

# CALENDAR



2011/2012

Dentistry | Law | Medicine



**DALHOUSIE  
UNIVERSITY**

*Inspiring Minds*

[dal.ca](http://dal.ca)

# Smoke Free/Scent Free Dalhousie

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## **Providing a Healthy Work and Study Environment**

To protect people from involuntary exposure to tobacco smoke, in 2003, Dalhousie declared the University entirely smoke-free. The No Smoking Policy prohibits smoking in all University buildings, including University residences, on University property and in University Vehicles.

Under this policy, those wishing to smoke are asked to leave University property. While smoking on public property, smokers are asked to avoid littering, to be respectful of others, and of course to abide by the municipal by-law.

The University has also acted to support its many students and employees who report that they are harmed when they are exposed to scents which are present in many scented personal care products. Scents in perfume, cologne, hair-spray, after-shave, and even some soap and fabric softeners, cause serious illness in people who are sensitive to these chemicals. To provide an environment which supports teaching and learning, Dalhousie asks students, staff, faculty and visitors, to refrain from using such scented products while at the University. The scent reduction program is part of a broader effort to limit, to the fullest extent practical, exposure to all chemicals in our buildings.

For more information on the Smoking Policy and the Scent Reduction Program, contact the Safety Office by email at [Safety.Office@dal.ca](mailto:Safety.Office@dal.ca) or consult the web sites <http://www.dal.ca/scentfree> and <http://www.dal.ca/smokefree>.

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# Important Notices

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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 program. Students should be aware that enrolment in many programs is limited and that students who are admitted to programs 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 program in question. While the University will make every reasonable effort to offer classes as required within programs, prospective students should note that admission to a degree or other program does not guarantee admission to any given class. However, no student in a graduating year may be excluded from a class required by that student to meet degree requirements because of lack of space (This rule does not apply to elective courses or to preferred sections of classes.). 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, classes or courses 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**

Dalhousie University calendars are available in electronic form on the Web at <http://www.registrar.dal.ca>. Please note that the electronic versions of the calendars are provided for your convenience. Formatting of the electronic version may differ from the official printed version. Where differences occur, please contact the Registrar's office at registrar@dal.ca.

## **Other Programs**

Information on programs offered by the Faculties of Architecture and Planning, Arts and Social Sciences, Computer Science, Engineering, Health Professions, Management and Science can be found in the Undergraduate calendar. Information on programs offered by the Faculty of Graduate Studies can be found in the Graduate Studies calendar.



# Academic Dates

## 2011

### April

Monday, 4	Classes end, Law
Monday, 4	Classes begin, entering Dentistry Qualifying Program
Wednesday 6	Exams begin, Law
Friday, 15	Exams end, Law (first year)
Friday, 15	Last day of classes before exams Dentistry Qualifying Program, Dentistry (third year), Dental Hygiene
Wednesday, 20	Examinations begin in Dentistry (third year), Qualifying Program (first year), Dental Hygiene
Thursday, 21	Classes end Dentistry (fourth year)
Friday, 22	Good Friday - University Closed
Friday, 22	End of Medicine Clerkship, Class of 2011
Tuesday, 26	Exams end, Law (second and third year)
Friday, 29	Exams end, Dentistry (third year), Qualifying Program first year), Dental Hygiene

### May

Monday, 2	Classes resume. Dentistry (third year), Qualifying Program (first year)
Friday, 20	Last day of classes, Dentistry (first and second year)
Friday, 20	End of year, Medicine (first year)
Monday, 23	Victoria Day - University closed (does not apply to Medicine clerkship)
Tuesday, 24 - Wednesday, June 1	Spring Convocations
Tuesday, 24	Examinations begin, Dentistry (first and second year)
Tuesday, 31	Examinations end, Dentistry (first and second year)

### June

Saturday, 4	End of year, Medicine (second year)
Wednesday, 8	Last day of classes, Dentistry (third year), Qualifying Program (first year)
Wednesday, 15	First day of classes, Dentistry (fourth year)
Tuesday, 30	Last day to register PGY (all years), without late fee

### July

Friday, 1	Canada Day - University closed (does not apply to Medicine clerkship)
Friday, 1	Postgrad Medicine academic year begins
Friday, 1	Online application (Step 1) opens, Medicine
Monday, 4	Last day to apply to graduate in October
Friday, 15	Supplemental and special examinations begin, Law
Friday, 15	Supplemental and special examinations end, Law
Friday, 15	Last day to apply for supplemental examinations in Dentistry and Dental Hygiene
Friday, 15	Supplemental examinations begin, Dentistry and Dental Hygiene
Friday, 22	Summer break begins, Dentistry (fourth year)

