfare, including a 400 hour field placement (1.5 credits) OR SLWK 6345.09: Social Work in Physical and Mental Health, including a 400 hour field placement (1.5 credits)
- One or more elective classes and the Colloquium
- SLWK 5990.00: Colloquium (non-credit)

Community Practice Specialization

- SLWK 6001.03: Theory and Practice of Anti-Oppressive Social Work (0.5 credit)
- SLWK 6380.03: The Social Party Context of Community Work (0.5 credit)
- SLWK 6385.03: Community and Social Change Analysis (0.5 credit)
- SLWK 6390.09: The Theory and Practice of Community Work, including a 400 hour field placement (0.5 credits)

- SLWK 6240.06: Master's Project in Community Practice (1 credit) OR SLWK 9000.00: Master's Thesis (1.5 credits)
- one or more elective classes
- SLWK 5990.00: Colloquium (non-credit)

Electives

Students are required to complete 1 full elective credit (or two 0.5 credits) if they do a Master's Project, or one 0.5 credit if they do a thesis.

At least one 0.5 credit elective must be taken outside the Maritime School of Social Work. This applies to both thesis and Master's project students.

The following Social Work electives are usually offered:

- SLWK 6365.03: Community Socio-Economic Development (0.5 credit)
- SLWK 6370.03: Advanced Practice Skills (0.5 credit)

C. Field Experience

Students should note that the required 1.5-credit core class of applied theory and practice for each specialization includes a field experience component of 400 hours in an appropriate agency other than the student's place of employment. This is undertaken in regular daytime hours between September and March concurrently with the classroom seminar. The MSW Field Manual contains the policy and procedures which define various aspects of the field placement.

D. Class Sequencing for Part-Time Students

In order to maintain the integrity of the part-time student's academic program, two of the core classes are taken in sequence, beginning in the first year with the one-credit advanced Social Work theory class in the Individual and Family Specialization, or the two .5-credit classes in the Community specialization. This is followed in the second year by the 1.5-credit core class of applied theory, which includes the field placement. The remaining classes may be taken concurrently with either of these, or in the third part-time year.

Enrolment in the core thesis or project usually occurs in the third year. The remaining classes may be taken concurrently with the other core classes in any one or more of the three year programme.

V. Regulations

All students are required to be familiar with and to observe University, Faculty of Graduate Studies and Maritime School of Social Work regulations. Students should therefore request a Graduate calendar when they register.

A. Grading Requirements

Students are governed by the grading regulations of the Faculty of Graduate Studies.

B. Required Academic Withdrawal

A student who fails to meet the minimum grade requirement of "B-" in each class may be withdrawn from the programme. Students who are withdrawn may submit a formal, written request to be readmitted. If the student is allowed to continue in the programme, the failed or uncompleted class or classes must be repeated if core, repeated or replaced if elective, and successfully completed with a final grade of at least "B-".

C. Required Withdrawal on the Grounds of Unsuitability

The MSSW acting through its Programme Committee and its Director may require a student to withdraw if judged to be unsuitable in aptitude and fitness for the profession of Social Work. Because the nature of the study and practice of Social Work places clients in a position of special trust in relation to social workers and social work, certain impairments or some types of conduct unbecoming to a member of the social work profession may be grounds for dismissal, or suspension. Aptitude and fitness for the profession of Social Work, as determined by the MSW Programme Committee are requirements for continuation in the programme.

The following list of examples illustrates the criteria used to assess the unsuitability in aptitude and fitness. This list should not be considered to exclude other such behaviours:

- (i) conviction of criminal activity (e.g. assault, sexual assault, fraud and drug trafficking).
- (ii) persistent substance abuse (e.g. alcoholism, drug addiction, use of illegal drugs).
- (iii) any medical condition which affects an individual's ability to perform as a social worker if that condition is chronic and/or recurring and affects judgements.
- (iv) unethical behaviour (see Nova Scotia Association of Social Workers Code of Ethics, 1994)

The MSW Committee will consider the student's situation to determine whether he/she is fit for the study and practice of Social Work. The principles of confidentiality, natural justice and due process are observed in all Committee deliberations.

VI. Classes Offered

SLWK 6001.03: Theory and Practice of Anti-Oppressive Social Work.

The principles of cross-cultural and ethnic-specific social work practice are now widely accepted in social work education, training and practice. The more recent challenge has been to develop anti-racist and anti-oppressive theory and practice. Racism and oppressive practices are in conflict with the "caring" notion of social work as a profession. Multiple forms of oppression frame everyone's lives. Social work intervention either adds to oppression, condones it through non-action, or does something to ease or break oppression. The aim of this course is to unravel the underlying thread of multiple oppression, and the interaction of various sources and forms of oppression, and to develop practice strategies that seek to challenge and break oppression.

SLWK 6020.06: Master's Project in Individual and Family Practice.

SLWK 6240.06: Master's Project in Community Practice.

SLWK 6335.06 Theory and Methods of Intervention.

This class offers an opportunity to develop intervention guidelines for a specific area of social work practice. Each student selects her/his own topic. Case-based reasoning, as developed from research by experienced practitioners, is presented as a basis for developing useful guidelines. Attention is given to assessing biases in the evidence used to develop guidelines, and to systematic inquiry in order to assess service outcomes.

SLWK 6340.09R Social Work in Family and Child Welfare.

Including a 400 hour field placement. In the Family and Child Welfare concentration, students develop a greater understanding of individuals as they are situated within a familial and societal context. One half of the classroom content of the course is devoted to social policy and social work practice relevant to analyzing the family, and child welfare within the family. Students are expected to analyze conceptions of the family in relation to perspectives of social class, racism, sexism, heterosexism, and disability.

The other half of the classroom content includes the more clinical aspects of working directly with individuals, both children and adults, within families.

The 400-hour field placement comprises the third component of this course. A student must successfully complete the field component in order to pass the course.

SLWK 6345.09R Social Work in Physical and Mental Health. Including a 400 hour field placement.

The Social Work in Physical and Mental Health course concerns itself with the application of theory to social work practice in the broadly defined field of health. It engages students in:

- (a) The development of a critical analysis and understanding of social and political/economic factors which impact on health and health service delivery

- (b) An examination of the nature of health service delivery including issues of access, equity and power, and new ways of delivering services which involve institutional/community lineages and community-based programs
- (c) A critical appraisal and review of social work practice theories, methods and models of intervention, as they relate to individual students' practice fields and interests; and
- (d) The integration of new knowledge, understanding and skills into their existing practice (through a 400-hour field placement component) in order to prepare them for specialized practice which is anti-oppressive and supports client empowerment.

SLWK 6365.03: Community Socio-Economic Development.

This class deals with the socio-economic development of communities and regions that are economically disadvantaged, as measured by high rates of poverty and underemployment. This course includes an examination of the leading theoretical frameworks that seek to explain high rates of poverty and underemployment, the policy-strategy directions that flow from each of these frameworks, and current attempts to achieve socio-economic development, including the work of community practitioners. The applied aspect of the course will involve in-class seminars with resource persons as well as field trips to selected community development projects in the province, including Mi'kmaq and African Scotian locations.

SLWK 6370.03: Advanced Practice Skills.

This elective class, intended primarily for students in the Individual and Family Practice Specialization, is designed to put into practice the knowledge and skills students are developing in their field placements and work environments. Much of the learning is experiential.

Students will be encouraged to think critically about the assumptions that underpin various approaches to practice. They will be given the opportunity to apply newly acquired knowledge and skills in a supportive environment, and to receive constructive feedback. Students are encouraged to develop a model of practice. Because this is a skills directed course, theory will be discussed within the context of practice. For example, if a particular practice approach derived from theory is being discussed, there will also be an opportunity to demonstrate that approach or technique via a role play or some other experiential method.

SLWK 6380.03: The Social Policy Context of Community Work.

This class is divided into two parts: (a) Theoretical interpretations of the current and projected status of the welfare state in advanced industrial societies, and consideration of the economic, political, social and demographic factors that lead to change in social policy. And (b) an in depth examination of several policy areas that are most relevant for community work such as income support, affirmative action and employment equity, education and training, and employment and economic development.

SLWK 6385.03: Community and Social Change Analysis.

There are tensions within the concept of "community" between marginalization and/or self-determination. Through case studies, the course explores these tensions as they occur in the field of community "care", an expanding field of social work practice. The theoretical base for the course draws on a variety of perspectives such as communitarianism, eco-feminism, social ecology, managerialism, neo-liberalism, and "new" social movement theory. The core classes for community students, SLWK 6380.03 and 6385.03, may be taken as electives by individual and family students.

SLWK 6390.09: The Theory and Practice of Community Work, including a 400-hour field placement.

In Canada, turn of the century settlement houses provided a community foundation for the work of paid and unpaid social workers. Today, women's centres, transition houses, AIDS support organization, anti-poverty networks, neighbourhood organizations and a variety of other community-based social action groups and

service programs continue the social movement tradition of community involvement, organizing for local community control over social and economic development.

The first term of this course is designed to assist students in building their academic and analytical skills in community work, while reinforcing an examination of their past work experiences and their field placements. In the second term, students have the opportunity both to enhance the academic and practical work of the first term, as well as to assist each other in the development of student determined critical practice skills.

SLWK 5990.00: MSW Colloquium.

Students also register for a series of colloquia dealing with contemporary issues in social work, which are discussed monthly during each term. Topics and guest speakers are determined in consultation with students. Part-time students may include this requirement in any one year of study.

SLWK 9000.00: Master's Thesis.

Sociology and Social Anthropology

Location: Corner of Seymour and South Streets
Halifax, NS B3H 3J5
Telephone: (902) 494-6593
Fax: (902) 494-2897
E-mail: donnaed@is.dal.ca

Chairperson of Department

Morgan, J.G.

Professors

Apostle, R., BA (Simon Fraser), MA, PhD (Calif, Berkeley)
Barkow, J.H., AB (Brooklyn), AM, PhD (Chicago)
Binkley, M., BA, MA, PhD (UofT)
Clairmont, D.H., BA, MA (McM), PhD (Wash)
Gamberg, H.V., BA (Brandeis), AM, PhD (Princeton)
Thlessen, V., BA (Man), MA, PhD (Wis)

Associate Professors

Butler, P.M., BA (MUN), MA (UNB), PhD (UofT)
Elliott, D.H., BA (Yale), PhD (Pitt)
Li, T., BA, PhD (Cambridge)
Miller, V.P., BA (Calif, Berkeley), MA, PhD (Calif, Davis)
Morgan, J.G., BA (Nott), MA (McM), D Phil (Oxon)
Murphy, C.J., BA (StFX), MA (Dal), PhD (UofT)
Stolzman, J.D., BA (Ore), MS (Fla), PhD (Ore)

Assistant Professors

Clark, P.G., BA, MA (McM), PhD (UBC)
Findlay, D., BA, BSW, MA, PhD (McM)
Gardiner Barber, P., BA, MA (Auckland), PhD (UofT)
Jarman, J., BA, MA (UofT), PhD (Cambridge)
vanRoosmalen, E., BA, MA (Waterloo), PhD (Alberta)

Lecturer

DuBois, L. BA (McG), MA (New School-NY)

Honorary Adjunct Professors

Looker, D., BA (Carleton), MA (Waterloo), PhD (McM), Acadia

Honorary Research Associate

Thomson, A.G., BA, BEd, MA (Dal), PhD (Cambridge), Acadia

Anthropologists and Sociologists in other Departments

Benoit, J., BA, MA (Guelph), PhD (Johns Hopkins), Henson College
Cohen, F., BA, Med (Harvard), PhD (Minn), School for Resource and Environmental Studies
Cohen, M., BA (Mich), DMD (Tufts), MSD, PhD (Minn), Oral Biology, Dentistry
Keddy, B., BScN (MSVU), MA, PhD (Dal), School of Nursing
Kephart, G., BS (California), MS, PhD (Wisconsin), Community Health and Epidemiology
Singleton, J., BA (Waterloo), MS (Penn State), PhD (Maryland), Recreation, Physical and Health Education
Townsend, L., DipP & OT, BSc (OT) (UofT), MAdEd (St. FX), PhD (Dal), Occupational Therapy

I. Admission Requirements

The Department of Sociology and Social Anthropology offers programmes leading to the M.A. in Sociology, the M.A. in Social Anthropology, and the Ph.D. in Sociology.

All candidates who are applying to the M.A. programme in Sociology or Social Anthropology must satisfy the general requirements for admission to the Faculty of Graduate Studies. Candidates will normally be expected to hold a four-year degree in Sociology or Social Anthropology with at least an upper second class (A-) standing. It is expected that a candidate's undergraduate work will have included classes in theory and methods appropriate to the particular discipline. Promising applicants who fail to meet these requirements may be admitted to a qualifying year which, if successfully completed, would permit subsequent enrolment in the MA programme.

All candidates who are applying for the Ph.D. in Sociology must hold an M.A. in Sociology, Anthropology or its equivalent. Applicants must have a graduate academic record of at least A-. Priority for acceptance to the PhD programme will be given to students whose areas of interest coincide with the Department's major areas of concentration. Priority in acceptance will also be given to students who have not acquired both a B.A. and M.A. from Dalhousie University.

II. Degree Programmes

A. Master of Arts (MA)

A full-time MA programme is normally of one year's duration, its upper time limit (in accordance with Faculty of Graduate Studies regulations) being three years. A part-time option is also available, its upper time limit (once again, in accordance with Faculty of Graduate Studies regulations) being four years. Both full-time and part-time options are available.

The normal programme is made up of five full credits. A thesis (SOSA 9000.00), worth two credits, is required as are the following classes: Graduate Seminar (SOSA 5200.06R) and Area Examination (SOSA 5300.06R). An elective class (or two one-half credit classes) approved by the Graduate Education Committee constitute the final credit.

An examination in the student's chosen area of specialization as well as defense of a thesis proposal are required.

B. Doctor of Philosophy (PhD)

In accordance with the Faculty of Graduate Studies regulations, the programme has a two year residency requirement. It is expected that the programme will take approximately four years to complete.

During the first year of doctoral studies the student will write three formal "Issue Papers". These issue papers may be prepared in one of the scheduled graduate level classes. The student will also complete any additional graduate classes, internal or external to the Department, that the student's Advisory Committee deems necessary.

During the second year the student will take SOSA 6201.03B (Graduate Seminar for Ph.D. students). By the end of the second academic year the student must have written three interrelated comprehensive exams in theory, in methods and in a substantive area. The student is required to pass all three comprehensive exams in order to continue in the PhD programme. During this year the student is required to make a presentation to a departmental colloquium on a topic that normally will be related to the research proposal. The latter must also be completed and approved by the Advisory Committee by the end of the second year.

For the third (and any subsequent) years the student will register for "thesis only" credit. By the end of the third year, the student must demonstrate a working knowledge of a language other than English which is relevant to the student's studies and research. If a student does not have an approved doctoral thesis proposal within three calendar years after acceptance into the programme, the student will not be permitted to continue in the programme. In accordance with Faculty regulations, an oral defense of the thesis is required.

III. Classes Offered

Classes may not be offered every year. Please consult the current timetable upon registration to determine if these classes are offered.
SOSA 5001.03A or B: Survey Methods

SOSA 5002.03A or B: Social Statistics
SOSA 5003.03A or B: Contemporary Perspectives in Ethnography
*SOSA 5004.03A or B: Advanced Issues in Work, Industry and Development: Regional and International Perspectives
*SOSA 5005.03A or B: Advanced Issues in Social Injustice and Social Inequality
*SOSA 5006.03A or B: Advanced Issues in Health and Illness
*SOSA 5011.03A or B: Advanced Issues in Social Theory
*SOSA 5012.03A or B: Special Topics in Sociology and Social Anthropology
SOSA 5200.06R: Graduate Seminar
SOSA 5300.06R: Area Examination
**SOSA 5510.03A or B: Graduate Readings in Sociology and Social Anthropology
**SOSA 5520.03A or B: Graduate Readings in Sociology and Social Anthropology
SOSA 5530.06R: International Development Studies Through the Shastri Summer Institute in India
SOSA 9000.00: MA Thesis
SOSA 9530.00: Ph.D. Thesis

* Please consult the department for specific class descriptions. The Topics or Issues will change from year to year.

** Permission of the Graduate Education Committee is required for registration in these classes.

Statistics

Location: Chase Building
Halifax, NS B3H 4H7
Telephone: (902) 494-2572
Fax: (902) 494-5130
WWW: <http://www.cs.dal.ca/home2.html>

Chair of the Department

Gupta, R.P.

Director of Division

Hamilton, D.

Professors

Field, C.A., MSc, PhD (Northwestern)
Gabor, G., MSc, PhD (Eotvos)
Gupta, R.P., MSc (Agra), PhD (Delhi)

Associate Professors

Hamilton, D., MA, PhD (Queens)
Smith, B., MSc (Calgary), PhD (Berkeley)
Thompson, K., MSc (Manchester), PhD (Liverpool), joint appointment with Oceanography

Assistant Professors

Bowen, K., PhD (Calif)
Manchester, K.E., MSc, PhD (UofT)

Post-Doctoral Fellow

Almudevar, A., PhD (UofT)

Statistical Consultant

Blanchard, W., MSc (UBC)

Please refer to the entry for the Department of Mathematics, Statistics and Computing Science in this calendar for a full listing of the members of the Department and information on other programmes offered by the Department.

The department offers programmes leading to the degrees of MSc and PhD in the following areas: statistical inference, robust statistics, data analysis, multivariate analysis, linear and nonlinear regression, time series analysis, statistical graphics and computing, information theory.

I. Admission Requirements

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies.

Candidates will normally be expected to hold a degree recognized by Dalhousie University as the equivalent of a Bachelor's degree with Honours in one of its own faculties.

GRE Aptitude and Advanced Mathematics scores are recommended for all applicants for graduate studies whose undergraduate work has been completed outside of Canada, and TOEFL scores are required for applicants whose native language is not English. Valid score reports must be received directly from the Educational Testing Service. To ensure consideration for scholarship funds, application should be made by January 31.

II. Degree Programmes

A. Master of Science (MSc)

Requirements

1. At least three full-credit classes, not including seminar classes, at the graduate level to be chosen in consultation with a department adviser. In addition, students whose preparation is deficient will be required to complete appropriate classes which will be designated by the adviser.
2. Attendance and participation in seminars.
3. A satisfactory thesis.
4. Students are required to give an oral presentation of their thesis and at that time to answer questions about the thesis. This presentation will be made after the thesis is in the hands of the student's committee and will be taken into account when the committee makes its decision.

B. Doctor of Philosophy (PhD)

Requirements

NOTE: The minimum and maximum time required to complete this programme are set out in section 6 of the Faculty Regulations.

1. At least one full-credit class during each of the first two years of the programme.
2. Comprehensive examinations which must be taken for the first time within 12 months and successfully completed within 16 months of registration in the programme.
3. Attendance and participation in an appropriate seminar.
4. Preparation and defence of a satisfactory research thesis.

III. Classes Offered

A selection of the following graduate classes will be offered subject to demand.

STAT 5060.06/4060.06: Advanced Statistical Theory
STAT 5070.03/4070.03: Multivariate Distributions
STAT 5075.03: Multivariate Analysis
STAT 5090.03/4090.03: Probability
STAT 5100.03/4100.03: Survival Analysis
STAT 5200.03/4200.03: Nonlinear Regression Analysis
STAT 5300.03: Topics in Statistics and Probability
STAT 5350.03/4350.03: Applied Multivariate Analysis
STAT 5360.03/4360.03: Robust Statistics
STAT 5370.03/4370.03: Stochastic Process
STAT 5390.03/4390.03: Time Series Analysis I
STAT 5400.03/4400.03: Time Series Analysis II
STAT 5410.03/4410.03: Advanced Topics in Time Series Analysis
STAT 5500.03: Topics in Advanced Statistics
STAT 5620.03/4620.03: Data Analysis
STAT 5990.03: Intermediate Statistics for Health Sciences. Format: Lecture 3 hours. Prerequisite: STAT 1060.03 or equivalent.
Cross-listing: NURS 5000.03, PHAR 5980.03, LEIS 5503.03, KINE 5503.03, HEED 5503.03, HEAS 6500.03. Restriction: Not open to graduate students in Mathematics, Statistics and Computing Science
STAT 7320.03 Statistics Seminar

Women's Studies

Location: 1444 Seymour Street, Second Floor
Halifax, NS B3H 3M5
Telephone: (902) 494-2980
Fax: (902) 494-2105
WWW: <http://www.dalgrad.dal.ca/homepage.htm>

Women's Studies Coordinator
Sherwin, S.

Graduate Programme Coordinator
Campbell, S.

Inter-University Faculty

Atlantic School of Theology
Davis Finson, S., BA (Waterloo-Lutheran), MRE (Emmanuel), MSW (Tor), DMin (Boston)

Dalhousie University

Andrews, A., BA, BEd, MA (Leeds), PhD (III), FRSA
Baniker, J., BA (Tor), LLB (Osgoode)
Barber, P.G., BA, MA (Auckland), PhD (Tor)
Bednarski, B., BA (London), MA (Dal), PhD (Laval)
Campbell, S., BA (Harvard), PhD (Cornell)
Carbert, L., BA (Alberta), MA, PhD (York)
Crowley, J., BA (Princeton), MA (Michigan), PhD (Johns Hopkins)
Fingard, J., BA (Dal), MPhil, PhD (London), FRSC
Ginn, D., BA (Mt.A), LLB (Queen's), LLM (Osgoode)
Jarman, J., BA, MA (Tor), PhD (Cambridge)
Keddy, B., BScN (MCSV), MA, PhD (Dal), RN
Laidlaw, T., BA, Med (Calgary), PhD (Alberta)
Lucky, C., BA, MA, PhD (Tor)
Neal, R., BA/BSW (McM), MA (OISE), SSW
Oore, I., BA (TelAviv), MA (Waterloo), PhD (Western)
Parpart, J., BA (Brown), MA, PhD (Boston)
Richard, B., BA (Mt.A), MSW (Dal)
Sherwin, S., BA (York), PhD (Stanford)
Stone, M., BA (Guelph), MA (Waterloo), PhD (Tor)
Thomson, J., BA (Western), MA, PhD (Tor)
Tillotson, S., BEd (Waterloo), MA, PhD (Queen's)
Treves, N., BSc (American University, Cairo), PhD (Rice)
van Roosmalen, E., BA (Waterloo), PhD (Alberta)

Mount Saint Vincent University

Baker, P., BA (Manitoba), MA, PhD (Tor)
Bruhm, S., BA (MSVU), MA (Dal), PhD (McGill)
Conrad, M., BA (Acadia), MA, PhD (Tor), FRSC
Early, F., BA (Florida State), MA, PhD (Concordia)
Evenden, D., BA, MA, PhD (McM)
Frank, B., BA, BEd, MEd (Acadia), PhD (Dal)
Gordon, J., BA (Antioch), MA, PhD (S.Illinois)
Kelly, U., BA, BEd, Med (MUN), PhD (Tor)
Manicom, A., BEd (McGill), MEd (AIE), PhD (Tor)
Nielsen, L., BEd (Sask), MA (Minnesota), PhD (New Hampshire)
O'Brien, M., BA (Mercyhurst), MA, PhD (Michigan)
Ralston, M., BA (Tor), MA (Sussex), PhD (Dal)
Scrimger, J., BA (Guelph), DipEd, MA (Western)
Varga, D., BASc (Guelph), MA, PhD (Tor)
Zuk, R., BA, MA, PhD (Alberta)

Saint Mary's University

Bell, S.J., BA, MA (Western), PhD (Tor)
Cauville, J., MA (Paris), MA, PhD (UBC)
Chan, W., BA (Carleton), MA (Sheffield)
Christensen-Ruffman, L., BA (Smith), PhD (Columbia)
Connelly, P., BA (SMU), DipEd, MA (Dal), PhD (Tor)
Crooks, S., BA (SMU), MA (Dal), PhD (Edinburgh)

Dalton, A.M., BS, BEd (MUN), MA (Fordham), PhD (Cath. Univ. of America)
Doucet, A., BA (Hons)(York), MA (Carleton), PhD (Cambridge)
Flzgerald, P., BBA (StFX), MA (N.Dakota), PhD (N.Colorado)
Katz, W., BA (Skidmore), MA, PhD (Dal)
Keeble, E., BA (DePaul), MA, PhD (Dal)
MacDonald, M., BA (Dal), MA, PhD (Boston)
Ralston, H., RSCJ, BA, MA, PhD
Tastsogiou, E., MA, PhD (Boston)
Thomas, G., BA, BEd, MA, PhD (Dal)
Thomas, G., BA, MA (Sussex), PhD (London)
VanderPlaat, M., BA, MA, PhD (Dal)

I. Master of Arts in Women's Studies

This degree is offered jointly by Dalhousie University, Mount Saint Vincent University, and Saint Mary's University. The degree will be granted jointly by the three cooperating universities and each students' programme will be approved by the Joint Graduate Admissions and Programme Committee (GAPC). The MA in Women's Studies emphasizes the interdisciplinary basis of Women's Studies, its community linkage and the emerging body of feminist theories and methodologies. Drawing on the collective resource of faculty members across the three universities, the programme invites applications from students whose research interests fall within eight broad categories: feminist theory and methodology; women and work; gender and development; women and health; North American women's history; feminist literary/cultural theory and practice; gender and education; and women and social change.

A. Admission Requirements

To be admitted to the MA students normally will be expected to have completed an Honours BA or equivalent with a minimum of B average or equivalent. Admission will also be based on the availability of Women's Studies faculty to supervise in the student's proposed area of research. Some students may be required to do qualifying classes to develop their background in social sciences, humanities and/or Women's Studies prior to admission to the programme.

In addition to following normal university procedures for application to graduate programmes, students must submit transcripts, three letters of references and a Supplementary Application Form.

Applications can be made to any of the three cooperating universities. Decisions in admission are made by the Interuniversity Graduate Admissions and Programme Committee (GAPC) for Women's Studies.

B. Programme Requirements

The programme includes both course work and thesis and can be pursued either full time or part time. The normal time limits for the completion of MA degrees apply (please refer to Section 4.6 of this calendar). The programme requires a minimum of five credits (5.0) including four required half-credits (Theories of Feminism, Feminist Methodologies, Graduate Seminar and Directed Study) and a two-credit thesis. Remaining electives can be chosen from among a range of graduate-level classes offered by other departments at the three universities, in consultation with the students' faculty advisor.

II. Classes Offered

WOST 6010.03: Theories of feminism.

This class provides an in-depth study of feminist theory. It explores the development of theories over time and across borders, focusing on common assumptions and debates among feminists.

WOST 6020.03: Feminist Methodologies.

This class examines feminist critiques and strategies around knowledge and research methodologies. It explores historical and contemporary debates on important research issues.

WOST 6030.03: Graduate Seminar.

(Half-credit, meets through both semesters.) This seminar will be used to discuss student research proposals and to provide a forum to integrate material from other classes. As part of this seminar, each student will be required to engage in field-based learning (i.e. community-based, developed in the context of each students programme). This will be a Pass/Fail class.

WOST 6090.03: Directed Study in Feminist Theory and Methodology.

WOST 6091.03: Directed Study in Feminist Literary and Cultural Theory and Practice.

WOST 6092.03: Directed Study in Gender and Development.

WOST 6093.03: Directed Study in Women and Social Change.

WOST 6094.03: Directed Study in Women in History (North America)

WOST 6095.03: Directed Study in Women and Work.

WOST 6096.03: Directed Study in Women and Health.

WOST 9000.00: Master's Thesis.

Centres and Institutes

A number of centres and institutes for study and research in specific fields are based at the University. Among these are:

Atlantic Health Promotion Research Centre

Director: Dr. M. Stewart
Co-ordinator: S. Crowell

The AHPRC was established in 1993 and is dedicated to research which can improve the health of individuals and communities - physically, mentally, socially, and spiritually. The main goal is to encourage health promotion research initiatives.

The AHPRC provides assistance with the development of health related research ideas, offers advice and consultation on proposals and reports; helps with networking, advises on potential funding sources, offers letters of support, a regular newsletter, a Web site, a library of health promotion materials and workshops and seminars on health promotion research.

The AHPRC works with community groups, individuals, academic researchers, health professionals and students.

Atlantic Institute of Criminology

Director: D.H. Clairmont, BA, MA, PhD

The Atlantic Institute of Criminology has been established to provide a centre for research in the areas of criminology, policing, and other concerns of the justice system. In this focus and in its contribution to the associated career development, the Institute is equivalent to those existing in other regions of the country. Research awards for graduate students in Criminology are available. Seed funding is also available for research relating to the justice system.

Policy for the Atlantic Institute of Criminology is developed with the assistance of an Advisory Board comprising representatives from the academic and professional community of the region.

Associate memberships are available to interested and qualified persons. Workshops and training classes also provide opportunities for professional development for employees of the Criminal Justice system in the Atlantic Region.

Atlantic Region Magnetic Resonance Centre

Director: Chair, Department of Chemistry
Manager: D.L. Hooper, BSc, MSc, PhD

Established in 1982 with assistance from the Natural Sciences and Engineering Research Council, the Centre is concerned with teaching and research programmes in magnetic resonance. The Centre has modern nuclear magnetic resonance (NMR) and electron spin resonance (ESR) instruments including Bruker AC 250 and AMX 400 NMR instruments and a Bruker MSL 200 NMR for solid state studies.

In addition to providing well-equipped laboratories and instrumentation for resident and visiting faculty, research scientists and students, the Centre provides NMR spectra and expertise to scientists in the Atlantic Region.

Atlantic Research Centre

Director: H.W. Cook, MSc, PhD

Established in 1967, the Centre conducts basic biomedical research and population studies in the fields of human genetics, cell membranes, neurobiology, and developmental nutrition. It also provides education in these fields to undergraduate and graduate students and the general public. Special tests and consultative services for the prevention and treatment of diseases causing metabolic disorders and mental handicap are provided by the

Centre. The Centre's professional staff hold appointments in various departments of the Faculty of Medicine. Its work is supported by grants from agencies such as the Medical Research Council of Canada, the Dalhousie Medical Research Foundation, the governments of the three Maritime provinces and by private donations.

Centre for African Studies

Location: 1444 Seymour Street
Halifax, NS B3H 3M5
Telephone: (902) 494-3814/2105
Fax: (902) 494-2105
Director: J.L. Parpart, MA, PhD

This Centre, established in 1975, coordinates instruction, publication, research and development education programmes in African Studies. Associated faculty hold appointments in departments and units concentrated in the social sciences and humanities. The Centre organises academic and informal seminars and public policy conferences on Africa and encourages interdisciplinary interaction at all levels on African subjects and issues. It cooperates with the International Development Studies programme and with the Pearson Institute and International Students Centre.

Centre for Foreign Policy Studies

Director: Timothy M. Shaw, PhD

Established in 1971 the Centre is concerned with teaching, research, publication, policy advice and other professional activities in the various aspects of foreign policy, security studies and international politics. It is funded through the Security and Defence Forum of the Department of National Defence and other foundations, government agencies and contracts.

The Centre's work is concentrated in the area of Canadian and comparative maritime and oceans policy and strategy but it also deals with international political economy and regional and global development. Its geographical specializations include foreign policy in Canada, Europe, the South (especially Africa, Asia and the Caribbean), and the U.S. The Centre encourages activities in these areas by Research & Doctoral Fellows and advances communication among local and international communities in these fields through seminars, workshops, conferences and colloquia, often co-sponsored by local, national and/or international organizations. It publishes occasional papers and monographs plus a monthly Defence Newsletter on Canadian defence and security policy issues.

The Centre is an integral part of the Department of Political Science. Centre faculty offer classes through the Department in foreign and defence policy, international relations and development, and maritime affairs at both undergraduate (majors & honours) and graduate (MA and PhD) levels. They also supervise masters and doctoral theses in these fields.

Centre for International Business Studies

Director: M.R. Brooks, BOT, MBA, PhD

The Centre was established in 1975 and is funded by the Department of Foreign Affairs and International Trade. Its purposes include the provision of specialist training in international business studies, research and outreach activity in international business. It carries out these functions within the administrative framework of the School of Business Administration.

Centre for Marine Geology

Director: Paul T. Robinson, BSc, PhD

The Centre for Marine Geology was founded in 1983 to promote the interdisciplinary study of the continental margins and the sea floor. The Centre draws on the faculty and resources of the Departments of Earth Sciences, Oceanography and Physics and has close links with other oceanographic institutions in North America. The objectives of the Centre are: (1) to expand the university's leading role in international studies of the oceanic crust, (2) to participate with industry and government in the geological aspects of oil and gas development on Canada's east coast and (3) to continue research on sedimentation and the recent history of the Canadian offshore.

Dalhousie Health Law Institute

Director: Jocelyn Downie, BA, MA, M.Litt., LLB

The Health Law Institute is an interdisciplinary Institute supported by and serving the Faculties of Law, Medicine, Health Professions, and Dentistry. The Institute provides teaching services to these four faculties at the undergraduate, graduate, and continuing education levels. Institute faculty also supervise graduate and undergraduate law students interested in writing about topics at the intersection of law and health care. Institute faculty conduct and facilitate research in health law both independently and collaboratively. There are particularly strong research links between the Institute and the Office of Bioethics Education and Research in the Faculty of Medicine. The Institute offers consultation services to various government agencies as well as public interest groups, the private sector, health care institutions and the media. Outreach activities include Institute promotion, international scholarly links and joint initiatives, and service to the University and to the broader community.

Lester Pearson International Institute

Associate Director/Projects and Administration: P. Rodee, BA, MBA

The Lester Pearson International (LPI) was founded in 1985 to promote Dalhousie's involvement in international development activities. In mid-1987, LPI was merged with the Centre for Development Projects and was given responsibility for guardianship of all externally financed international development programmes and projects at Dalhousie.

In mid-1994, LPI's administrative responsibility was expanded to include a broader responsibility of international activities and the internationalization of the University. Toward this end, LPI supports the Dalhousie community's involvement in international activities by facilitating student exchange opportunities with overseas partners and by enhancing networks among those with international experience and interest at the University. LPI also undertakes major activities such as a development education programme for the campus and local community, a lecture and seminar series, conferences, research, and a publications programme. Although LPI is not a degree granting arm of the University, it encourages and supports the study of international issues; serves as a resource centre for students, faculty and staff; and maintains a roster of associates known as Pearson Fellows who serve as advisors in their particular area of expertise.

Neuroscience Institute

Director: W. Tatton, MD, PhD, FRCPC

The Neuroscience Institute was founded in 1990 to promote and coordinate research in neuroscience, the modern interdisciplinary study of the brain and nervous systems. The development of the Institute parallels the establishment of many such institutes throughout the world and marks dramatic recent progress in understanding the workings of the brain, as signalled for example by U.S. President Bush's declaration of the 1990's as the Decade of the Brain.

Currently housed in the Sir Charles Tupper Medical Building, the Institute serves as an umbrella organization to foster research and training in neuroscience at Dalhousie. A major objective is to increase understanding of the functions of the nervous system in health and disease and, to this end, the Institute coordinates the activities of neuroscientists in the Faculty of Medicine and the Faculty of Science, facilitating collaboration between clinical and basic scientists in the two Faculties. Some foci of current research activity include: the autonomic nervous system; development and plasticity of the nervous system; and, sensory physiology. The Institute also provides a vehicle to seek new sources of funding, and will encourage new initiatives in all areas of neuroscience research at Dalhousie. In addition, the Institute promotes and coordinates training programmes in neuroscience currently offered through constituent departments at both the undergraduate and graduate levels. Associated with the latter it sponsors a seminar series annually.

Oceans Institute of Canada/Institut canadien des océans

The Oceans Institute of Canada/Institut canadien des océans is a federally incorporated, non-profit organization established in 1976 and dedicated to promoting responsible management of the world's oceans.

The Institute serves the public and private sectors at national and international levels. Work is carried out by a permanent staff and experts drawn from a multidisciplinary panel of associates.

The location of its head office in Halifax promotes full collaboration with many other establishments concerned with ocean affairs, including Dalhousie University. The Institute has a Pacific Office in Vancouver.

Trace Analysis Research Centre

Director: L. Ramaley, BA, MA, PhD

With the assistance of a grant from the National Research Council, the Centre was established in 1971 to train analytical chemists and, through research, to contribute to the advancement of analytical chemistry. A major facility of the Centre is a low-power nuclear reactor (SLOWPOKE) which is available to researchers within Dalhousie and elsewhere.

Resources and Services

A. Advisory Committee on Sexual Harassment

Sexual harassment is sexually oriented behaviour of a deliberate or negligent nature that adversely affects the working or learning environment or participation in university life. Sexual harassment can take many forms, from constant joking to assault. It may involve promises of reward, or threats that you could fail in class or lose your job. It may make your work or study environment uncomfortable through continued sexual comments, suggestions or pressures. Sexual harassment may involve unwelcome sexual attention from a professor, a teaching assistant, a staff member, a student, or even a patient or a customer.

Dalhousie University is committed to an environment free from sexual harassment. A policy and procedures exist to deal with complaints of sexual harassment. Responsibility for monitoring the policy and coordinating educational programming rests with the President's Advisory Committee on Sexual Harassment, which includes representation from student, staff and faculty groups.