### August

Monday, 1	Halifax/Dartmouth Natal Day - University closed (does not apply to Medicine clerkship)
Friday, 12	Supplemental examinations end, Dentistry and Dental Hygiene
Friday, 12	Summer term ends, entering Dentistry Qualifying Program (Year 1)
Sunday, 15	Last day to apply to Medicine - online application (Step 1) closes
Monday, 22	Classes resume, Dentistry (fourth year)

Monday, 22	Classes begin, Dentistry third year and Qualifying Program First year
Monday, 29	Classes begin, Medicine (first and second year)
Monday, 29	Classes begin, Medicine Clerkship (third year - Class of 2013)
Tuesday, 30	Classes begin, Dentistry (first & second years), Diploma Dental Hygiene

## September

Thursday, 1	Classes begin, Bachelor of Dental Hygiene
Thursday, 1	Step 2, Medicine application closes. Transcript submission deadline MCAT Score submission deadline
Thursday, 1	Application deadline Dentistry Qualifying Program
Monday, 5	Labour Day - University closed
Tuesday, 6	Orientation begins, first year Law
Wednesday, 7	Classes begin, second and third year Law
Saturday, 17	Classes end, Medicine Clerkship (third year - Class of 2012)
Sunday, 18	Last day to add or drop fall and full-year term classes without a 'W', Law

## October

Friday, 1	Application deadline Paediatric General Practice Dental Residency Program
Monday, 10	Thanksgiving Day - University closed (does not apply to Medicine Clerkship)
Saturday, 15 - Sunday, 16	Fall Convocations

## November

Monday, 7	Last day to drop fall term classes with a "W", Law
Thursday, 10	Study Day (does not apply to Medicine, Dentistry or Dental Hygiene)
Friday, 11	Remembrance Day - University closed (does not apply to Medicine clerkship)
Wednesday, 30	Early Application Deadline (Law)

## December

Thursday, 1	Last day to apply to graduate in May
Thursday, 1	Application deadline, Dentistry
Wednesday, 7	Classes end, Dentistry, Dental Hygiene, Qualifying Program
Tuesday, 6	Classes end, Law
Thursday, 8	Examinations and midterms begin, Law
Monday, 12	Examinations begin, Dentistry, Dental Hygiene, Qualifying Program
Saturday, 17	Classes end, Medicine (first and second year)
Saturday, 17	Classes end, Medicine (third year)
Monday, 19	Midterms end, Law (first year)
Wednesday, 21	Examinations end, Dentistry, Dental Hygiene, Qualifying Program
Thursday, 22	Examinations end, Law (second and third year)

## 2012

### January

Monday, 2	In lieu of New Year's Day - University closed
Tuesday, 3	Classes resume, Medicine (first, second & third year), Law
Wednesday, 4	Classes begin, winter term (regular session)
Monday, 9	Reference letter deadline - Medicine
Sunday, 15	Last day to add or drop winter term classes without a 'W', Law

### February

Friday, 3	Munro Day - University closed (does not apply to Medicine clerkship)
Monday, 6	Last day to drop full-year classes "W", Law
Monday, 20	Study break begins (does not apply to Medicine)
Monday, 27	Classes resume, Law
	Examinations begin. Dentistry (fourth year)

Wednesday, 29 Final Application deadline, Law

## March

Friday, 2 Examinations end, Dentistry (fourth year)  
Monday, 12 Study break begins, Medicine (first and second year)  
Monday, 15 Application deadline, Diploma in Dental Hygiene,  
Bachelor of Dental Hygiene  
Monday, 19 Classes resume, Medicine (first and second year)

## April

Monday, 2 Classes begin, entering Dentistry Qualifying Program  
Wednesday, 4 Classes end, Law  
Thursday, 5 Classes end, regular session unless otherwise indicated  
Friday, 6 Good Friday - University Closed (does not apply to  
Medicine clerkship)  
Monday, 9 Examinations begin, Law  
Friday, 13 Last day of classes before exams, Dentistry (third year),  
Qualifying Program (first year), Dental Hygiene  
Wednesday, 18 Examinations end, Law (first year)  
Wednesday, 18 Examinations begin, Dentistry (third year), Qualifying  
Program (first year) and Dental Hygiene  
Friday, 20 End of Medicine Clerkship, Class of 2012  
Friday, 20 Classes end Dentistry fourth year  
Friday, 27 Examinations end, Dentistry (third year), Dental  
Hygiene, Qualifying Program (first year)  
Monday, 30 Classes resume Dentistry (third year), Qualifying  
Program (first year)  
Monday, 30 Examinations end, Law (second and third year)