If you believe you are being sexually harassed at Dalhousie you are encouraged to discuss your questions or concerns with the Sexual Harassment Advisor, Room #3, Basement of the Arts and Administration Building, 494-1137 or 494-1639. Advice and information about the policy and possible options are available.

Persons found to have engaged in sexually harassing behaviour can be subject to a range of penalties, up to and including expulsion or dismissal from the University.

B. Alumni Association

The Alumni Association is composed of over 70,000 former students. Volunteers scattered across the world keep alumni informed and involved with the Association. The Alumni Association coordinates a number of programmes including homecomings, reunions, chapter meetings, sports events, information lectures, a Student Alumni Association, Scholarships and Bursaries, and the Alumni Award for Teaching Excellence and the Outstanding Alumnus Award. The Association publishes the Dalhousie Alumni Magazine which is sent to all alumni and friends.

The alumni play a vital role in the University in a wide variety of ways including representation on the Board of Governors.

C. Athletics

Athletics and Recreational Services offers a wide range of programmes for every Dalhousie student. More than fifty clubs and intramural programmes offer fun, fitness and companionship while 13 varsity sports provide excitement for players and spectators alike. For those who prefer less competitive activities, there are a great number of fitness, leisure and aquatic instructional programmes.

Recreation facilities on campus include: Dalplex—offering a 50,000 sq. ft. fieldhouse, olympic-size pool, two weight rooms, two hardwood basketball courts, numerous "no-fee" racquet courts, and an indoor jogging track, a golf putting green and driving cage, a cardio-fit area and family-fitness features such as the Fun Zone play area (the largest indoor soft modular play structure in Metro), a babysitting service, and our Family Change Room; the Dalhousie Memorial Arena, Studley Gym, and The F.B. Wickwire Memorial Field (one of the largest artificial playing surfaces in the world). For details on fitness and recreation at Dalhousie contact Dalplex at 494-3372 or the Intramural Office at 494-2049.

D. Black Students

The Black Student Advising Centre is available to assist and support new, prospective and returning Black Students (African, American, Canadian, Caribbean, etc.) The Advisor may organize programme

activities which assist Black students in developing contacts with other Black students both on campus and in the Black community. The Centre is intended to foster a sense of support and community among the Black students, with other students and to increase intercultural awareness.

The Advisor will provide confidential services and programmes individual and/or group assistance, impartial observation, relevant resource materials, along with a referral service which may benefit your academic, personal and social development on and off campus. There is a small student resource room for meeting, peer support, reading and/or studying. Awards, scholarships, employment, community information and upcoming events are also made available.

The position of the Black Student Advisor was created by Dalhousie University to provide information to prospective students, increase access and promote retention of indigenous Black students.

The Centre may be beneficial to all students, faculty and staff as a means of increasing awareness and sensitivity to Black student issues and presence within the University community.

For further information contact: Office - Black Student Advisor, Student Union Building, Halifax, Nova Scotia, B3H 4J2; phone - (902) 494-6648; fax - (902) 494-2042; World Wide Web homepage URL - <http://www.dal.ca/~acswww/bsa.html>; Black Students homepage - <http://www.dal.ca/~acswww/blacks.html>.

E. Chaplaincy at Dalhousie

The University provides facilities for chaplains appointed by various churches. There are five chaplains at Dalhousie, representing the Anglican, Baptist, Roman Catholic, Lutheran, and United Church traditions. In addition, contact ministers are designated by the Jewish, Presbyterian, and Orthodox traditions and can be reached through the Chaplains' Office on campus. The Chaplains' Office is located on the fourth floor of the Student Union Building, telephone 494-2287. Office hours are Monday to Friday 9 - 4. Appointments can be made for other convenient times. The chaplains are available at any time for emergencies. Outside office hours, chaplains may be reached by calling the answering machine at 494-2287 to hear emergency numbers.

F. Counselling and Psychological Services

The Counselling and Psychological Services Centre offers programmes for personal, career and educational concerns. Counselling is provided by professionally trained Counsellors and Psychologists. Strict confidentiality is ensured. Counselling is available both individually and on a group basis. Topics covered by regularly offered group programmes include Study Skills, Career Decision Making, Exam Anxiety Reduction, Public Speaking Anxiety Reduction, Overcoming Procrastination, Anger Management, Resume Writing and Job Search Skills. Information on a wide variety of careers and academic programmes is available in the Frank G. Lawson Career Information Centre. Students wishing to get a first hand view of careers they are considering entering, may contact alumni willing to discuss their career experiences through the Centre's Mentors and Models programme. Interest testing is also available to students.

The Counselling and Psychological Services offices and its Frank G. Lawson Career Information Centre are located on the 4th Floor of the Student Union Building. In addition to regular office hours, the Centre is open three evenings a week during the academic year. Inquire or make appointments by dropping in or calling 494-2081.

G. Dalhousie Arts Centre

Designed as a multipurpose facility, the Dalhousie Arts Centre is home to four University departments: Dalhousie Arts Centre (Rebecca Cohn Auditorium), Dalhousie Art Gallery, and the two academic departments of Music and Theatre. The Arts Centre remains, after twenty-one years, an integral part of the cultural experience in our community and stands as the only arts complex of its kind in Nova Scotia.

Of the numerous performing arts spaces in the Dalhousie Arts Centre, the Rebecca Cohn Auditorium, or "The Cohn", as it is affectionately called, is the most familiar and prestigious. The 1040

seat concert hall is the home of Symphony Nova Scotia, as well as the venue of choice for a wide variety of performers ranging from The Royal Winnipeg Ballet to Blue Rodeo, The Chieftains, and Revere to name a few. Other performing and visual arts space in the Arts Centre include: The Sir James Dunn Theatre (240 seats), the David MacK. Murray Studio, Studio II, The MacAloney Room, and the Art Gallery.

The Dalhousie Art Gallery offers the public access to national and international touring exhibitions and initiates many ambitious and exciting exhibition programmes.

Further information on the Music and Theatre Departments can be found in their separate listings.

H. Dalhousie Student Union

Every Dalhousie student is automatically a member of the Dalhousie Student Union. The Student Union is recognized by an agreement with the University Administration and by an Act of the Nova Scotia legislature as the single voice of Dalhousie students. All student activities on campus are organized through the Student Union, and the Student Union is the focus of all student representation. The business of the Student Union is conducted by a Council made up of 40 members. Every student is represented by one or more representatives of their faculty, elected within their faculty in the spring. As well, students who live in residence and international students also elect their own representatives because they are uniquely affected by certain university policies. Also on the Council are the student representatives elected to the Senate and Board of Governors.

One of the most important resources of the Student Union is the Student Union Building located at 6136 University Avenue between Seymour and LeMarchant Streets. The SUB, which is exclusively operated by the Student Union and is paid for through Student Union fees, was opened in 1968 as a centre for student activity on campus. Every student has the opportunity to take advantage of the Union's financial, physical and organizational resources. Students have an opportunity to become involved in committees dealing with various student issues. The DSU also offers a full range of clubs, societies and organizations for any student to participate in. All students are invited to satisfy their curiosity by visiting the Student Union Council offices. The Student Council office is located on the second floor of the SUB and is open from 8:30 a.m. to 4:30 p.m. Monday through Friday, phone number 494-1106.

I. Housing/Residence Services

For the 55 per cent of Dalhousie University students whose homes are outside the Halifax Metropolitan area, where to live while attending university is a major question. The supply of University owned housing does not meet the demand and the vacancy rate in the various private, commercial units is low. It is therefore very important that students planning to attend Dalhousie think well in advance about their accommodation needs.

Students should be aware of the following points in reference to residence accommodation. You must indicate your interest in residence accommodation on your Application for Admission to a programme of study. Upon admission to a programme of study, those students who have indicated an interest will receive a Residence Application Form. It is important to return the Residence Application Form promptly as the applications will be considered as they arrive. Residence Application Forms will not be distributed to, nor received from, individuals who have not gained admission to a programme of study.

Students with disabilities are encouraged to contact the Residence Office at (902) 494-1054, for information and assistance.

The traditional style residences at Dalhousie are chiefly for undergraduate students; very few graduate spaces are allocated and in many cases students pursuing advanced degrees are not prepared to live with the exuberance of first and second year students.

The information below gives a description of A. traditional on-campus residences, B. off-campus housing owned by the university and C. the services offered by the off-campus housing office listing service. For information on housing fees, see the Fees section of the Calendar.

PLEASE NOTE: Academic acceptance by the University, i.e., admission to a course of study, DOES NOT GUARANTEE admission to University Housing or provision of off-campus accommodation.

It is the responsibility of the individual student in all cases to make separate application for the university housing of her/his choice, or to avail him/herself of the listing services provided by the Off-Campus Housing Office.

As available space in University residences is limited students are encouraged to complete and submit their residence application immediately upon receiving it with their letter of academic admission.

1. Traditional Style On Campus Residence

a) Howe Hall

Centrally located on campus, Howe Hall, provides accommodation for 524 undergraduate students. The sprawling, grey ironstone complex is divided into five houses: Bronson, Henderson, Smith and Studley Houses are co-ed; Cameron is for men only. Each house has its own distinctive identity and student government. The ratio of seniors to first-year students is approximately 40/60, except in Henderson house which is predominantly for first year students.

The houses offer both double and single rooms with the singles generally reserved for senior undergraduates and the doubles for first-year students. Facilities include two dining rooms, lounges, television rooms in each house, a canteen, games room, squash courts, weight room, study areas, laundry rooms and computer room.

b) Shirreff Hall

The women's residence on the Dalhousie campus, Shirreff Hall, provides accommodation for 444 female students. Located in a quiet corner of the campus, it is minutes from classes, the library, Dalplex and other facilities as well as from the scenic Northwest Arm. It is divided into three houses - Newcombe, Old Eddy and New Eddy (which includes the Annex). Old Eddy and New Eddy have both single and double rooms while Newcombe has single rooms only. The Annex houses only 14 senior students and is distinct from the remainder of Shirreff Hall in that it has a separate outside entrance and is not directly accessible from the main residence.

Shirreff Hall offers a dining room, an elegant library and visitors' lounge, study areas, computer rooms, games room, television lounges, exercise room, kitchenettes, canteen, laundry room and reception desk. Students have access to two pianos.

c) Eliza Ritchie Hall

Opened in 1987, Eliza Ritchie Hall is a co-ed residence. It provides traditional residence accommodation for 84 students in predominantly single rooms.

This three-storey building is located close to the Dalplex and to Shirreff Hall, where students take their meals. Facilities include study rooms, a multipurpose room, reception area, laundry facilities and leisure lounges with kitchenettes.

2. Off Campus, University Owned Housing

a) Fenwick Place

Dalhousie's 33-storey Fenwick Place offers students the privacy and some of the independence of apartment living. Located in south end Halifax, it is only a 15-minute walk or a short bus ride from the campus. Because Fenwick houses both single and married students, the mix of people provides a harmonious living environment.

Many of the 252 apartments in Fenwick Place are furnished to accommodate students in groups of two, three or four. Priority is given to students who apply in groups and who are currently living in a Dalhousie residence. Each of these apartments has a full kitchen and bathroom, furnished living room and dining area and a balcony. Bedrooms have desks and a mate-style bed. Heat, hot water, electricity, and satellite television are included in the residence fee.

Fenwick also has a number of unfurnished bachelor, one and two-bedroom apartments which are rented to married and single students. Each of these apartments has a full kitchen and bathroom. Heat, hot water, and satellite television are included in the rent.

Laundry facilities are available on every floor of Fenwick Place. The front desk is open 24 hours a day with staff available to provide security, information and advice to students.

b) *Glengary Apartments*

Located on the campus on Edward Street, Glengary Apartments is a four-storey brick building offering co-ed accommodation for up to 52 students. Preference is given to students in second and third year and especially to those who apply in groups of three/four.

Glengary has 12 furnished apartments, each with space for three/four students. The apartments may be arranged as three single rooms, or two singles and a double room. Each apartment includes a kitchen living room and bathroom. There are also four bachelor apartments which are always in high demand. Laundry facilities are located in the basement, where there is also a limited amount of storage space.

Coordinators are available for security and administrative services and also act as a resource for students who may need advice or assistance.

c) *Co-ed Apartment Units*

Dalhousie has two co-ed apartment buildings which are open to students in graduate programmes. Located on University Avenue, on the main campus, the buildings include bachelor, one and two-bedroom apartments and accommodate a total of 20 students.

Each apartment has a living area and kitchen facilities with a fridge, stove and sink, a full bathroom and ample cupboard space but is otherwise unfurnished. A laundromat is located in the neighbourhood. Heat and hot water are included in the rent.

d) *Residence Houses*

Dalhousie also has six residence houses, three of which are now co-ed. All were once single family homes, and have their own kitchens, living rooms and bathrooms. The character of these homes has been maintained as much as possible. The houses are all on campus. Although they are generally occupied by students in graduate programmes or professional schools, a few of the 45 spaces are reserved for undergraduates.

Two of the houses are designated as 24-hour quiet areas for students who want a particularly quiet environment in which to live and study. One of the houses is designated as a French house, reserved for male and female students who would like to live in a French-speaking environment.

All of these houses have both single and double rooms, each with a bed, dresser, study desk, lamp and chair. Linen, cooking utensils and small appliances are not provided. Students share kitchen and living room areas which are maintained by the cleaning staff. A trained senior student acts as a house coordinator and liaises with the Howe Hall Residence Co-ordinator and Facility Co-ordinator to provide administrative and resident-related services.

e) *Living Off-Campus*

Dalhousie's Off-Campus Housing Office assists students who do not want to live on campus or who have been unable to find a place in residence or in University apartments and houses. Located in the Student Union Building, this office is designed to help students find privately-owned accommodation.

The Off-Campus Housing Office provides centralized information on available housing in the Halifax metro area, including apartments, shared accommodations, rooms, condos and houses. Up-to-date computerized printouts of these listings are available for viewing as well as telephones for calling landlords and material such as maps and transit schedules.

Off Campus Housing has a new Web site:

<http://adminweb.ucls.dal.ca/housing/loc.htm>. You can search for accommodations as well as list your own place. The Web site is updated twice weekly on Tuesday and Thursday.

Although the housing staff cannot arrange, inspect or guarantee housing, they will do everything they can to help students find accommodation that is pleasant, inexpensive and close to campus.

Because of the low vacancy rate in Halifax, it is advised that students start looking for off-campus housing well ahead of the academic year.

f) *General Information*

- Application forms must be accompanied by an application fee and a deposit in Canadian funds, payable to Dalhousie University. Deposit amounts are listed on the application form.
- Acceptance into an academic programme does not mean that application for a place in residence has been approved.
- To live in any of the University-owned buildings, students must maintain full-time status at Dalhousie throughout the academic year.

For further information on living at Dalhousie, or for additional copies of the residence application form, do not hesitate to contact:

Director of Housing and Conferences

Location: 6250 South Street
Dalhousie University
Halifax, N.S. B3H 3J5
Telephone: (902) 494-3365

Howe Hall, Eliza Ritchie Hall, Shirreff Hall and the Residence Houses:

Location: Residence Office
Howe Hall
Dalhousie University
6230 Coburg Road
Halifax, N.S. B3H 4J5
Telephone: (902) 494-1054

For Fenwick Place, Glengary Apartments and Co-ed Apartment Units:

Location: Accommodation Office
Fenwick Place
Dalhousie University
5599 Fenwick Street
Halifax, N.S. B3H 1R2
Telephone: (902) 494-2075

For Off-Campus Housing Assistance:

Location: Off-Campus Housing Office
Student Union Building
Room 410
Dalhousie University
6136 University Avenue
Halifax, N. S. B3H 4J2
Telephone: (902) 494-3831

J. Instructional Development and Technology

The Office of Instructional Development and Technology (OIDT) is mandated to initiate, lead, and coordinate activities which encourage reflection upon and improvement in teaching and learning at Dalhousie.

Workshops - To fulfil this primary goal, the OIDT develops and presents a variety of sessions and workshops to faculty and teaching assistants at Dalhousie. Annual events include the Orientation to Teaching at Dalhousie for new faculty and the Graduate Teaching Assistant Orientation for new GTAs. During the year, workshops are presented monthly or bi-monthly and are open to the Dalhousie community. The OIDT also cooperates with other universities in Nova Scotia to disseminate information about teaching improvement.

Publications - Focus on University Teaching and Learning, the OIDT newsletter, is published five times a year. Three other publications - Recording Teaching Accomplishment: A Dalhousie Guide to the Teaching Dossier; University Teaching and Learning: An Instructional Resource Guide for Teaching Assistants at Dalhousie University; Learning Through Writing: A Compendium of Assignments and Techniques - may be purchased or borrowed from the OIDT. The extensive bibliography of materials available for loan includes both print and video resources on topics related to teaching. These may be borrowed by faculty, teaching assistants, and students.

Instructional Media Services - To complement its primary goal, the OI DT also has responsibility for the provision of instructional media services to the campus (excluding Medicine and Dentistry). These services include audio-visual equipment, videotaping, photography, and graphics. Facilities for borrowing discipline-specific audio and video tapes are located in the Learning Resource Centre in the basement of the Killam Library.

Distance Education - Through its support for the development of distance education classes, primarily in the Health Professions, the OI DT assists Dalhousie to respond to the needs of those who wish to upgrade their education. General inquiries about these classes should be directed to the Registrar's Office.

Information, teaching resources, and private consultations are available through the Office of Instructional Development and Technology. The Office is located in the Killam Library Courtyard (494-1622).

K. International Student Centre

The International Student Centre provides services and programmes for Dalhousie's students from around the world. It is a resource and activity post for international students, and is dedicated to ensuring that international students make the most of their stay in Canada.

The Centre provides information and advice on financial, legal, immigration and personal matters and acts as a referral point to other services on campus. It organizes reception and orientation programmes that assist international students in adjusting to the new culture and in achieving their educational and personal goals. A variety of social, cultural and educational programmes are also held throughout the year. The Centre coordinates activities that facilitate fostering of relationships with the university and city communities.

The Centre has a lounge where students can meet and a reading room where students can study or read international publications. For further information, contact: The Advisor, International Student Centre, Student Union Building, 6136 University Avenue, Room 120, Dalhousie University, Halifax, N.S., Canada, B3H 4J2 or phone (902) 494-7077.

L. Libraries

The Dalhousie University Library System is organized to accommodate the needs of the undergraduate teaching programmes, graduate and faculty research projects, and professional schools. The system is made up of the following components: the Killam Memorial Library - Humanities, Social Science, and Sciences, the Sir James Dunn Law Library, and the Kellogg Health Sciences Library.

As of April 1, 1996, the total Dalhousie University Library System holdings include over 1,550,000 volumes of books, bound periodicals, documents, and bound reports, 414,000 microfilm & microfiche, 100,000 maps, and other media. Approximately 8,850 serials titles are currently received, and dead title holdings number over 11,000.

Dalhousie libraries participate in Novanet, a network which shares a single automated online catalogue of the holdings of the member libraries (Mount Saint Vincent University, Nova Scotia College of Art & Design, Saint Mary's University, Technical University of Nova Scotia, University College of Cape Breton, University of King's College, the Atlantic School of Theology and St. Francis Xavier University). Users borrow from Novanet libraries upon presentation of their University ID card.

M. Ombudsperson's Office

The Dalhousie Ombudsperson's Office offers assistance and advice to anyone experiencing problems with the Dalhousie community, including difficulties associated with finances, academics, or accommodations. This student run office can help resolve particular grievances and attempts to ensure that existing policies are fair and equitable. Jointly funded by the University and the Dalhousie Student Union, the Ombudsperson can provide information and direction on any University-related complaint. Clients retain full control over any action taken on their behalf by the Ombudsperson's Office, and all inquiries are strictly confidential.

The Dalhousie Ombudsperson's Office is located in the Student Union Building, Room 403. Regular office hours are posted on the door at the beginning of each Semester. The Ombudsperson's Office can also be reached by calling 494-6583. If no one is available to take a call, a message may be left on voice mail.

N. Registrar's Office

The office is responsible for high school liaison, admissions, awards and financial aid, registration, maintenance of student records, scheduling and coordinating formal examinations, and convocation. Of greater significance to students, however, is the role played by members of the staff who provide information, advice, and assistance. They offer advice on admissions, academic regulations and appeals, and the selection of programmes. In addition, they are prepared to help students who are not quite sure what sort of assistance they are looking for, referring them as appropriate to departments for advice about specific major and honours programmes or to the office of Student Services or to specific service areas such as the Counselling Services Centre.

Among the staff are people with expertise in financial aid and budgeting who are available for consultation.

The summer advising programme for first year students in Arts and Social Sciences, Management, Engineering and Science is directed from the Registrar's Office. Prospective students may arrange a tour of the campus through this office.

The fact that the Registrar's Office is in contact with every student and every department means that it is ideally placed to provide or to guide students and prospective students to the source of the advice or assistance they need.

O. Services for Students with Disabilities

Dalhousie University is committed to providing an accessible environment in which members of the community can pursue their educational goals. Ongoing efforts consistent with a reasonable and practical allocation of resources are being made to improve accessibility and provide special services.

The Advisor provides support and advocacy for students with disabilities. In cooperation with faculty, staff, and other student services at the University, the Advisor endeavours to provide appropriate support services as needed by the student. Students are encouraged to contact the Advisor as early as possible, (902) 494-2836, TTY (902) 494-7091.

P. Student Advocacy Service

The Student Advocacy Service was established by the Dalhousie Student Union and is composed of qualified students from the University. The main purpose of the Service is to ensure that the student receives the proper information when dealing with the various administrative boards and faculties at Dalhousie. An Advocate may also be assigned to assist students with appeals or in a disciplinary hearing for an academic offence. Our goal is to make the often unpleasant experience of challenging or being challenged by the University less intimidating.

The Advocates may be contacted through:

Location: Student Advocacy Service
Room 402
Dalhousie Student Union Building
Telephone: (902) 494-2205

Q. Student Clubs and Organizations

Students seeking information on clubs and societies should call the Dalhousie Student Union INFOLINE 494-2146. Extracurricular activities and organizations at Dalhousie are as varied as the students who take part in them. Organizations range from small informal groups to large well organized ones; they can be residence-based, within faculties, or university-wide. Some are decades old with long traditions, others arise and disappear as students' interests change. The Student Handbook publishes a list of clubs, societies and organizations, and every fall new students are encouraged to select and participate.

R. Student Employment Centre

The main function of the Dalhousie Student Employment Centre is to aid Dalhousie students in their efforts to obtain permanent, summer, or part-time employment. It is located on the fourth floor of the Student Union Building, and operates Monday through Friday from 9:00am to 4:30pm. Telephone: (902) 494-3537. The Employment Centre also has useful information on résumé preparation, interview techniques, and job-search skills.

Interviews for graduating students are arranged with employers who visit Dalhousie each year (mid-October to mid-November are usually the busiest months).

Summer employment listings are received as early as October, while new part-time jobs are posted daily for both "on campus" and "off campus" locations.

S. Student Services

Located at 1234 LeMarchant Street, Student Services provides a point of referral for any student concern. The Vice-President is the chief student services officer and coordinates the activities of Athletics and Recreational Services, Dalplex, Bookstore, Counselling and Psychological Services, Health Services, Housing and Conference Services, Office of the Registrar, Writing Workshop, Office of the Ombudsperson, and Student Resources including Black Student Advising, Advisor to Students with Disabilities, Chaplaincy, International Student Centre, Student Employment Centre, Tutoring Service and the Student Volunteer Bureau. Students who experience difficulties with their academic programmes or who are uncertain about educational goals, major selection, honours or advanced major information, degree regulations, changing faculties, inadequate study skills, or conflicts with faculty and regulations, can seek the assistance of the Academic Advisors in the Vice-President's Office.

T. University Bookstore

The University Bookstore, owned and operated by Dalhousie, is a service and resource centre for the university community and the general public. The Bookstore has all required and recommended texts, reference books and supplies, as well as workbooks, self help manuals and other reference material. As well, you can find an assortment of magazines, newspapers and books by Dalhousie authors.

The Health Sciences department has the largest and most complete medical book section in Atlantic Canada, with over 2000 titles in stock. Thousands of other titles are specially ordered annually, and the department ships out books to medical personnel and hospitals throughout the region.

The Stationery department carries all necessary and supplementary stationery and supplies, including scientific and engineering items. The Campus shop carries gift items, mugs, clothing and crested wear, cards, jewellery, class rings, backpacks, novelties, briefcases, and general University paraphernalia. A Special Order department is located at the customer service area and will order and ship books worldwide.

The Bookstore is situated on the lower level of the Student Union Building on University Avenue, and is open year round, Monday to Saturday (Hours vary throughout the year).

U. University Computing and Information Services

University Computing and Information Services (UCIS) provides computing and communication services for students, faculty, and staff for instructional, research, and administrative purposes. It is responsible for all centrally managed computing and communications facilities.

UCIS manages a campus-wide communications network which interconnects office systems, laboratories systems, departmental computers, and central facilities. This network is connected to the ISinet, which in turn is connected to the national network CANARIE which has worldwide connections. UCIS is also responsible for University telephones.

Central computer systems include three and two IBM RS/6000 computers which are used primarily for academic purposes; an IBM RS/6000 SP2, which is a powerful parallel processing system used for research; and an IBM 4381 and two IBM RS/6000 computers supporting the university's central administrative systems. In cooperation with the relevant academic departments, UCIS also manages numerous micro computer teaching laboratories which are situated throughout the campus, including laboratories in the School of Business, Engineering, English, History, Sociology, Law, Music, Political Science, Physics, Biology, Earth Sciences, Dentistry, Psychology, and at the central Computer Centre in the basement of the Killam Library. It is strongly recommended, however, that students have access to a personally owned microcomputer, especially for word processing and personal e-mail, as most university facilities are heavily used for discipline specific class work.

All students may have access to these computing facilities on an individual basis or in conjunction with the classes that they take.

UCIS also manages the campus computer store (PCPC); provides short, non-credit computer related classes in conjunction with Henson College, offers a hardware maintenance service for micro-computers, and operates a digital multimedia facility (DMC).

V. University Health Services

The university operates a medical clinic, in Howe Hall, at Coburg Road and LeMarchant Street staffed by general practitioners and two psychiatrists. Further specialists' services are available and will be arranged through the Health Service when indicated. All information gained about a student by the Health Service is confidential and may not be released to anyone without signed permission by the student.

Appointments are made during the clinic's open hours, from 9 a.m. to 10 p.m. In the event of emergency, students should telephone the University Health Service at 494-2171 or appear at the clinic in person. The university maintains health services on a 24-hour basis.

All students must have medical and hospital coverage. All Nova Scotia students are covered by the Nova Scotia Medical Services Insurance. All other Canadian students must maintain coverage from their home provinces. This is especially important for residents of any province requiring payment of premiums. All non-Canadian students must be covered by medical and hospital insurance prior to registration. Details of suitable insurance may be obtained from the Student Accounts office prior to registration. Any student who has had a serious illness within the last 12 months, or who has a chronic medical condition, should contact and advise the Health Service; preferably with a statement from the doctor.

The cost of most medications prescribed by a physician is recoverable under a prepaid drug plan administered by the Student Union.

W. Writing Workshop

The Writing Workshop programme recognizes that students in all disciplines are required to write clearly to inform, persuade, or instruct an audience in term papers, laboratory reports, essay examinations, critical reviews and more.

This English language resource centre offers non-credit classes in language and writing, including institution and practice in English for speakers of other languages (ESOL), a tutorial service, guidelines for acceptable standard language usage, and provides information about sources for reference. For more information about the Writing Workshop, please call 494-3379.

Financial Aid

PLEASE NOTE: The contents of this section are subject to change without notice.

The University reserves the right to publicize the recipients of merit awards.

i. Government Student Loans

Canada Student Loans Plan

Canadian students, other than Quebec residents, are to apply for government assistance to the appropriate agency in that province or territory in which the applicant is a bona fide resident. The addresses for Canada Student Loan authorities of those provinces and territories participating in the plan are listed below:

Alberta

Alberta Students' Finance Board
10th Floor, Baker Centre
10025-106 Street
Edmonton, Alberta T5J 1G7
(403) 427-2740 Fax: (403) 422-4516

British Columbia

Student Services Branch
Ministry of Advanced Education, Training and Technology
2nd Floor, 1106 Cook Street
Victoria, British Columbia V8V 3Z9
(604) 387-6100/6101 Fax: (604) 356-9455

Manitoba

Student Financial Assistance Branch
Manitoba Education and Training
Box 6, 693 Taylor Avenue
Winnipeg, Manitoba R3M 3T9
(204) 945-6321/6322 Fax: (204) 477-4596

New Brunswick

Student Services Branch
Department Of Advanced Education and Training
P.O. Box 6000
Fredericton, New Brunswick E3B 5H1
(506) 453-2577 or
1-800-667-5625 (Atlantic Provinces, Ontario and Quebec only)
Fax: (506) 444-4333

Newfoundland

Department of Education
Student Aid Division
Thompson Student Centre
Memorial University of Nfld.
St. John's, Newfoundland A1C 5S7
(709) 729-4235/5849 Fax: (709) 729-2298

Northwest Territories:

Manager-Student Services
Department of Education
Government of the Northwest Territories
Yellowknife, Northwest Territories X1A 2L9
(403) 873-7190 or 1-800-661-0793 Fax: 1-800-661-0893

Nova Scotia

Student Aid Office
Department of Advanced Education and Job Training
P.O. Box 2290, Station M
Halifax, Nova Scotia B3J 3C8
(902) 424-8420 (metro)
1-800-565-8420 (within province)
Fax: (902) 424-0540

(Street location: Trade Mart Building, 2021 Brunswick at Cogswell Streets, Halifax, N.S.)

Ontario

Student Support Branch
Ministry of Colleges and Universities
P.O. Box 4500
Thunder Bay, Ontario P7B 6G9
(807) 343-7260 Fax: (807) 343-7278

Prince Edward Island

Student Aid Office
Department of Education & Human Resources
P.O. Box 2000
Charlottetown, Prince Edward Island C1A 7N8
(902) 368-4640 Fax: (902) 368-4663

Saskatchewan

Student Financial Assistance Branch Saskatchewan Education
1855 Victoria Avenue
Regina, Saskatchewan S4P 3V5
(306) 787-5620 Fax: (306) 787-7597.

Yukon Territory

Students' Financial Services
Department of Education
P.O. Box 2703
Whitehorse, Yukon Territory Y1A 2C6
(403) 667-5310 or (403) 667-5929 Fax: (403) 667-6399

The above authorities also administer provincial bursary and loan plans in conjunction with the Canada Student Loan, if applicable.

Québec

Residents of Québec apply to:
Ministère de l'enseignement supérieur et de la Science
Direction générale de l'aide financière aux étudiants,
1033, rue de la Chevrotière
Québec, Québec G1R 5K9
(418) 646-5245

Leave brief message, your name, your Code Permanent, and the day/time period you will be "home". Québec will telephone the student back at that time period.

(514) 864-4505 (24-hour automated service)
Fax: (418) 528-0648

II. Dalhousie Graduate Bursaries

Students who find themselves in financial difficulty due to unforeseen expenses may apply for Dalhousie Graduate Bursary funds. Applications are available from the Faculty office and completed forms may be submitted to that office at any time.

All graduate students currently registered in a degree programme are eligible to apply.

A. General Information about Bursaries

It should be noted that Canada Student Loans (with or without provincial bursaries and/or loans) are expected by provincial authorities to meet the financial deficiencies of the students and that bursaries subsequently awarded by the University must be reported and are liable to be deducted (in part or in whole) from the amounts originally allocated under the Canada Student Loan Plan or provincial aid programme.

B. Government Notification

Holders of Dalhousie University bursaries should note that the University is required, upon written request, to report its award winners to the respective Provincial Student Aid Authority.

All the regulations in this section may not apply to Graduate Students. Please refer to the "Faculty of Graduate Studies" section of the Graduate Studies Calendar.

II. University Regulations

The following general regulations are applicable to all payments made to the University in respect of fees.

- Fees must be made in Canadian funds by cash, negotiable cheque, or money order.
- If payment is by cheque and returned by the bank as non-negotiable, there will be an additional fee of \$20.00 and the account will be considered unpaid. Furthermore, if the bank returns a cheque that was to cover the first payment of tuition, the student's registration will be cancelled and, if permitted to re-register, a late fee will apply.
- Invoices for fees will not be issued. The receipt obtained from Student Accounts each time a payment is made will show the date and amount of the payment.
- Cash, certified cheque, or money order is required for payment of any account in arrears beyond the current academic year.

A. Admission Deposit - Limited Enrolment Programmes

A non-refundable deposit of \$200.00 is required by all new students in Specified Limited Enrolment Programmes within three weeks of receiving an offer of a place at Dalhousie.

Limited Enrolment Programmes include:

- Master of Business Administration
- Master of Environmental Studies
- Master of Library and Information Studies
- Master of Public Administration

All programmes in the following faculties:

- Faculty of Dentistry
- Faculty of Health Professions
- Faculty of Law

Further information on the regulations governing the refund of admission deposits is contained in Table III and IV.

B. Registration

A student is considered registered only after financial arrangements have been made with Student Accounts.

All students:

- Must submit to the Student Accounts Office on or before the specified registration dates the first instalment of academic fees unless they are receiving a scholarship, fellowship, Canada Student Loan, a fee waiver, or their fees are paid by external organizations;
- Those holding external scholarships or awards paid by or through Dalhousie University must provide at registration documentary evidence of the scholarship or award;
- Those whose fees are to be paid by a government or other agency must provide a signed statement from the organization at registration. (PLEASE NOTE: Upon request, account status information will be made available to the sponsor.)
- Those whose fees are to be paid by Canada Student Loan must indicate such on the appropriate section of the registration form. (Please note: Students registering by Canada Student Loan must negotiate the Loan or provide the letter of declination issued by Student Aid by September 19. A late registration fee and/or interest will be charged after September 19. Failure to comply or arrange an alternative method of payment may result in deregistration.)
- those whose fees are paid by a Dalhousie University staff tuition fee waiver must present the approved waiver form and pay applicable incidental fees at time of registration.
- Those who are Canadian citizens or permanent residents, 65 years of age or over and enrolled in an undergraduate degree programme will have their tuition fees waived but must pay applicable incidental fees.

The completion of the registration process shall be deemed to be an agreement by the student for the payment of the balance of fees unless written notification to withdraw is submitted to the Office of the Registrar. Students withdrawing in person must attend the

Fees

Student Account Office

Location: Arts and Administration Building (Room 29)
Halifax, NS B3H 4H6
Telephone: (902) 494-3998
Fax: (902) 494-2848
E-mail: Student.Accounts@Dal.Ca
Office Hours: Monday to Friday 10:00 - 4:30 (or by appointment)

1997-98 Important Dates

August

29 Last day to register without late fee. First instalment of fees due

September

19 Last day for complete refund of first term or regular session fees

October

17 Last day for partial refund if registered in first term only

November

3 \$50 reinstatement fee assessed on all outstanding accounts over \$200

January

19 Last day for complete refund, second term only

31 Second instalment of regular session fees due. No refund after this date. If student has not withdrawn from regular session at this time he/she is responsible for second instalment

February

16 Last day for partial refund if registered in second term only. Please note there are no refunds for full time students withdrawing from B classes (see January 31).

March

2 \$50 reinstatement fee assessed on all outstanding accounts over \$200.

I. Introduction

The following section of the Calendar outlines the University Regulations on academic fees for both full-time and part-time students enrolled in programmes of study during the fall, winter and regular sessions. A section on University residence and housing fees is also included. Students wishing to register for the Spring or Summer session should consult the Summer School Calendar for information on registration dates and fees.

All fees are subject to change by approval of the Board of Governors of Dalhousie University. An Academic Fee Schedule will be available with the registration package. A list of miscellaneous fees is included in Table I.

NOTE: The student tuition fees and other fees that are published herein are applicable only to regular students admitted to a programme through the normal application process. Other students who are admitted to Dalhousie under a special programme or policy will be charged a different tuition fee and different other fees in accordance with such special programme or policy. For further information regarding any fees to be charged to students who are admitted to Dalhousie under a special programme or policy, please contact Student Accounts or the Dean of the faculty.

Students should make special note of the Academic Dates contained in the front section of the calendar. Students should also be aware that additional fees and/or interest will be charged when deadlines for payment of fees as contained herein are not met.

Office of the Registrar and the Student Accounts Office before the withdrawal process is official. Students in Graduate and Professional programmes wishing to withdraw should initiate formal action to withdraw at the office of the appropriate Dean.

C. Late Registration

Students are expected to register on or before the specified registration dates. Students wishing to register after these dates must receive the approval of the Registrar and pay a late registration fee of \$50.00. This fee is payable at the time of registration and will be in addition to the first instalment of fees.

D. Health Insurance

International students must purchase the Dalhousie International Health Insurance Plan or provide proof of private insurance coverage before registration.

Health Insurance - International Students (1996/97 fees, for information only)

- Single - \$355.00
- Family - \$700.00

Canadian students have the option of purchasing a health insurance plan through the Dalhousie Student Union.