## May

Friday, 11 Last day of classes, Dentistry (first and second year)  
Monday, 14 Examinations begin, Dentistry (first and second year)  
Friday, 18 End of year, Medicine (first and second year)  
Friday, 18 Examinations end, Dentistry (first and second year)  
Monday, 21 Victoria Day - University closed (does not apply to  
Medicine clerkship)  
Tuesday, 22 - Wednesday, May 30 Spring convocations

## June

Wednesday, 6 Last day of classes, Dentistry (third year), Qualifying  
Program (first year)  
Wednesday, 13 Classes begin, Dentistry (fourth year)  
Sunday, 26 Orientation for all new postgraduate medical trainees  
Wednesday, 30 Last day to register PGY (all years), without late fee

## July

Friday, 1 Postgrad Medicine Academic Year begins  
Monday, 2 In lieu of Canada Day - University closed (does not  
apply to Medicine clerkship)  
Wednesday, 4 Supplemental and Special exams begin, Law  
Friday, 14 Supplemental exams begin, Dentistry  
Friday, 20 Summer break begins, Dentistry (fourth year)  
Friday, 20 Supplemental and Special exams end, Law

## August

Monday, 6 Halifax/Dartmouth Natal Day - University closed (does  
not apply to Medicine clerkship)  
Friday, 10 Summer Term ends, Dentistry Qualifying Program  
(first year)

# Admission Dates 2011/2012

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## Final Dates for Receipt of Applications for Admission

### Regular Session

#### Dentistry

DDS ..... December 1  
Diploma in Prosthodontics with Master of Science of Applied  
Science in Biomedical Engineering.....not offered in 2011/12  
Dental Hygiene Diploma ..... March 15  
Bachelor of Dental Hygiene ..... March 15  
DDS Qualifying Program ..... September 1  
Paediatric General Practice Dental Residency  
Program..... October 1  
Master of Science in Prosthodontics.....not offered in 2011/12  
Master of Science in Periodontics.....October 1

#### Medicine

MD ..... August 15

#### Law

Law .....November 30 and February 29

## Academic Programs

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### Faculty of Dentistry

- Doctor of Dental Surgery - 4 years
- Diploma in Prosthodontics combined with Master of Applied Science in Biomedical Engineering - 3 years - (Not offered in 2011/2012 academic year)
- Diploma in Dental Hygiene - 2 years Dental Hygiene
- DDS Qualifying Program - 2 years
- Paediatric General Practice Dental Residency Program - 1 year
- Bachelor of Dental Hygiene - 1 year completion
- Master of Science in Prosthodontics - 3 years - (Not offered in 2011/2012 academic year)
- Master of Science in Periodontics - 3 years

### Faculty of Law

Degree designation from LLB to JD subject to approval by the Board and MPHEC

- Bachelor of Laws - 3 years
- Bachelor of Laws with Master of Business Administration - 4 years
- Bachelor of Laws with Master of Public Administration - 4 years
- Bachelor of Laws with Master of Health Services Administration - 4 years
- Bachelor of Laws with Master of Library and Information Studies - 4 years

### Faculty of Medicine

- Doctor of Medicine - 4 years
- Residencies - various programs ranging from 2-6 years post-MD
- Doctor of Medicine with Master of Science - 6 years - Master of Science thesis in: Oral and Maxillofacial Surgery
- Doctor of Medicine with Doctor of Philosophy - Program under review. Applications are not currently being accepted

## Academic Regulations

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### Registration

1. It is the student's responsibility to register. Registration instructions are available on the web at <http://www.registrar.dal.ca>. Registration for classes is completed using Dal.online. The timetable of classes for 2011-2012 and registration dates are available in March.
2. A student is considered registered after selection of classes. Selection of classes is deemed to be an agreement by the student for the payment of all assessed fees.
3. All students are required to obtain an ID card or validate an existing ID card at the Dalcard office. 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 card.