E. Academic Fees

The 1997-98 academic fee schedule is not yet available. In order to provide some indication of the fee requirements, Table II shows the 1996-97 fees. Once fees are approved for 1997-98, a complete schedule showing total academic fees and the minimum instalments will be made available. The official schedule will be included in the registration package.

Academic fees are comprised of:

- a) The tuition fee;
- b) An incidental fee comprised of Student Union, Society and Athletic fees, Capital Campaign and Football Levy;
- c) Auxiliary fee (specified Music, Theatre and/or Science classes, Diploma Costume Studies programme and Graduate Studies Programmes in management studies);
- d) Co-op fee if applicable;
- e) Differential fees (International students only, see G. below)

For purposes of this section of the Calendar, a full-time undergraduate student is one who is registered for the regular session for more than three full credits (21 credit hours or more), or, if registered for only one term, for more than three one-half credits.

Changes from full-time to part-time and part-time to full-time status have cost implications, often beyond what students expect. Any part-time student planning to add classes, or full-time students who are considering part-time status (dropping classes) should consult with Student Accounts to determine the impact these changes will have on the fees assessed.

NOTE: Students registered in more than one programme are required to pay separate academic fees for each programme. Full-time students taking classes not credited towards their degree or programme will be required to pay additional fees for these classes.

F. Payment

The payment of academic fees will be received at the Student Accounts Office located on the basement level of the Arts & Administration building.

For the convenience of students, registration material and non-cash payments are accepted by mail. Registrations with cheques post-dated to August 29, 1997 will also be accepted. Please allow sufficient time to ensure that material sent by mail is received on or before the specified dates.

Fees paid by mail must be received by Student Accounts on or before the deadlines specified below in order to avoid late payment and/or delinquency charges.

The following regulations apply to the payment of academic fees. For further information on regulations regarding withdrawal of registration, please refer to Class Changes, Refunds and Withdrawals:

- a) Should students prefer to pay in two instalments, the first instalment is due on or before Aug. 29 and the second instalment is due Jan. 31, or the first subsequent working day.
- b) Students registering for either the fall or winter terms only must pay fees on or before Aug. 29 and Jan. 19, respectively.
- c) Scholarships or awards paid by or through Dalhousie University will be applied to tuition and residence fees.
- d) When Canada Student Loan, Provincial Loan or co-payable bursary is presented at the Student Accounts Office, any unpaid academic, residence fees and/or Temporary Loans will be deducted.
- e) Fees cannot be deducted from salaries paid to students who are employed at Dalhousie University.
- f) Any payments received will first be applied to overdue accounts.

G. International Students

Registering students who are not Canadian Citizens or permanent residents are required to pay an additional fee referred to as a "Differential Fee" in the amount of \$ 2700.00. Students registering in their current programme which commenced prior to 1994-95 academic year will pay a differential fee of \$1700.00. There is a proportional charge for part-time International students. The differential fee is payable with the first instalment of fees each year. Graduate Students please see Section 4.6 of the Graduate Studies Calendar to determine the number of years a student is required to pay the differential fee.

H. Audit Classes

Full-time students may audit classes which are related to their programmes without additional fees. Part-time students auditing a class pay one-half of the regular tuition. In such cases, the student is required to complete the usual registration process.

A student registered to audit a class and during the session wishes to change their registration to credit must receive approval from the Registrar and pay the difference in class fees plus a transfer fee of \$25.00. This must be done on or before the last day for withdrawal without academic penalty. The same deadline applies for a change from credit to audit.

I. Class Changes, Refunds and Withdrawals

Please consult Student Accounts for all financial charges and the Office of the Registrar for academic regulations. Also refer to Tables III and IV for refund calculation.

Refund Conditions

NOTE: Non-attendance does not constitute withdrawal.

A refund of fees will not be granted unless the following conditions are met:

- a) Written notification of withdrawal must be submitted to the Office of the Registrar.
- b) After the approval of the Registrar has been obtained (in the case of graduate and professional school, the appropriate Dean), application for a refund or adjustment of fees should be requested from the Student Accounts Office immediately. The calculation of the refundable portion of fees will be based on this date. (Retroactive withdrawals will not be permitted.)
- c) No refunds will be made for 30 days when payment has been made by personal or foreign cheque.
- d) A student who is dismissed from the University for any reason will not be entitled to a refund of fees.
- e) Refunds will be made to the Bank if a student has received a Canada or Provincial Student Loan.
- f) Refunds will be prorated on fees paid by Scholarships and/or Fee Waiver.
- g) A valid Dalhousie University ID must be presented in order for the student to receive a refund cheque.
- h) No fee adjustment will be made for a student changing their degree or programme in the regular session after September 19.

J. Delinquent Accounts

Accounts are considered delinquent when the balance of fees has not been paid by September 19 (January 19 for students registered for the winter term only). Where payment in two instalments is permitted, the remaining balance is due January 31 or the first subsequent working day.

Interest at a monthly rate set by the University will be charged on delinquent accounts for the number of days overdue.

At the time of printing the monthly rate of interest is 0.079% (9.50% per annum).

A student whose account is delinquent for more than 30 days will be denied University privileges including access to transcripts and records of attendance. The student will be reinstated upon payment of the fees outstanding, the arrears interest and a \$50.00 reinstatement fee. Students will not be permitted to register for another session until all outstanding accounts are paid in full. Subsequently, if the bank returns the cheque, the student may be deregistered.

Students whose accounts are delinquent on April 15 may not be eligible, at the sole discretion of the University, for graduation at the May convocation. For October graduation the date is September 1.

Accounts which become seriously delinquent may be placed on collection or further legal action may be taken against the individual. Students will be responsible for charges incurred as a result of such action.

K. Canada Student Loans

Students planning to pay the first instalment of fees from a Canada Student Loan should apply to their Province in April or May so that funds will be available in time for registration. The University will deduct fees/charges from the loan at the time of endorsement. Please contact the appropriate provincial office to determine eligibility as well as course load requirements. A late fee of \$50.00 will apply if the loan is negotiated after September 19, 1997. (January 19, 1998 for students registered for winter term only.)

L. Provincial Bursaries and University Scholarships

These cheques are distributed by the Student Accounts Office. Any unpaid Fees and/or Temporary Loans along with charges, if applicable, are deducted and a University cheque will be issued within one week of endorsement for any balance remaining. A valid Dalhousie University ID and Social Insurance Number must be presented in order to receive these cheques. Please contact the appropriate provincial office to determine eligibility as well as course requirements for Provincial Bursaries. For more information on Student Loans, Bursaries or Scholarships inquiries should be directed to the Registrar's Office - Information Centre located on the first floor of the Arts & Administration building, Room 123. Telephone (902) 494-6557.

M. Income Tax Credit from Academic Fees

The amount of academic fees constituting an income tax credit is determined by Revenue Canada, Taxation. Currently, the tax credit for students is calculated by deducting the following from Academic Fees: Student Union fees, Society fees, and Athletic fee. Seventeen percent (17%) of the remaining balance constitutes the tax credit.

A special income tax certificate (T2202A) will be available at Student Accounts annually no later than February 28. A photocopy of the T2202A will be provided on request for a charge of \$5.00 per receipt. On request, a replacement tax receipt will be provided within 2 weeks for a charge of \$10.00 per receipt.

N. Identification Cards

All full and part-time students should obtain identification cards upon registration and payment of proper fees. If a card is lost, a fee of \$15.00 is charged. Regular academic year ID cards remain valid until the beginning of the following academic year (including summer session).

O. Laboratory Deposits

A deposit for the use of laboratory facilities in certain departments is required. The deposit is determined and collected by these departments. Students will be charged for careless or willful damage regardless of whether or not a deposit is required.

P. Athletic Fee

Membership at Dalplex for 1997-98 is included in the athletic fee for all full-time students at Dalhousie and all part-time students at Dalhousie taking a minimum of three full credit classes. Membership in Dalplex for ALL other part-time students at Dalhousie may be obtained at the office of Dalplex at the prevailing rates.

Q. Student Union Fee Distribution

Every student registered at Dalhousie is automatically a member of the Student Union and is therefore required to pay a Student Union fee as part of their registration procedure. These fees have been approved by students in referenda and, along with other revenue of the Union, are allocated each year by the Student Council in a budget.

What follows is the breakdown of how Student Union fees are spent. If you have any questions or comments please contact the Student Union Office located in Room 222 of the SUB Telephone No. 494-2146

1996-97 Student Union Fees

Full-Time (3 credits or more) - For information only	
General Operations	\$51.75
Class Evaluation	1.00
C K D U - FM	9.00
NSPIRG	4.00
South African Trust Fund	1.00
WUSC	0.50
Women's Centre Fund	2.00
Student Accessibility Fund	1.75
Gazette	4.00
TOTAL	\$75.00

Table I: Miscellaneous Fees

FEE	AMOUNT	PAYABLE AT
Replacement Tax Receipt	\$10	Student Accounts
Photocopy Tax Receipt	\$5	Student Accounts
Late Registration	\$50	Student Accounts
Reinstatement Fee	\$50	Student Accounts
Returned Cheque	\$20	Student Accounts
Distance Education Fee, per class	\$100	Student Accounts
Admission Deposit	\$200	Student Accounts
Change from Audit to Credit	\$25	Student Accounts
Confirmation of Fee Payment	\$5	Student Accounts
Leave of Absence Fee	\$25	Graduate Studies
Application Fee	*\$35	Registrar
Confirmation of Enrolment	\$5	Registrar/Grad. Studies
Late Graduation Application	\$50	Registrar
Letter of Permission per class		
- maximum \$50.00	\$10	Registrar
Reassessment Fee	\$25	Registrar
Replacement ID	\$15	Registrar
Transcript	\$5	Registrar
Priority Transcript Fee	\$15	Registrar
FAX Fees:		
Metro	\$5	Registrar
Canadian	\$10	Registrar
International	\$15	Registrar
Residence Application Fee	\$25	Residence

* Except for the following programmes which require payment of a \$55.00 application fee: Occupational Therapy, Pharmacy, Physiotherapy, Recreation, Social Work; Diploma programmes in Meteorology, Outpost and Community Health Nursing, and Health Services Administration; and all programmes in the Faculties of Medicine, Dentistry (including Dental Hygiene), Law, and Graduate Studies.

Table II: Academic Fees 1996-97

The 1997-98 academic fee schedule is not yet available. In order to provide some indication of the fee requirements, this table shows the 1996-97 fees. Once fees are approved for 1997-98, a complete schedule showing total academic fees and the minimum instalments will be made available. The official schedule will be included in the registration package.

For information only, 1996-97 figures.

	TOTAL TUITION	STUDENT UNION	DSU CAPITAL CAMPAIGN & FOOTBALL	SOCIETY	ATHLETIC
Undergraduate					
Arts & Social Sciences ⁽¹⁴⁾					
Full-time ⁽¹⁾	3,395	75	35	10	60
Full-time term ⁽⁸⁾	1,700	75	35	-	60
Part-time ⁽⁹⁾					
3 Credit Classes	2,070	75	35	10	60
1 Credit Class	690	30	25	-	-
1/2 Credit Class	345	15	25	-	-
Auxiliary Fees					
Costume Studies	500	-	-	-	-
(yearly programme fee)					
Music (per specified class)	750	-	-	-	-
Theatre Arts (per specified class)	250	-	-	-	-
Science (per specified class)					
1/2 Credit Class (3 credit hours)	11	-	-	-	-
1 Credit Class (6 credit hours)	22	-	-	-	-
SCIE 1500.30R Class (30 credit hours)	50	-	-	-	-
Science (Except Engineering)					
Full-time ⁽¹⁾	3,895	75	35	15	60
Full-time term ⁽⁸⁾	1,950	75	35	-	60
Part-time ⁽⁹⁾					
3 Credit Classes	2,340	75	35	15	60
1 Credit Class	780	30	25	-	-
1/2 Credit Class	390	15	25	-	-
Co-op Work Term	500	-	-	-	-
Science Auxiliary Fees					
1/2 Credit Class (3 credit hours)	11	-	-	-	-
1 Credit Class (6 credit hours)	22	-	-	-	-
SCIE 1500.30R Class (30 credit hours)	50	-	-	-	-
King's (Arts & Social Sciences)					
Full-time ⁽¹⁾	3,395	-	-	10	(11)
Full-time term ⁽⁸⁾	1,700	-	-	-	(11)
Part-time ⁽⁹⁾					
3 Credit Classes	2,070	-	-	10	(11)
1 Credit Class	690	-	-	-	-
1/2 Credit Class	345	-	-	-	-
Auxiliary Fees					
Music (per specified class)	750	-	-	-	-
Theatre Arts (per specified class)	250	-	-	-	-
Science (per specified class)					
1/2 Credit Class (3 credit hours)	11	-	-	-	-
1 Credit Class (6 credit hours)	22	-	-	-	-
SCIE 1500.30R Class (30 credit hours)	50	-	-	-	-
King's (Science)					
Full-time ⁽¹⁾	3,895	-	-	15	(11)
Full-time term ⁽⁸⁾	1,950	-	-	-	(11)
Part-time ⁽⁹⁾					
3 Credit Classes	2,340	-	-	15	(11)
1 Credit Class	780	-	-	-	-
1/2 Credit Class	390	-	-	-	-
Co-op Work Term	500	-	-	-	-
Science Auxiliary Fees					
1/2 Credit Class (3 credit hours)	11	-	-	-	-
1 Credit Class (6 credit hours)	22	-	-	-	-
SCIE 1500.30R Class (30 credit hours)	50	-	-	-	-
Engineering					
Full-time ⁽¹⁾	3,895	75	35	25	60
Full-time term ⁽⁸⁾	1,950	75	35	-	60
Part-time ⁽⁹⁾					
3 Credit Classes	2,340	75	35	25	60
1 Credit Class	780	30	25	-	-
1/2 Credit Class	390	15	25	-	-
Science Auxiliary Fees					
1/2 Credit Class (3 credit hours)	11	-	-	-	-
1 Credit Class (6 credit hours)	22	-	-	-	-
SCIE 1500.30R (30 credit hours)	50	-	-	-	-
Management					
BComm Co-op ⁽¹⁾					
Full-Time ⁽¹⁾					
Year of Study 1 & 4	4,530	75	35	30	60
Year of Study 2	4,530	75	35	30	60
Year of Study 3	2,265	75	35	30	60
Part-Time ^{(9) (10)}					
3 Credit Classes	2,706	75	35	30	60
1 Credit Class	902	30	25	-	-
1/2 Credit Class	451	15	25	-	-
Co-op transfer fee ⁽¹⁰⁾	610	-	-	-	-

Academic Fees 1996/97 (cont'd)

For information only, 1996-97 figures.

	TOTAL TUITION	STUDENT UNION	DSU CAPITAL CAMPAIGN & FOOTBALL	SOCIETY	ATHLETIC
8Comm and D.P.A.					
Full-time ⁽¹⁾	3,430	75	35	30	60
Full-time term ⁽²⁾	1,715	75	35	-	60
Part-time ⁽³⁾					
3 Credit Classes	2,070	75	35	30	60
1 Credit Class	690	30	25	-	-
½ Credit Class	345	15	25	-	-
Health Professions					
Social Work					
Full-time ⁽¹⁾	3,805	75	35	25	60
Full-time term ⁽²⁾	1,905	75	35	-	60
Part-time ⁽³⁾					
3 Credit Classes	2,250	75	35	25	60
1 Credit Class	750	30	25	-	-
½ Credit Class	375	15	25	-	-
Nursing ⁽⁴⁾					
Full-time ⁽¹⁾	4,230	75	35	20	60
Full-time term ⁽²⁾	2,115	75	35	20	60
Part-time ⁽³⁾					
3 Credit Classes	2,520	75	35	20	60
1 Credit Class	840	30	25	20	-
½ Credit Class	420	15	25	20	-
Recreation, Health Education					
Full-time ⁽¹⁾	3,895	75	35	15	60
Full-time term ⁽²⁾	1,950	75	35	-	60
Part-time ⁽³⁾					
3 Credit Classes	2,340	75	35	15	60
1 Credit class	780	30	25	-	-
½ Credit Class	390	15	25	-	-
Physical Education, Kinesiology					
Full-time ⁽¹⁾	4,230	75	35	15	60
Full-time term ⁽²⁾	2,115	75	35	-	60
Part-time ⁽³⁾					
3 Credit Classes	2,520	75	35	15	60
1 Credit Class	840	30	25	-	-
½ Credit Class	420	15	25	-	-
Pharmacy					
Full-time ⁽¹⁾⁽¹⁵⁾	4,985	75	35	65	60
Clinical Residence - Pharmacy	750	-	-	-	60
Physiotherapy and Occupational Therapy					
Full-time ⁽¹⁾	4,935	75	35	13	60
Diploma in Health Services Administration					
Full-time ⁽¹⁾	3,930	75	35	-	60
Full-time term ⁽²⁾	1,965	75	35	-	60
Part-time ⁽³⁾					
3 Credit Classes	2,340	75	35	-	60
1 Credit Class	780	30	25	-	-
½ Credit Class	390	15	25	-	-
Dentistry, Law and Medicine					
Dentistry ⁽⁷⁾					
D.D.S. ⁽²⁾	5,515	75	35	70	60
Masters - Oral Surgery	5,685	75	35	44	60
Dental Hygiene ⁽³⁾	4,260	75	35	35	60
Law					
Full-time	4,740	75	35	46	60
Part-time ⁽⁶⁾ - see examples below					
'R' Class - 6 Credit Hours	960	30	25	-	-
'R' Class - 4 Credit Hours	640	20	25	-	-
'A' or 'B' Classes - 3 Credit Hours	480	15	25	-	-
Legal Aid Clinic ⁽⁴⁾	1,990	75	35	46	60
Term after Legal Aid Clinic ⁽⁴⁾	2,750	75	35	46	60
Master of Laws	4,910	75	35	44	60
Doctor in the Science of Laws	5,075	75	35	44	60
Medicine					
Doctor of Medicine	5,515	75	35	30	60
Postgraduate Interns & Residents	1,390	-	-	-	60
Graduate Studies					
Arts & Social Science					
Doctorate					
Full-time	3,795	75	35	44	60
Masters					
Full-time	3,595	75	35	44	60
Part-time	1,200	60	25	22	-
Science (including interdisciplinary Studies)					
Doctorate					
Full-time	4,295	75	35	44	60
Masters					
Full-time	4,095	75	35	44	60
Part-time	1,365	60	25	22	-

Academic Fees 1996/97 (cont'd)

For information only, 1996-97 figures.