### 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.

# Definitions

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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 Dismissal

A student's required withdrawal from a program due to unsatisfactory academic performance.

## Academic Program

A distinct group of classes and other requirements which lead to eligibility for a degree or other university-awarded credential.

## Academic Sessions

- Regular session: September - April
- Fall term: September - December
- Winter term: January - April
- Summer term: May - August

## Advanced Standing

Students possessing advanced knowledge of a subject will be encouraged to begin their studies in that subject at a level appropriate to their knowledge, as determined by the department concerned. However, such students must complete, at Dalhousie, the full number of credits required for the particular credential being sought.

## Audit Student

A student permitted to attend classes but not 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 in the normal way. Students may register to audit a class only after the last day to add classes in the term.

## Class/Course

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

## Clerkship

See Internship

## Clinical Practice

See Internship

## Co-requisite

Requirement which must be fulfilled concurrently with the class being considered.

## Credit

A unit by which University class work is measured. A full year class, i.e. September - April, is normally worth one credit.

## CRN

Each class has a CRN attached to it (class registration number). This number is to be used when signing up for classes.

## Email

Email is an authorized means of communication for academic and administrative purposes within Dalhousie. The University will assign all students an official email address. This address will remain in effect while the student remains a student and for one academic term following a student's last registration. This is the only email address that will be used for communication with students regarding all academic and administrative matters. Any redirection of email will be at the student's

own risk. Each student is expected to check her or his official email address frequently in order to stay current with Dalhousie communications.

## Exclusion

Students may not register for a class which lists, as an exclusion, a class the student is also taking or has already passed.

## Externship

See Internship

## Fieldwork

See Internship

## Full-time Students

Those registered for three full classes or more, or the equivalent of three half credit classes or more in either the fall or winter term.

## Grade Point Average (GPA)

Weighted sum of the grade points earned, divided by the number of classes enrolled.

- Sessional GPA: Classes taken in a single session, September - April.
- Cumulative GPA: All classes taken while registered in a program.

## Internship, Fieldwork, Clinical practice, Externship, Practicum, Clerkship

These terms are used in Faculty of Health Professions' programs to describe practical professional educational experiences that are conducted in a non-university setting such as a health or social service agency.

## 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).

## Practicum

See Internship

## Prerequisite

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

## Residency

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

## 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 or level of study only, are not issued.

## Transfer Student

A transfer student is one who is awarded credit towards a Dalhousie degree for academic work completed at a previous university or equivalent institution of higher learning.

## Visiting Student

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

## Work Term

Career related work experience required in Co-operative Education programs. Work terms are usually of 13-16 weeks duration.

## Class Codes

### Numbers

1000-level classes are introductory

2000-4000 level classes are advanced

5000-9000 level are Graduate level (with some exceptions)

### Credit Hours - examples only

0.06 credit hours = 1 full credit

0.03 credit hours = ½ credit

0.00 credit hours = no credit

### Subject Codes

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

AGRI - Agriculture

ANAT - Anatomy & Neurobiology

ARBC - Arabic

ARCH - Architecture

ARTC - Applied Health Services Research

ASSC - Arts and Social Sciences Interdisciplinary

BCBD - Community Building and Design

BIOC - Biochemistry and Molecular Biology

BIOE - Biological Engineering

BIOL - Biology

BIOT - Bioethics

BMNG - Biomedical Engineering

BUSI - Business Administration

CANA - Canadian Studies

CH&E - Community Health & Epidemiology

CHEE - Chemical Engineering

CHEM - Chemistry

CHIN - Chinese

CIVL - Civil Engineering

CLAS - Classics

CNLT - Centre for Learning and Teaching

COMM - Commerce

CPST - Complimentary Studies

CRWR - Creative Writing

CSCI - Computer Science

CTMP - Contemporary Studies

DCYT - Diagnostic Cytology

DEHY - Dental Hygiene

DENQ - Dentistry Qualifying

DENT - Dentistry

DISM - Disability Management

DMUT - Diagnostic Medical Ultrasound Technology

ECED - Electrical and Computer Engineering

ECMM - Electronic Commerce

ECON - Economics

EDUC - Education

EMSP - Early Modern Studies

ENGI - Engineering

ENGL - English

ENGM - Engineering Math

ENSL - English Language (CE)

ENVE - Environmental Engineering

ENVI - Environmental Studies

ENVS - Environmental Science

ERTH - Earth Sciences

EURO - European Studies

FOSC - Food Science & Technology

FREN - French

GEOG - Geography

GERM - German

GWST - Gender and Women's Studies

HAHP - Health and Human Performance

HEED - Health Education

HESA - Health Administration

HINF - Health Informatics

HIST - History

HLTH - Health Professions

HPRO - Health Promotion

HSCE - Health Sciences Education

HSTC - History of Science and Technology

HUCD - Human Communication Disorders

IDIS - Interdisciplinary Studies

IENG - Industrial Engineering

INFO - Information Management

INFX - Informatics

INTD - International Development Studies

INTE - Interdisciplinary Studies (Graduate)

INWK - Engineering Internetworking

IPHE - Interprofessional Health Professions

ITAL - Italian

JOUR - Journalism

KINE - Kinesiology

KING - King's Foundation Year Programme

LAWS - Law

LEIS - Leisure Studies

MARA - Marine Affairs

MARI - Marine Biology

MATL - Materials Engineering

MATH - Mathematics

MDLT - Medical Lab Technology

MECH - Mechanical Engineering

MEDI - Medicine

MEDS - Medical Science

MGMT - Management

MICI - Microbiology & Immunology

MINE - Mineral Resource Engineering

MUSC - Music

NESC - Neuroscience

NUMT - Nuclear Medicine Technology

NURS - Nursing

OCCU - Occupational Therapy

OCEA - Oceanography

ORAL - Oral & Maxillofacial Surgery

PATH - Pathology

PEAS - Process Engineering and Applied Science

PERI - Periodontics

PETR - Petroleum Engineering

PGMD - Post-Graduate Medicine

PGPH - Post-Graduate Pharmacy

PHAC - Pharmacology

PHAR - Pharmacy

PHIL - Philosophy

PHDP - PHD Program

PHYC - Physics and Atmospheric Science

PHYL - Physiology

PHYT - Physiotherapy

PLAN - Planning

POLI - Political Science

PROS - Prosthodontics

PSYO - Psychology

PUAD - Public Administration

RADT - Radiological Technology

REGN - Registration Course - Graduate

RELS - Religious Studies

RSCH - Research Class for PDF's

RSPT - Respiratory Therapy

RUSN - Russian Studies

SCIE - Science

SLWK - Social Work

SOSA - Sociology and Social Anthropology

SPAN - Spanish

STAT - Statistics

SUST - Sustainability

THEA - Theatre

TYPR - Transition Year Program

VISC - Vision Science

# Dalhousie University

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Dalhousie University, located in the heart of Halifax, Nova Scotia, an international port city known for its scenic beauty, vibrant culture and rich heritage, is one of Canada's leading universities. We are widely recognized for outstanding academic quality and the opportunities presented by our broad range of educational and research activities.

Since 1818, Dalhousie has a long tradition of excellence and achievement. Dalhousie offers more than 3,600 diverse courses in over 180 undergraduate, graduate and professional degrees. We also encourage students learning through exchange programs, fieldwork, community service and co-operative education. Our collaborative learning environment encourages our nearly 16,000 students to interact with one another and with faculty experts to share ideas and offer new perspectives.

Our collaborative spirit extends off campus, as well. We conduct research in partnership with teaching hospitals, professional organizations, businesses, nonprofit agencies, and other universities. As Atlantic Canada's leading research university, we attract more than \$93 million in research grants and awards annually, allowing us to conduct a wide variety of research projects.

In 1997, the Technical University of Nova Scotia amalgamated with Dalhousie University, creating dynamic new centre of advanced technical education and research in Nova Scotia, in the areas of architecture, computer science and engineering.

The University of King's College, situated adjacent to the Dalhousie campus, is an affiliated institution, and its students in Arts and Science receive Dalhousie degrees in the name of both institutions. Degrees in agriculture, awarded to students of the Nova Scotia Agricultural College, are awarded by Dalhousie in co-operation with the College.

Dalhousie University is a member of the Association of Universities and Colleges of Canada, the Association of Atlantic Universities, and the Association of Commonwealth Universities.