	TOTAL TUITION	STUDENT UNION	DSU CAPITAL CAMPAIGN & FOOTBALL	SOCIETY	ATHLETIC
Education					
Doctorate					
Full-time	3,805	75	35	44	60
Masters					
Full-time	3,635	75	35	44	60
Part-time	1,210	60	25	22	-
Marine Management					
Masters					
Full-time	3,630	75	35	44	60
Part-time	1,210	60	25	22	-
Library Information Studies, Public Administration, Environmental Studies					
Masters (14)					
Full-time	4,130	75	35	44	60
Part-time	1,375	60	25	22	-
Graduate Diploma in Public Administration					
Full-time	3,630	75	35	44	60
Part-time	1,210	60	25	22	-
Masters of Business Administration (2 year programme) ⁽¹⁴⁾					
Full-time	4,130	75	35	55	60
Part-time	1,375	60	25	28	-
Masters of Business Administration (10 or 8 month programme) ⁽¹⁴⁾					
Full-time	6,450	75	35	55	60
Community Health & Epidemiology, Health Education, Nursing, Physical Education and Recreation					
Masters					
Full-time	4,430	75	35	44	60
Part-time	1,480	60	25	22	-
Social Work					
Masters					
Full-time	4,005	75	35	25	60
Part-time	1,335	60	25	13	-
Health Services Administration					
Masters					
Full-time	4,130	75	35	44	60
Part-time	1,380	60	25	22	-
Pharmacy, Human Communication Disorders and Physiotherapy					
Doctorate					
Full-time	5,335	75	35	44	60
Masters					
Full-time	5,135	75	35	44	60
Part-time	1,715	60	25	22	-
Thesis Only - All Programmes except Education					
Full-time	1,125	75	35	44	60
Part-time	1,125	66	25	22	-
Full-time Term	565	75	35	44	-
Part-time Term	565	66	25	22	-
Thesis Only - Education					
Full-time	890	75	35	44	60
Part-time	890	66	25	22	-
Full-time Term	445	75	35	44	-
Part-time Term	445	66	25	22	-
Graduate Qualifying, Special & Visiting Students					
Full-time (1)	3,595	75	35	44	60
Full-time term (8)	1,800	75	35	-	60
Part-time (9)					
3 Credit Classes	2,160	75	35	44	60
1 Credit Class	720	30	25	-	-
1/2 Credit Class	360	15	25	-	-

- (1) Undergraduate students taking three and one-half credit classes (21) credit hours or more) in regular session (Sept - April).
- (2) D.D.S. requires an instrument fee and \$500 user fee payable with the first instalment of fees.
- (3) Dental Hygiene requires \$250 user fee payable with the first instalment of fees.
- (4) Students will pay full-time student union, society, and athletic fees only once per academic year.
- (5) Nursing students will pay society fee only once per academic year.
- (6) Law students taking less than 18 credit hours (Sept. - April), tuition fees - \$160 per credit hour plus Student Union fees (\$5 per credit hour and \$25 Capital Campaign & Football fee).
- (7) Candidates with advanced standing admitted to special programmes in D.D.S. and Dental Hygiene that meet Provincial Professional Qualifications are required to pay twice the tuition fee paid by students in the regular programme.
- (8) One term only taking more than 3 one-half credit classes (more than 9 credit hours).
- (9) Undergraduate students taking less than three and one-half classes (less than 21 credit hours) in regular session (Sept. - April) or taking three one-half credit classes or less (9 credit hours or less) in one term only.
- (10) Tuition includes co-op fees - Year 1, 2 & 4 \$610, Year 3 \$305, part-time \$61 per one-half credit class. Students transferring into Co-op programme from another faculty or institution will pay a transfer fee of \$610. The transfer fee is non-refundable.
- (11) King's students may purchase Dalplex membership at an additional cost of \$90.
- (12) \$2265 (tuition \$1960 and \$305 co-op fee) payable when registering for Spring Co-op Session 1997.
- (13) \$2265 (tuition \$1960 and \$305 co-op fee) payable when registering for Winter academic term on or before January 20, 1997.
- (14) Tuition includes Management auxiliary fee - \$500 full-time and \$165 for part-time students.
- (15) Tuition includes \$50 printing recovery fee.
- (16) Auxiliary fee for specified classes in Music and Theatre Arts is payable with the first instalment.
- (17) King's fees are subject to approval of University of King's College Board of Governors.
- (18) Students will pay Student Union Capital Campaign and Football Fee once per academic year.

Table III: Fee Refund Calculation - Specified Limited Enrolment Programmes

Admission Deposit: Non-refundable
 Student Union Fee: Non-refundable after September 19 (Second Term January 19)
 Athletic Fee: Non-refundable after September 19 (Second Term January 19)
 Society Fee: Non-refundable after September 19 (Second Term January 19)
 Tuition Fees: As follows:

Withdrawal Date	Regular Session	First Term Only	Second Term Only
Up to September 4	100%	100%	100%
September 5 - January 5	40%	0%	100%
January 6 - January 31	40%	0%	0%
After January 31	0%	0%	0%

Table IV: Fee Refund Calculation

Class Changes

Students contemplating a change in class activity should consider the financial implications as well as academic. Please contact Student Accounts if you have any questions regarding changes, refunds or withdrawals and their impact on fees.

Students changing to part-time³ from full time¹ after September 19 will be assessed the same percentage of full-time tuition fees as students withdrawing from the university. Please refer to the refund schedule below to determine the percentage owing. Fees for classes remaining will be assessed according to part-time fees less the percentage used to calculate the portion owing for full-time fees.

Part time² students dropping a class will be assessed the same percentage as part-time students withdrawing from the university. Please refer to the refund schedule below to determine the cost of classes being dropped. Additions are assessed according to the fee schedule.

Withdrawals

All faculties (except Specified Limited Enrolment Programmes), including Graduate Studies:

Student Union Fee: Non-refundable after September 19 (Second Term January 19)
 Athletic Fee: Non-refundable after September 19 (Second Term January 19)
 Society Fee: Non-refundable after September 19 (Second Term January 19)
 BComm and Science Co-op Fees: Non-refundable after September 19 (Second Term January 19)
 Distance Education Fee: Non-refundable after September 19 (Second Term January 19)
 Differential Fee: Non-refundable after November 30 (or with special permission until April 9, 1998)
 Tuition Fees: As below:

Date	Regular Session Full-time ¹	Graduate Students Except Thesis Term	Full-Time & Thesis 1st Term Only ²	Full-Time & Thesis 2nd Term Only ²	Part-Time Students ³		
					A Class	B Class	R Class
Up to Sept 19	100%	100%	100%	100%	100%	100%	100%
Sept 20 - Oct 17	85%	85%	67%	100%	67%	100%	85%
Oct 18 - Nov 7	70%	70%	0%	100%	0%	100%	70%
Nov 8 - Dec 31	50%	50%	0%	100%	0%	100%	50%
Jan 1 - Jan 19	40%	40%	0%	100%	0%	100%	40%
Jan 20 - Jan 31	40%	40%	0%	67%	0%	67%	40%
Feb 1 - Feb 16	0%	0%	0%	67%	0%	67%	0%
After Feb 16	0%	0%	0%	0%	0%	0%	0%

1. Applicable to undergraduate students registered in regular session (Sept - Apr) taking more than three credits (21 credit hours or more).
2. Undergraduate students registered in one term only taking more than three one-half credit classes (more than 9 credit hours). Graduate students registered as "Thesis Only" for one term.
3. Applicable to undergraduate students registered in regular session (Sept - Apr) taking fewer than three and one-half credit classes (fewer than 21 credit hours). Undergraduate students registered in one term only taking three one-half credit classes or fewer (9 credit hours or fewer).

III. Residence Fees

PLEASE NOTE: The following are general statements. Given the diversity of residence facilities, available practices vary slightly from locale to locale.

Applications for accommodation in all residences are accepted on the understanding that the student will remain for the whole academic session.

When students who have chosen to live in residence and have secured a room withdraw from residence before the end of the school year, there are serious financial penalties. Written notice to withdraw is always required by the Residence Co-ordinator or Fenwick Facilities Coordinator. Complete information on withdrawal from residence is available from the Residence Co-ordinator or Fenwick Facilities Coordinator and is detailed in the residence agreement to be signed by all residence students. No refund will be made to any resident who is dismissed for misconduct. Discretionary power in exceptional circumstances remains with the Director of Housing and Conferences or designate.

Residence Application Forms will not be distributed until the student has been accepted by the University for the coming session. To be considered for accommodation, a completed Residence Application Form and the \$125.00 residence application fee and deposit must be received. All residents, new and returning, who have accepted a room assignment, will be required to pay a second deposit of \$200.00 by June 30 to reconfirm the assigned space. Failure to make a second deposit by June 30 will result in automatic cancellation of room assignment. Once the \$200.00 deposit is paid it (along with the \$125.00) is not refundable; it is our guarantee of your intention to live in residence.

Deposits may be made by cheque, bank draft, or money order in Canadian funds and payable to Dalhousie University. No reservations will be held on post-dated or "NSF" cheques. Deposits cannot be deducted from scholarships, fellowships, or similar awards.

A. Payment of Residence Fees

Payment may be made in full at registration, or for an extra charge of \$10.00, in two instalments. Scholarships may be applied to residence charges only after tuition fees for the full session are paid. The first instalment must be paid in full by September 30. Interest at a monthly rate as set by the University will be charged on all accounts outstanding after September 30 and on any second instalment outstanding after January 31. At the time of printing the monthly rate of interest is 0.85% monthly (10.25% per annum). The student will not be permitted to register for another session until all accounts are paid in full. A student whose account is delinquent for more than 30 days will be denied university privileges including access to transcripts and records of attendance and Dalplex. The student will be reinstated upon payment of the fees outstanding, the arrears interest, and a \$50.00 reinstatement fee.

For Howe Hall, Eliza Ritchie Hall, Shirreff Hall and the Residence Houses fees are paid at the Student Accounts Office. For Fenwick Place and Glengary Apartments and Co-ed Apartment Units fees are paid at Fenwick Place.

Students should make an appointment as soon as possible with the Associate Director of Residence Life, Fenwick Facilities Coordinator, or the Supervisor of Student Accounts if they are having financial difficulties.

B. Regulations and Additional Charges

The room and board session is defined as being from the Wednesday in September before classes begin in the College of Arts and Science to the last day of regularly-scheduled examinations in the College of Arts and Science in April. Please note that, except at Fenwick Place, students must vacate the residence twenty-four hours after their last exam and that residences are closed over the Christmas holidays.

No reduction in the board charge will be made for meals not taken, except that a rebate of \$200.00 per month may be considered in the case of illness or other cause necessitating absence of four weeks or more.

In Fenwick Place the rental period is based on a 34-week period beginning on Labour Day. For more specific details on dates of semesters, students should contact the accommodations office at Fenwick Place.

In all other cases, an additional fee is payable by all residents who are registered in a Faculty where the academic session commences before or continues after the session of the College of Arts and Science. Special arrangements are to be made with the Residence Co-ordinator or Fenwick Facilities Coordinator for accommodation for periods prior to or following the session as defined above.

C. Residence Rates 1996-97

The residence term for Howe Hall, Shirreff Hall, Eliza Ritchie Hall, Glengary Apartments and the Residence Houses covers the time period from the Wednesday in September before classes begin in the College of Arts and Science to the last regularly scheduled examination in the College of Arts and Science in April (Christmas vacation excluded).

The residence term for Fenwick Place is as follows: First semester - Labour Day to December 31; second semester - January 1, 1997 to April 30, 1997. Those students wishing to stay beyond the residence term may do so for a daily or weekly rate. Please contact the appropriate residence for details.

The student has two alternatives for payment after the first deposit of \$125.00 and second deposit of \$200.00 has been paid (see Table V):

1. Pay the Total Fees by September 30th.
2. Pay the Total Fees in two equal parts, first half by September 30th and the second half by January 31st. A \$10.00 service charge will be added to the second instalment (Fenwick and Glengary are exempt from this charge).

Table V: Residence Rates 1996-97 - Payment Alternatives

RESIDENCE TYPE	DEPOSITS		ALTERNATIVE 1		ALTERNATIVE 2		Total Fees
	1st Deposit Due and Appl Fee	2nd Deposit Due 06/30/96	Balance If Paid in Full by 09/30/96	Total Fees by 09/30/96	Pay 1st Part by 01/31/97	Pay Balance	
Traditional ⁽¹⁾							
Howe Hall							
Shirreff Hall							
Eliza Ritchie Hall							
Single Room	125	200	4,695	5,020	2,350	2,355	5,030
Double Room	125	200	4,345	4,670	2,175	2,180	4,680
Residence Houses							
Single Room	125	200	2,590	2,915	1,295	1,305	2,925
Double Room	125	200	2,215	2,540	1,110	1,115	2,550
Apartments							
Glengary ⁽²⁾							
Bachelor Apts.	125	200	3,700	4,025	1,850	1,850	4,025
Choice of:							
a) 3-person (3 bedroom)	125	200	2,995	3,320	1,495	1,500	3,320
b) 4-person (3 bedroom)							
Single	125	200	2,595	2,920	1,295	1,300	2,920
Double	125	200	2,240	2,565	1,120	1,120	2,565
Fenwick Place ⁽³⁾							
2-person (2 bedroom)	125	200	3,420	3,745	1,710	1,710	3,745
3-person (3 bedroom)	125	200	3,095	3,420	1,545	1,550	3,420
4-person (4 bedroom)	125	200	2,730	3,055	1,365	1,365	3,055

Meals Only - Special Rate for session

Meal only plans may be purchased. Contact Dalhousie University Food Service at (902)494-2078.

19 Meal Plan per Week	\$2,025
14 Meal Plan per Week	\$1,955

PLEASE NOTE: The above fees will be superseded on July 1, 1997 when the 1997/1998 residence fee schedule will be published.

- (1) Howe Hall, Shirreff Hall and Eliza Ritchie Hall rates include a residence council membership fee (\$30) and the cost for a 19 meal plan per week. If the 14 meal plan option is chosen, the rates will be reduced by \$70.
- (2) Three bedroom apartments at Glengary can be rented as 3 single rooms (3-person) or 2 singles and 1 double room (4-person). Please apply in appropriate group sizes of 3 or 4 people.
- (3) At Fenwick Place, Total Fees include a refundable \$100 damage deposit. See application form for details.

Awards

PLEASE NOTE: The contents of this awards section are subject to change without notice.

The University reserves the right to publicize the recipients of merit awards.

I. Graduate Scholarships and Fellowships

A. General Disciplines

1. Dalhousie Graduate Scholarships

Each department has a limited number of scholarships for students pursuing a degree programme on a full-time basis. Scholarships are not offered to anyone on leave from a job with salary continuation. In order to be eligible for a Dalhousie Graduate Scholarship, a student is expected to hold at least the equivalent of a Dalhousie honours degree in an appropriate field of study. Those wishing to be considered for scholarship assistance are strongly advised to submit their completed applications by January 31, and no later than March 1. Maximum eligibility for scholarships is two Master's years and the first four Doctoral years, but some departments may have shorter maxima.

In general, the Dalhousie Graduate Scholarship will be paid to the student in regular monthly payments on the 27th of each month, after University fees have been deducted. Cheques are available from the students' department upon presentation of a current valid Dalhousie Student Identification card. Where warranted, with permission of the Dean of Graduate Studies, a student may receive scholarship funding for a maximum of 12 months while pursuing research off-campus.

Applicants for graduate scholarships should write to the graduate coordinator of the department concerned in addition to making their official application to the Registrar.

Very well qualified scholars who receive awards from federal agencies may also receive Dalhousie supplements within the limits set down by the agencies offering the awards.

The Izaak Walton Killam Memorial Scholarships

Shortly before her death, Mrs. Dorothy J. Killam set aside a substantial portion of her estate for the purpose of founding the Izaak Walton Killam Fund for Advanced Studies at Dalhousie University.

Her purpose in so doing was not only to establish a perpetual memorial in his native province to her late husband, Izaak Walton Killam, industrialist and financier, but also "to help in the building of Canada's future by encouraging advanced study." It was her hope that she might thereby in some measure "develop and expand the work of Canadian Universities, and promote sympathetic understanding between Canadians and the people of other countries." It is in accordance with Mrs. Killam's wishes that Dalhousie University offers the Izaak Walton Killam Memorial Scholarships.

Killam scholars are selected on the basis of nominations made by departments. It is expected that nominees will also have applied for funding from relevant national or international agencies. Canadian students are eligible for nomination for the Killam Scholarships only if they have applied for the relevant national scholarship (NSERC, SSHRC, MRC, etc.).

Only those students registered in a programme with a thesis requirement are eligible to hold the Izaak Walton Killam Memorial Scholarship.

Scholarships may be renewed annually upon evidence of satisfactory completion of work leading toward the Master's or Doctoral degree, subject to the following maxima: Masters students may hold a Killam Scholarship for 12 months and PhD students for up to 36 months. The scholarships are valued at \$15,000 (1996-97) for a Master's programme and \$18,500 (1996-97) for a Doctoral programme. No remission of fees accompanies the scholarships, but additional funds to assist with transportation to Halifax will be supplied. Killam scholars may perform instructing or demonstrating duties, and, if they do, will be given additional remuneration for these services.

Killam scholarships are open to both Canadians and non-Canadians. PLEASE NOTE: Candidates do not apply for these Scholarships. On the basis of the information in a completed application for admission the graduate department concerned may nominate the student to the selection committee.

The Izaak Walton Killam Postdoctoral Fellowships

Killam funds also provide for postdoctoral fellowships in most fields of study. The annual stipend is \$33,000 (1996-97) plus travel and research grants. There are no restrictions regarding nationality of applicants, but non-Canadian candidates must meet all Canadian Immigration requirements. Qualifying applicants should have recently completed a PhD degree at a recognised university and should not hold a permanent academic position to which they will return. Since these Fellowships are intended to attract new scholars to Dalhousie, scholars already at Dalhousie are not eligible to apply, including Dalhousie PhDs, Dalhousie or King's employees, and researchers using Dalhousie or King's facilities. These awards may be taken up between July 1st 1996 and January 15th 1997 but preferably in September or October 1996. Fellows may engage in limited teaching duties in the University. A graduate seeking a Killam Memorial Postdoctoral Fellowship must contact the appropriate Dalhousie department and indicate the scholar or researcher with whom she/he wishes to work or be associated by October 15, 1996, enclosing a c.v. and a brief description of the proposed research. Prospective applicants with suitable research proposals will be invited to apply on forms mailed to them, which should be returned to the Dean of Graduate Studies no later than December 15, 1996. Supporting documents should be returned to the Department, no later than December 15, 1996. The results of the competition are usually announced in mid-February, and all applicants are notified of the results.