## Executive Officers

### President and Vice-Chancellor

Tom Traves, BA, MA, PhD

### Vice Presidents

#### Academic and Provost

Acting VP, Carolyn Watters, BSc, MSc, MLS(Western), PhD (TUNS)

#### Finance and Administration

Ken Burt, BA, MBA

#### External

Floyd W. Dykeman, BA, MPL

#### Student Services

Bonnie Neuman, BA, MA, EdD

#### Research

Martha Crago, BA, MSc (A), PhD

#### Associate Vice-President Academic Outreach and International Programs

Keith F. Taylor, BSc (St. FX), PhD (Alberta)

#### Associate Vice-President, Academic Programs

Susan Spence Wach, MHA

#### Associate Vice-President, Research

Russell J. Boyd, BSc, PhD

#### Assistant Vice-President, Academic Success Services

TBA

#### Assistant Vice-President, Ancillary Services

Heather Sutherland, BSc, MEd

#### Assistant Vice-President and Chief Development Officer

Peter Fardy, BA, MBA

#### Assistant Vice-President, Communications and Marketing

Catherine Bagnell Styles, BA, ABC

#### Assistant Vice-President, Enrolment Management and Registrar

Åsa Kachan, BA, MLIS

#### Assistant Vice-President, Facilities Management

Jeffrey W. Lamb, BEng, MEng, (Royal Military College)

#### Assistant Vice-President, Financial Services

Ian Nason, BComm

#### Assistant Vice-President, Government Relations

Gillian Wood, BA, MA (Economics)

#### Assistant Vice-President, Human Resources

Katherine Sheehan, BA, CHRP

#### Assistant Vice-President, Industry Relations and Executive Director, ILI

Stephen Hartlen, BComm, MBA

#### Assistant Vice-President, Information Technology Services

Dwight Fischer, BSc, MSc, EMBA

#### Assistant Vice-President, Research

Iain Stewart, BA, MMM, MPA

#### Assistant Vice-President, Student Affairs

Marc Braithwaite, BBA, MBA

#### University Legal Counsel

Karen Crombie, BA (Hon), JD

#### University Librarian

TBA

## Deans of Faculties

### Architecture and Planning

Christine Macy, BA (Arch) (California at Berkley), MArch (MIT), Reg. Arch. (WA)

### Arts and Social Sciences

Robert Summerby-Murray, ATCL (Trinity College, London), BA, MA, (Canterbury), PhD (Toronto)

### Computer Science

Michael Shepherd, MSc, PhD (Western)

### Dentistry

Thomas Boran, DDS, MEd (Dalhousie)

### Engineering

L. Joshua Leon, BSc, MSc, PhD (Dal), PEng

## **Graduate Studies**

Acting Dean, Sunny Marche, BA (RMC), MEd (Alberta), PhD (LSE)

## **Health Professions**

William G. Webster, BSc (Hon), MA, PhD

## **Law**

Kim Brooks, BA (Toronto), LLB (UBC), LLM (York)

## **Management**

Peggy Cunningham, BA (Queens), MBA (Calgary), PhD (Texas A&M)

## **Medicine**

Tom Marrie, MD (Dal)

## **Science**

Chris Moore, BA, PhD (Cambridge, UK)

## **College of Continuing Education**

Andrew Cochrane, BPER, MBA

## **College of Arts and Science, Provost**

Chris Moore, BA, PhD (Cambridge, UK)

## **Executive Directors**

### **Centre for Learning and Teaching**

Lynn Taylor, BSc and BEd (Memorial), MA (Dal), PhD (Ottawa)

### **Office of Institutional Analysis and Research**

Elizabeth Lane, BA, MA

## **Directors**

### **Arts Centre**

Heather McGean, BA

### **Athletics and Recreational Services and Dalplex**

John MacDonald, BComm, FICB

### **Environmental Health and Safety**

Raymond G. Ilson, M.Eng., CIH, CRSP, CRPA(R)

### **Health Services**

Glenn Andrea, MD (Dal)