Eliza Ritchie Doctoral Scholarship for Women

The Eliza Ritchie Doctoral Scholarship was established to commemorate Women's Centennial Year (1985) and to recognise the contribution to Dalhousie of one of its most important nineteenth-century graduates. After completing her undergraduate studies at Dalhousie in 1887, Eliza Ritchie (1856-1933) became one of the first Canadian women to receive a PhD degree (Cornell University, 1889). She cut short her professional career at Wellesley College to return to Halifax in 1899, where she devoted her energies to feminist and cultural causes, and to Dalhousie, for the rest of her life. She was the first warden of a Dalhousie women's residence (Forrest Hall, 1912-13), the first woman to serve as a member of the Dalhousie Board of Governors (1919-25), a founding member of the editorial board of the *Dalhousie Review*, and the first woman to receive an honorary degree from Dalhousie (LLD, 1927). Scholarships will be awarded to Canadians and permanent residents only and preference will be given to candidates from the Atlantic Provinces. Among such applicants preference will be given to those in disciplines in which women are underrepresented. The award will have a value of \$18,000 (1996-97) for a 12-month academic period at Dalhousie. One scholarship may be awarded each year. The deadline for receipt of the prescribed applications is 15th March. Additional information and application forms are available from the Faculty of Graduate Studies, Dalhousie University.

James Robinson Johnston Graduate Scholarship for African Canadians

The James Robinson Johnston Graduate Scholarship is supported by the Endowment for the James Robinson Johnston Chair in Black Canadian Studies at Dalhousie as part of the commitment of the Johnston endowment and the university to support the development of Black Canadian scholars in graduate studies and the professions. James R. Johnston was Dalhousie's first black graduate

in the Law Faculty in 1898 and was a major figure in the legal profession and the Black community throughout his short life. Today young African Canadians can be found pursuing studies in the arts, sciences, health professions and management as well as the traditional professions of law, dentistry and medicine. This scholarship is intended to provide an opportunity for promising African Canadian students to pursue their work at the graduate level.

To be eligible, applicants must have been accepted into a programme of study in any discipline in which Dalhousie offers a graduate degree. Successful applicants are normally expected to have attained a first class standing in an honours programme.

Successful candidates for an initial award and for renewals will be identified by the Faculty of Graduate Studies Scholarship Committee. The general rules for Dalhousie Graduate Scholarships will be applied except that, in the case of this scholarship, the award must be taken up initially in the first year of the degree program.

The master's-level scholarship is valued at \$10,200 for one twelve-month academic year of full-time study. The doctoral level scholarship is valued at \$18,000 for a twelve-month academic year of full-time study and may be renewed, subject to an annual progress review (first-class standing required) by the Faculty of Graduate Studies Scholarship Committee, for a total of 36 months of full-time study, including initial award. Fees are not waived and must be paid out of the award.

B. Specific Disciplines

1. Business Administration

Goldberg-Schulich Award for Entrepreneurship

The Nevada Capital Corporation in 1984 donated the sum of \$29,000 to establish an award in memory of Meyer Goldberg of Halifax, NS. This award is available to a student entering the second year of Dalhousie University's MBA programme. Deadline for receipt of application is March 15th.

The Department of External Affairs Fellowships in International Business

Fellowships of \$4,000 per annum are awarded to full-time second-year students specializing in the field of International Business. Candidates must be Canadian citizens or permanent residents, and have a strong academic record. Fellowship recipients will be selected on the basis of a career interest in international business and academic performance to date. For further information contact the Centre for International Business Studies, School of Business Administration.

2. Economics

Professor George A.B. Kartsaklis Memorial Scholarship

Family, friends and colleagues of Professor Kartsaklis established this fund to provide financial assistance to one or more graduate students from Third World countries currently enrolled in the Department of Economics, Dalhousie University.

3. English

C.L. Bennet Memorial Scholarship

The Department of English has designated that one University scholarship in the amount of \$500 be awarded annually as a memorial to the late Professor of English, Dr. C.L. Bennet. This award will be made to an outstanding graduate of a Maritime or Newfoundland university (other than Dalhousie) who wishes to pursue an MA in English at Dalhousie. Eligible students should apply for graduate study in English in the usual way, by March 31st, indicating a desire to be considered for the Bennet award. Further details may be obtained from the Department of English, Dalhousie University, Halifax, NS, B3H 3J5.

The James W. Tupper Graduate Fellowship in English

This fellowship, of an annual value of approximately \$7,500 is awarded by the faculty of the Department of English to a student who proposes to do graduate work in English at a university approved by the faculty. The award need not be held at Dalhousie. Further information may be obtained from the Department of English.

4. Environmental Studies

The Gerald and Margaret Godsoe Scholarship

This scholarship has been established by the Godsoe family to support a highly qualified and motivated individual entering the Master of Environmental Studies (MES) program at Dalhousie. The recipient must hold an honours degree in natural or social sciences, engineering, architecture or its equivalent, and have first class standing in his/her course of study or have proof of exceptional merit. Further, the recipient must have made significant contributions through community service, leadership, and education on environmental issues. Eligibility is limited to Canadian citizens and permanent residents of Canada living in the country. The award is valued at \$10,000 per year and may be renewable. The recipient will be selected by the Admissions Committee at the School for Resource and Environmental Studies. Additional information about application procedures is available from the School for Resource and Environmental Studies.

5. Library and Information Studies

H.W. Wilson Foundation Award

This award, valued at \$1,700, is presented by the School to an outstanding incoming student, and is renewable for the second year of the programme. All incoming students are automatically considered for the scholarship, so no separate application is necessary.

6. Marine Affairs Programme

The HMCS King's Memorial Scholarship in Marine Affairs

This is an annual scholarship in the amount of \$5,000 established by the Maritime Awards Society of Canada (MASC), through the generosity of LCdr. Bent G. Sivertz, OBE, RCNR (Ret'd), for a Canadian citizen to pursue the Master of Marine Management (MMM) degree. The criteria for conferral of the scholarship include the following: Applicants must be Canadian citizens; must demonstrate superior academic records; and may undergo a financial needs assessment. Qualified applicants to the MMM are automatically considered for this scholarship upon completion of their application; no separate application is necessary.

7. Oceanography

The Professor F. Ronald Hayes International Scholarship

This scholarship fund was established in memory of Professor F. Ronald Hayes, founder and first director of the Institute of Oceanography of Dalhousie University, and in commemoration of the Joint Oceanographic Assembly which was held at Dalhousie during August, 1982. The purpose of the scholarship is to provide financial support for a new graduate student in the first year of an MSc or a PhD programme in the Department of Oceanography. The recipient must be from a developing country ("developing country" shall be defined as one belonging to the United Nations Group of 77), from a state of the former Soviet Union, or from an economically disadvantaged country such as: Albania, Bulgaria, Romania and the former Yugoslavia. The recipient will be nominated through the normal screening process by the Departmental Graduate Admission Committee. For further information contact the Department of Oceanography.

8. Oral and Maxillofacial Surgery

John P. Laba Memorial Research Award

The income, earned from a fund established in memory of John P. Laba by family, friends, patients and colleagues, will provide for this award which may be given annually. The recipient will be the dentist accepted in the Graduate Programme in Oral and Maxillofacial Surgery and will be given exclusively for the presentation, dissemination and/or publication of research related to Oral and Maxillofacial Surgery. For further information please contact the Department of Oral and Maxillofacial Surgery.

9. Physics

The William Leiper Memorial Scholarship

An endowment has been established to provide an annual scholarship to a deserving graduate student in physics. Awarded at the discretion of the Physics Department, the scholarship is normally granted to a student already engaged in graduate study at Dalhousie.

The James Gordon MacGregor Memorial Teaching Fellowship in Physics

One fellowship valued at \$2,500 is offered. To be eligible, the candidate must have the necessary qualifications for admission to the Master's programme in Physics. The holder of this fellowship is expected to give instruction in the laboratory during the academic session. Nominees will be selected by the Department from those students being considered for a Dalhousie Graduate Fellowship; no application is necessary.

The Dr. A. Stanley MacKenzie Teaching Fellowship in Physics

One fellowship valued at \$600 is offered. To be eligible, the candidate must have the necessary qualifications for admission to the Master's programme in Physics. The holder of this fellowship is expected to give instruction in the laboratory during the academic session. Nominees will be selected by the Department from students being considered for Dalhousie Graduate Fellowships; no application is necessary.

The OZ Optics Ltd. Graduate Scholarship in Physics

One scholarship valued at \$1,500 is offered. To be eligible, the candidate must be doing graduate work in the area of fibre optics or a related field in Physics. The holder of this scholarship is expected to give instruction in a teaching laboratory during the academic session. Nominees will be selected by the Department from those students being considered for a Dalhousie Graduate Fellowship; no application is necessary.

10. Psychology

The Dr. Mabel E. Goudge Scholarship in Psychology

In her Will, the late Dr. Mabel Goudge bequeathed a sum of money with which to endow scholarships to qualifying graduate psychology students at Dalhousie. The scholarship in graduate studies is restricted to experimental or clinical psychology.

The D.O. Hebb Post-Graduate Prize

To honour the memory of Donald Oiding Hebb (BA 1925), Professor Emeritus (1977-1985), valued at \$1,000, the Psychology Department established the D.O. Hebb Post-Graduate Prize, which is awarded by the Graduate Program Committee, to an entering Masters or PhD student who has demonstrated the best potential to make a significant scientific contribution to the field of psychology.

11. Social Work

The Kavanaugh Scholarship

The Kavanaugh Scholarship was established by the Social Action Commission of the United Baptist Convention of the Atlantic Provinces to provide financial assistance in an annual amount of \$500.00 to a Master of Social Work student. Terms of reference and application forms are available to registered MSW students in early fall from the main office of the School.

The Lawrence T. Hancock Scholarship

The Hancock Scholarship was established to honour Dr. Lawrence T. Hancock for his devoted work as the first full time director of the Maritime School of Social Work, 1949 to 1973, and for his service to the profession and community. The scholarship is awarded annually to a student in the Master of Social Work programme who has demonstrated a high level of academic achievement and a potential for leadership in the field of social work. Application forms are available in early fall from the office of the Maritime School of Social Work.

Margaret Cragg Award

This award was established by family and friends in honour of Margaret M. Cragg, who pioneered the movement against violence toward women and in the practice of preventative, interdisciplinary health care. An annual financial award is made available in alternate

years to a graduate student in Nursing or Social Work. MSW students are eligible to apply in the fall of 1998. Further information is available from the Maritime School of Social Work.

Raul Leger Memorial Humanitarian Awards

This award was established to honour the memory of Raoul Leger, who received a Master's degree in Social Work from Dalhousie University in 1977. His work at home and abroad exemplified his commitment to community development, peace and social justice. The award is presented to a graduating BSW or MSW student, who is nominated on the basis of achievement with a continued involvement in critical social issues.

II. Bursaries

A. Dalhousie Bursaries

Students who unexpectedly find themselves in financial need may apply to the Graduate Studies Office for university bursaries made available through the student assistance programme.

The Faculty of Graduate Studies also administers the John and Lina Graham bursary for Commonwealth students and the Dr. P. Anthony Johnstone Memorial bursary for a graduate student with a record of involvement in social justice and human rights.

Bursaries are for only those students who can prove their need. Students eligible for government loans must have applied for them before a bursary application can be considered. Normally, students in year one of their programme are not eligible for bursaries. Please note there are no appeals on bursary decisions. Please contact the Faculty of Graduate Studies office for further information.

The John and Lina Graham Commonwealth Bursary

The donors established this fund to mark the 75th anniversary in 1988 of the Association of Commonwealth Universities. The net annual income may be used to assist one or more graduate students who find themselves in need of financial aid while in Nova Scotia. Recipients will be residents of Commonwealth countries, other than Canada, who in the opinion of the selecting body demonstrate need.

The Dr. P. Anthony Johnstone Memorial Bursary

The donors established this fund in 1994 to honour the memory of P. Anthony (Tony) Johnstone (1931-1989), scholar, educator and director of the Nova Scotia Human Rights Commission, 1985-1989. The net income may be used to assist a humanities or social science graduate student who has a record of interest and involvement in social justice and human rights.

Sonja R. Weil Memorial Bursary

Family and friends established this endowment in memory of Sonja Weil and in tribute to her work as a social worker and psychotherapist. This bursary is open to students in the BSW and MSW programmes, although first priority is given to graduate students who demonstrate financial need, satisfactory academic standing and interest in those areas which most closely reflect Sonja Weil's work in child and family therapy. Information and application forms are available in early fall from the office of the Maritime School of Social Work.

Hanna G. Matheson Bursaries

These bursaries are available to students enrolled in the BSW or MSW degree programmes on the basis of need. The fund is administered by the Registrar's Office, from which application forms are available.

III. Teaching Assistantships

Most departments offer Teaching Assistantships. The number, amounts and conditions vary. Please enquire of your department or school.

The President's Graduate Teaching Assistant Awards

Dalhousie University recognizes and applauds the important contributions of Graduate Teaching Assistants to the educational mission of the University. The work of TAs, both in the classrooms or laboratories and behind the scenes, provides crucial support for faculty members and greatly enhances the learning process for undergraduate students. Each year, the President's Graduate

Teaching Assistant Awards are presented to those TAs who have achieved outstanding success in the area of undergraduate instruction.

Nominations are accepted at the Office of Instructional Development and Technology. The winners are chosen in the Spring of each year, and the presentation of awards is made by the President during Convocation.

IV. Research and Travel Grants

A. Research Grants

Small research grants to assist thesis research can be applied for by graduate students in the Social Sciences and Humanities. (The expenses of most science students are covered out of operating grant or departmental funds). Forms available in the Graduate Studies Office, also contain the required format for application to the Human Ethics Committee. Awards granted to students will be set up under their supervisor's signing authority. Students in other disciplines may also apply to the Faculty of Graduate Studies for small grants if and only if their departments are unable to help them because of an unforeseen emergency. A letter from the Department Chair/Graduate Coordinator to this effect must accompany the application.

B. Travel Grants

Travel grants for presentation of a paper or poster at scholarly meetings can be applied for by graduate students in thesis programmes using forms available in the Graduate Studies Office. Students are eligible to apply for one travel grant during the period of their graduate degree programme at Dalhousie, and should be presenting a paper or poster based on their thesis research. Departmental approval must be given to these applications. Applications will not be accepted retroactively or for conferences which occur after graduation.

V. Awards on Graduate Transcripts

A select number of Dalhousie Scholarships/Awards are recorded on the students official Dalhousie transcript. They are:

- Killam and Honorary Killam Scholarships,
- Eliza Ritchie and honorary Eliza Ritchie Scholarship,
- J. R. Johnston and honorary J. R. Johnston Scholarship,
- Governor General's Gold Medal.

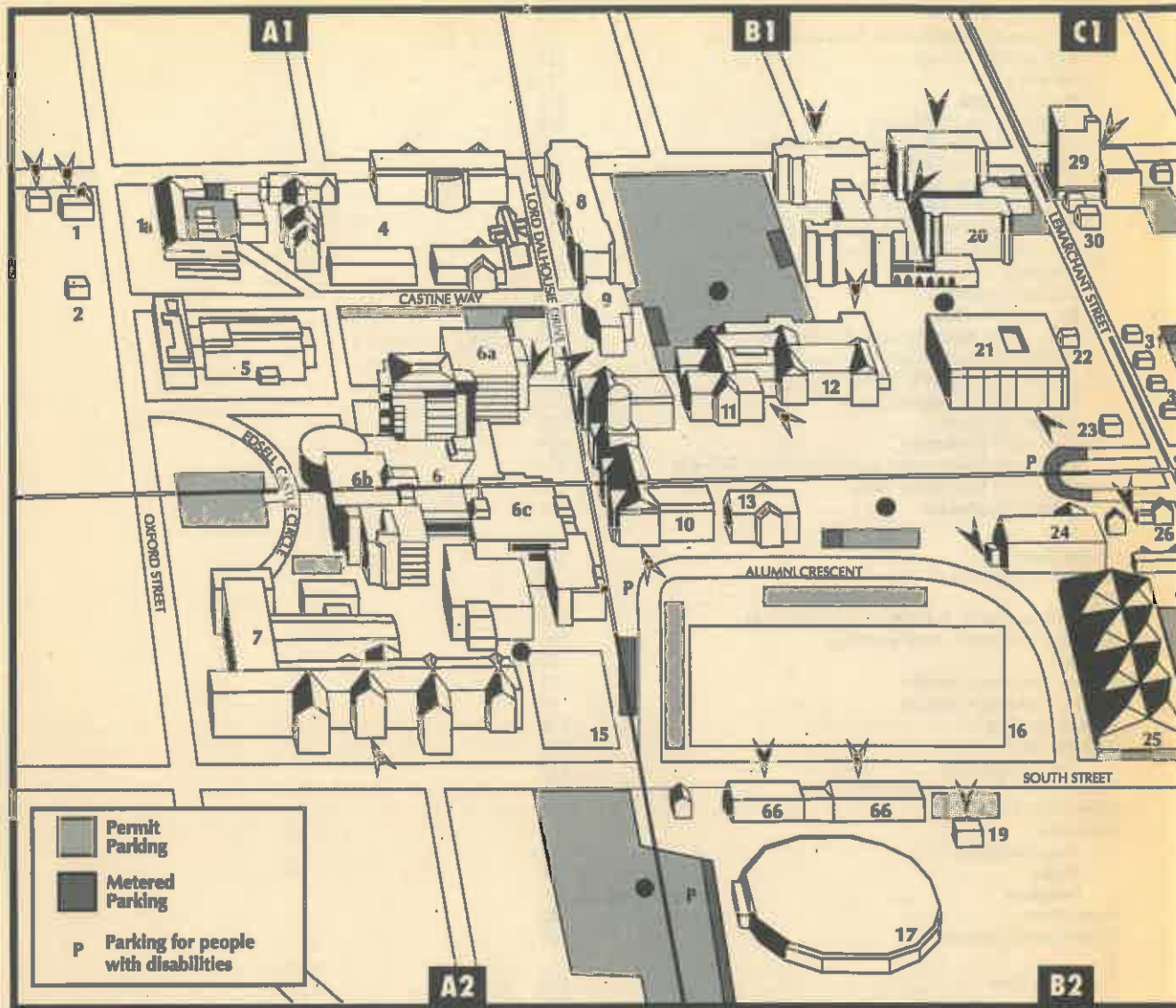
An official letter confirming other Dalhousie scholarships (e.g. Dalhousie Graduate Scholarships) can be obtained upon request from the Faculty of Graduate Studies Office. An administrative fee of \$5.00 will be charged.

Index

A	
Academic Costume	24
Academic Programmes	6
Accounts, See Fees	
Address	18
Administrative Officers	14
Admission	
Conditional	16
Admission Requirements	
Advanced Standing	16
Application	16
Application Dates	2
English Language Competency	16
GMAT	16
GRE	16
Interdisciplinary Neuroscience	77
Learning Disabilities, Students with	8
Students with Learning Disabilities	16
Advanced Standing	16
African Studies, Centre for	110
Agriculture	25
Alumni Association	112
Anatomy and Neurobiology	27
Anthropology	105
Appeals	24
Application	16
Application Dates	2
Arts Centre	112
Athletic Fees	120
Athletics	112
Atlantic Research Centre	110
Atmospheric Science	29
Audit Classes, Fees	119
Awards	126
Bennet, C.L., Memorial Scholarship	127
Business Administration	127
Cragg, Margaret, Award	128
Dalhousie Graduate Scholarships	126
Department of External Affairs, Fellowships in International Business	127
Economics	127
English	127
Environmental Studies	127
Godsoe, Gerald and Margaret, Scholarship	127
Goldberg-Schulch Award for Entrepreneurship	127
Goudge, Dr. Mabel E., Scholarship in Psychology	128
Graham, John and Lina, Commonwealth Bursary	128
Hancock, Lawrence T., Scholarship	128
Hayes, Professor F. Ronald, International Scholarship	127
Hebb, D.O., Post-Graduate Prize	128
HMCS King's Memorial Scholarship in Marine Affairs	127
Johnston, James Robinson, Graduate Scholarship for African Canadians	126
Johnstone, Dr. P. Anthony, Memorial Bursary	128
Kartsaklis, Professor George A.B., Memorial Scholarship	127
Kavanaugh Scholarship	128
Killam, Izaak Walton, Memorial Scholarships	126
Killam, Izaak Walton, Postdoctoral Fellowships	126
Laba, John P., Memorial Research Award	127
Leger, Raul, Memorial Humanitarian Awards	128
Leiper, William, Memorial Scholarship	128
Library and Information Studies	127
MacGregor, James Gordon, Memorial Teaching Fellowship in Physics	128
MacKenzie, Dr. A. Stanley, Teaching Fellowship in Physics	128
Marine Affairs	127
Matheson, Hanna G., Bursaries	128
Oceanography	127
Oral and Maxillofacial Surgery	127
OZ Optics Ltd. Graduate Scholarship in Physics	128
Physics	128
President's Graduate Teaching Assistant Awards	128
Psychology	128
Research Grants	129
Ritchie, Eliza, Doctoral Scholarship for Women	126
Social Work	128
Travel Grants	129
Tupper, James W., Graduate Fellowship in English	127
Weil, Sonja R., Memorial Bursary	128
Wilson, H.W., Foundation Award	127
B	
Biochemistry	29
Biology	32
Biophysics	89
Black Students	112
Board of Governors	5
Bookstore	116
Bursaries	128
Dalhousie Bursaries	117
Business Administration	36
C	
Canada Student Loans	117
Centres and Institutes	110
Atlantic Health Promotion Centre	110
Atlantic Institute of Criminology	110
Atlantic Region Magnetic Resonance Centre	110
Atlantic Research Centre	110
Centre for African Studies	110
Centre for Foreign Policy	110
Centre for International Business Studies	110
Centre for Marine Geology	110
Dalhousie Health Law Institute	111
Lester Pearson Institute for International Development	111
Neuroscience Institute	111
Oceans Institute of Canada/Institut canadien des océans	111
Trace Analysis Research Centre	111
Chaplaincy	112
Chemistry	41
Classes	19
Classics	43
Clubs and Organizations	115
Co-supervision	20
Code of Student Conduct	10
Committees	14
Community Health and Epidemiology	45
Computing	
Guide to Responsible	12
Computing and Information Services	116
Computing Science	46
Conditional Admissions	16
Conflict of Interest	18
Convocation	24
Counselling and Psychological Services	112
Criminology, Atlantic Institute of	110
D	
Dalhousie University	4
Board of Governors	5
Executive Officers	4
Senate	5
Dalplex	
Fee	120
Defence of a Doctoral Thesis	23
Definitions	2
Degree Programmes	15
Degree Requirements	18
Departmental Listings	25
Disabilities, Services for Students with	115
Discipline	10
E	
Earth Sciences	47
Economics	49
Education	51

English	52	L	
English Language Competency	16	Laboratory Deposits	120
Environmental Studies	54	Law 67 - 69	
Ethical Review	21	Learning Disabilities	20
Examination Regulations	7	Learning Disabilities, Admissions	16
Examinations	19	Leave of Absence	17
Pass Standard	19	Length of Programme	18
Preliminary Examinations	20	Libraries	115
F		Library and Information Studies	70
Faculty Council	14	Loans	
Fees	118	Canada Student	120
Academic Fees	119	M	
Admission Deposit	118	Magnetic Resonance Centre, Atlantic Region	110
Athletic Fees	120	Manuscript Preparation	21
Audit Classes	119	Marine Affairs Programme	72
Bursaries	120	Marine Geology, Centre for	110
Canada Student Loans	120	Maternity Leave	18
Class Changes	119	Math, Stats, & Computing Science	73
Delinquent Accounts	120	Microbiology and Immunology	75
Dentistry	122	N	
Graduate Studies	122	Neuroscience Institute	111
Health Insurance	119	Nursing	78
Identification Cards	120	O	
Income Tax Credit	120	Oceanography	79
Laboratory Deposits	120	Oceans Institute of Canada/Institut canadien des océans	111
Late Registration	119	Ombud's Office	115
Law	122	Oral and Maxillofacial Surgery	81
Limited Enrolment Programmes	118	Oral Examination	23
Medicine	122	P	
Payment	119	Pass Standard	19
Refunds	119	Pathology	82
Registration	118	Pharmacology	83
Regulations	118	Pharmacy	85
Residence	124	Philosophy	85
Scholarships	120	Physical Education	99
Student Accounts Office	118	Physics	87
Student Union Fee Distribution	120	Physiology and Biophysics	89
Table II - Academic Fees	121	Plagiarism	9
Table III - Refund Calculations (Limited)	124	Political Science	91
Table IV - Refund Calculations	124	Preliminary Examinations	20
Table V - Residence Rates 1996-97	125	Psychology	93
Undergraduate	121	Public Administration	96
Withdrawals	119	R	
Fellowships	126	Readmission	18
Financial Aid	117	Recreation Physical & Health Education	99
Foreign Policy Studies, Centre for	110	Registrar's Office	115
French	56	Registration	16
G		Address	18
German	58	Categories	17
GMAT	16	Failure to Register	17
Graduate Studies, Faculty of	14	Fees	18
GRE 16		Late	17
H		Late Registration Fees	119
Health Education	99	Leave of Absence	17
Health Insurance	119	Maternity Leave	18
Health Law Institute	111	Procedures	16
Health Promotion Centre, Atlantic	110	Required Withdrawal	17
Health Services	116	Regulations	15
Health Services Administration	58	Computing	12
History	60	Defence of a Doctoral Thesis	23
Housing and Residence Services	113	Discipline	10
Human Communication Disorders	62	Examinations	7
I		Fees	118
ID Cards	18	Intellectual Honesty	9
Identification Cards Fees	120	Plagiarism	9
Instructional Development and Technology	114	Release of Information	7
Integrity in scholarly activity, policy on	24	Residence Fees	125
Intellectual Honesty	9	University	7
Interdisciplinary and Joint Programme Listings	64	Release of Information	7
Interdisciplinary PhD	64	Required Withdrawal	17
Neuroscience	77	Requirements	18
Internal Advisor	20	Research and Travel Grants	129
International Business Studies, Centre for	110	Residence Fees	125
International Development, Lester Pearson Institute for	111	Payment	125
International Student Centre	115	Regulations and Additional Charges	125

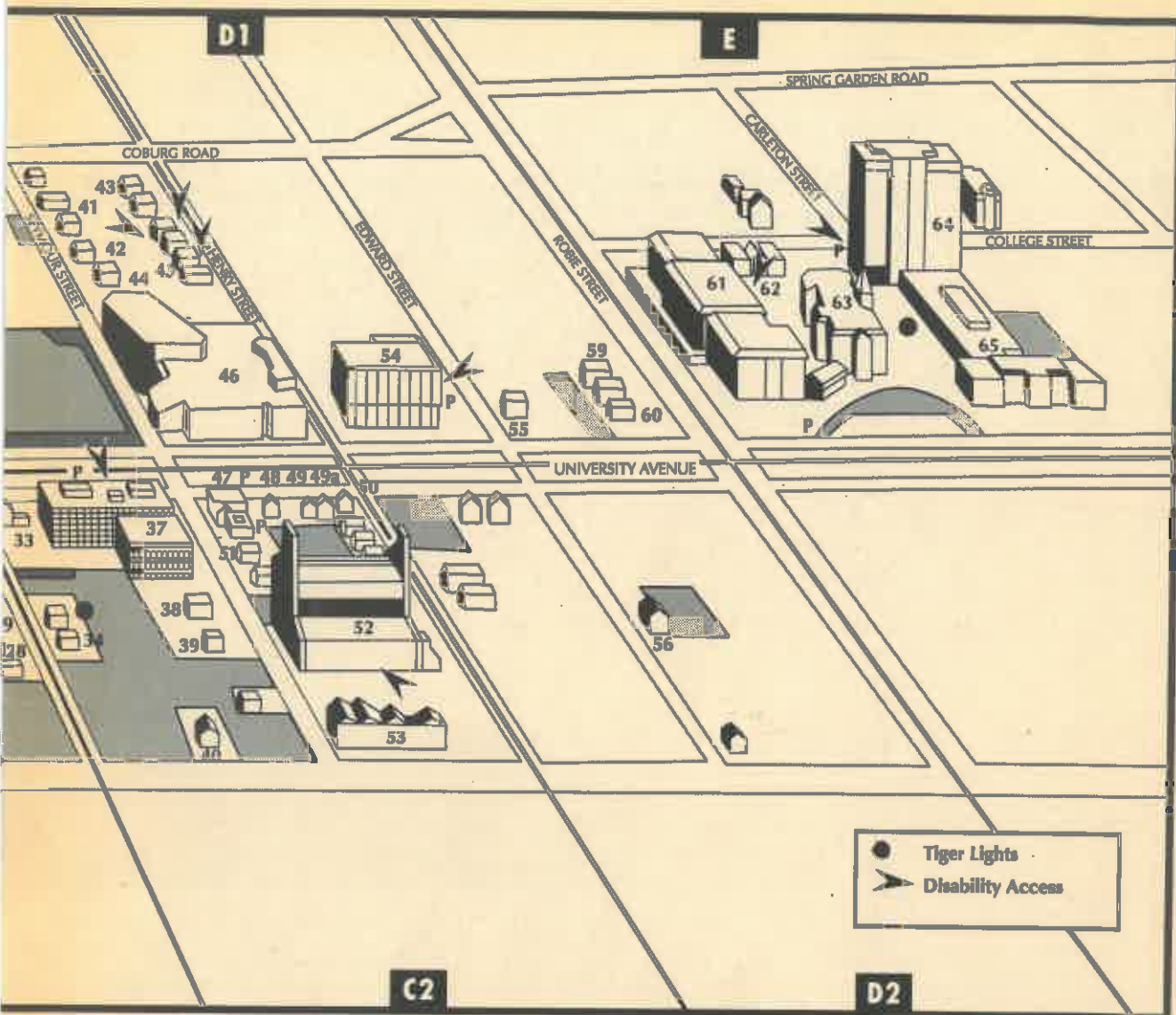
Residences	113
Resources and Services	112
Advisory Committee on Sexual Harassment	112
Alumni Association	112
Athletics	112
Black Students	112
Chaplaincy at Dalhousie	112
Counselling and Psychological Services	112
Dalhousie Arts Centre	112
Dalhousie Student Union	113
Housing and Residence Services	113
Instructional Development and Technology	114
International Student Centre	115
Libraries	115
Ombud's Office	115
Registrar's Office	115
Services for Students with Disabilities	115
Student Advocacy Service	115
Student Clubs and Organizations	115
Student Employment Centre	116
Student Services	116
University Bookstore	116
University Computing and Information Services	116
University Health Services	116
Writing Workshop	116
S	
Scholarships	126
Selection of Supervisor	20
Senate	5
Sexual Harassment, Advisory Committee on	112
Sociology and Social Anthropology	105
Statistics	73
Student Advocacy Service	115
Student Conduct, Code of	10
Student Services	116
Student Union	113
Fee Distribution	120
Students with Learning Disabilities	16
Supervision Guidelines	20
Supervisor	
Responsibilities	21
Rights	21
Selection	20
Supervisors	20
Supervisory Committees	20
T	
Tax Credit, Fees	120
Teaching Assistantships	128
Thesis Regulations	21
Deadline for Graduation	23
Defence of a Doctoral Thesis	23
Ethical Review	21
Manuscript Preparation	21
Oral Examination	23
Submission	23
Thesis Supervisors	20
Trace Analysis Research Centre	111
U	
University Regulations	7
W	
Writing Workshop	116



Admissions — 10 (B1, B2)
 Alumni Office — 11 (B1)
Arts and Administration Building
 — 10 (B1, B2)
 Biology Department — 6a (A1)
 Bookstore — 37 (C2)
Burbridge Pharmacy Building — 62 (E1)
 Business Administration — 29 (C1)
 Canadian Studies — 36 (C1)
 Central Services Building — 52 (C2)
Chase Building — 9 (B1)
Chemistry — 12 (B1)
Classics — 27 (C2) (C2)
 Comparative Religion — 23 (B1)
 Computer Centre — 21 (B1)
 Counselling and Psychological Services
 — 37 (C2)
Dalhousie Arts Centre — 46 (C1)
Dalhousie Memorial Arena (rink)
 — 25 (B2)

Dalplex — 17 (B2)
 Day Care — 1a (A1), 6c (A2)
 Dental Hygiene — 61 (E1)
Dentistry Building — 61 (E1)
 Development Office — 11 (B1)
 Disabled Students Adviser — 37 (C2)
Dunn Building — 8 (B1)
 Earth Sciences — 6a (A1)
 Economics — 26 (B2)
 Education — 49a (C2)
 Eliza Ritchie Hall — 66 (B2)
 Engineering — 8 (B1)
 English — 42, 43 (C1)
 Financial Services — 10 (B1)
Forrest Building — 63 (E1)
French — 23 (B1), 32 (C1)
German — 31 (C1)
 Glengary Apartments — 56 (D1)
Graduate House — 33 (C2)
 Graduate Studies — 10 (C2)

Health Profession (Office of the Dean)
 — 62 (E1)
Health Services Administration
 — Fenwick
Henson College — 30, 47, 48, 49,
50, 51 (C2)
History — 41 (C1)
Howe Hall — 20 (B1)
 International Development
 Studies — 36 (C1)
International Student Centre — 37 (D1)
Kellogg Health Sciences Library
 — 64 (E1)
Kilham Library — 21 (B1)
King's College — 4 (A1)
 Law — 54 (D1)
 Library and Information Services
 — 21 (B1)
Life Sciences Centre — 6 (A1)
Macdonald Building — 11 (B1)



Management — 29 (C1)
 Mathematics, Statistics, Computing
 Science — 9 (B1)
 Medical Computing & Media Services
 — 64 (E1)
 Medicine — 64 (E1)
 Multidisciplinary Centre — 36 (C1)
 Music — 46 (C1)
 Nursing — 63 (E1)
 Occupational Therapy — 63 (E1)
 Oceanography — 6b (A1, A2)
 Off-campus Housing Office — 37 (C2)
 Personal Computer Purchase Centre
 (PCPC) — 20 (B1)
 Personnel/Payroll Services — 10 (B2)
 Pharmacy — 62 (E1)
 Philosophy — 45 (C1)
 Physics — 8 (B1)
 Physiotherapy — 63 (E1)
 Political Science — 10 (B1, B2)

President's Office — 10 (B1, B2)
 Psychology — 6c (A2)
 Public Relations — 11 (B1)
 Public Administration — 34 (C2)
 Registrar's Office — 10 (B1, B2)
 School of Recreation, Physical and
 Health Education — 17, 19, 24 (B2)
 School for Resource and Environmental
 Studies — 59, 60 (D1)
 Science — 10 (B1)
 Security Services — 40 (C2)
 Shirreff Hall — 7 (A2)
 Social Work — 1 (A1)
 Sociology and Social Anthropology
 — 63 (C2)
 Spanish/Russian — 22 (B1)
 Student Accounts — 10 (B1)
 Student Services — 69 (B2)
 Student Union Building — 37 (C2)
 Studley gymnasium — 24 (B2)

Theatre — 46 (C1)
 Transition Year Programme (Henson)
 — 30 (C1))
 Tupper Building — 64 (E1)
 University Club — 13 (B2)
 University Health Services — 20 (B1)
 Women's Centre — 34 (C2)
 Women's Studies — 38 (C1)

For specific locations of offices and
 departments, consult the university
 switchboard, 494-2211, the Halifax-
 Dartmouth telephone directory, or the
 Dalhousie telephone directory.

January 1997

1997

JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1							1				1	2	3	4	5
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30	31	23	24	25	26	27	28	23	24	25	26	27	28	29	27	28	29	30					
													30	31													

MAY							JUNE							JULY							AUGUST							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5						1	2
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23	
25	26	27	28	29	30	31	29	30	27	28	29	30	31	27	28	29	30	31	24	25	26	27	28	29	30			
																			31									

SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER															
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S									
					1	2	3	4	5	6					1	2	3	4							1						1	2	3	4	5	6
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13									
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20									
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27									
28	29	30	26	27	28	29	30	31	23	24	25	26	27	28	29	30	28	29	30	31																

1998

JANUARY							FEBRUARY							MARCH							APRIL									
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S			
					1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7						1	2	3	4
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14	5	6	7	8	9	10	11			
11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21	12	13	14	15	16	17	18			
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28	19	20	21	22	23	24	25			
25	26	27	28	29	30	31	29	30	31	29	30	31	26	27	28	29	30	26	27	28	29	30								

MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2	1	2	3	4	5	6				1	2	3	4						1		
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
24	25	26	27	28	29	30	31	28	29	30	26	27	28	29	30	31	23	24	25	26	27	28	29	30	31		

SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER												
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S						
					1	2	3	4	5					1	2	3	1	2	3	4	5	6	7						1	2	3	4	5
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12						
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19						
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26						
27	28	29	30	25	26	27	28	29	30	31	29	30	27	28	29	30	31																



FOR FURTHER INFORMATION

THE REGISTRAR'S OFFICE

Dalhousie University

Halifax, N.S. Canada B3H 4H6

Fax: 902.494.1630 or call: 902.494.2450

WWW: <http://www.dal.ca>