### **Internal Audit Services**

Margaret Sterns, BBA, CA

### **Sustainability Office**

Rochelle Owen, BSc (He-Ed), MES

## **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.

### **Chancellor**

Dr. Frederick Fountian

### **Chancellor Emeritis**

Dr. Rueben Cohen

Sir Graham Day

Dr. Ruth Goldbloom

Dr. Richard Goldbloom

## **Officers**

Dr. Jim Spatz, Chair

Mr. William Black, Vice-Chair

Ms. Nancy MacCready Williams, Honorary Secretary

Mr. Lawrence Stordy, Honorary Treasurer

Dr. Tom Traves, President and Vice-Chancellor

## **Members**

Mr. Jay Abbass

Ms. Michelle Awad

Ms. Nancy Barkhouse

Mr. John Baxter

Dr. Andrew Bennett

Ms. Joyce Carter

Mr. Robert Chisholm

Ms. Janet Conrad

Mr. Wadih Fares

Dr. Frederick Fountain

Dr. Lloyd A. Fraser

Mr. Adam Harris

Ms. Lynn Irving

Ms. Sarah MacDonald

Mr. George McLellan

Mr. Chris Saulnier

Mr. Chris Smith

Mr. Stan Spavold

Ms. Gail Tomblin Murphy

Mr. Jim Wilson

## **University Secretary**

Ms. Susan Brousseau

## **Observer for Faculty Association**

Dr. Carrie Dawson

## **Senate**

The Senate is the University's senior academic decision-making body. It is responsible for the approval of new programs and academic units and it manages the reviews of Faculties, Centers and Institutes. Senate approves the granting of degrees and diplomas, including the conferral of Honorary Degrees. It is responsible for setting academic regulations which affect the University as a whole, including regulations governing student conduct and discipline, as well as regulations concerning faculty tenure and promotion.

Senate has 73 members-49 elected Faculty representatives, 16 academic administrators (President, Vice-President Academic and Provost, Vice-President Research, University Librarian, and the Deans of each faculty), six students elected by the Dalhousie Student Union, and representative from the University of King's College and the Nova Scotia Agricultural College.

Senate normally meets on the second Monday of each month from 4:00 - 6:00 p.m. In addition, if there are sufficient items of business, Senate will meet on the forth Monday of the month, from 4:00 - 6:00pm.

## **Chair of Senate**

Lloyd A. Fraser, EdD

## **Vice-Chair (Academic Programs)**

Carolan McLarney, PhD

## **Vice-Chair (Academic Administration)**

Carl Canning, DDS

# University Regulations

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## 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. 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. Students are bound by the regulations of the home faculty regardless of the faculty in which the student takes classes.
4. 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.

## Rescission of Acceptance into a Program

Dalhousie University reserves the right to rescind any acceptance of an applicant into a program or to rescind an offer of admission of an applicant into a program. Such rescission shall be in writing and may be made by the President or the Vice-President (Academic) and Provost, in consultation with the appropriate Dean, at any time prior to the applicant's registration being confirmed by the Registrar. Any such rescission shall be reported to the Senate in camera.

## 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 when used.
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 electronic computing, data storage and communication devices must be turned off, placed and sealed in the opaque storage bag on the exam writing surface. Calculators may be used at the discretion of the instructor.
4. Candidates may not leave their seats during an examination except with the consent of the invigilator.
5. 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.

6. Candidates found communicating with one another in any way or under any pretext whatever, or having unauthorized books, papers, electronic computing, data storage, or communication devices in their possession, even if their use be not proved, will be investigated by the Chief Invigilator. A written report will be submitted to the Faculty Academic Integrity Officer.
7. 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.

## Policy in the Event that a Formal Examination Cannot be Completed at the Regularly Scheduled Time

Formal examinations, up to three hours in length, are scheduled by the Registrar each December and April during formal examination periods, as laid out in the Calendar. If, in the unusual event that one of these examinations must be postponed or abandoned at short notice, the following policies will apply.

1. If more than fifty percent of the time allocated for the examination has elapsed, students' work up to the premature end of the examination, but prorated for the actual time written, will lead to the mark to be obtained from the formal examination.
2. If less than fifty percent of the time allocated for any examination has elapsed, the examination will be rewritten as soon as possible, normally on a day when examinations are not scheduled. Students will be informed by the Registrar of the time and place of the rewrite on the Website of the Registrar (<http://www.registrar.dal.ca>).
3. In all cases in which a formal examination cannot be written at its scheduled time and special arrangements must be made, it is essential that faculty ensure that all students in the class are treated fairly and equitably and according to the evaluative criteria in the class description given to students at the beginning of the term. If an examination is terminated as under point #1, any student who feels disadvantaged by not having been able to write an examination for the length specified in the class description, may appeal through the appropriate departmental or school appeal mechanism for an examination of the specified length. Appeals will be in writing and in a timely fashion. If the appeal is granted, arrangements for such a makeup examination will be made between the student and the class professor.
4. If a formal examination cannot be written at its scheduled time, it is the responsibility of students to check the Registrar's Website for when the examination will be rewritten. Announcements will be made as soon as possible after the original time, normally within 24 hours, and rewrites will normally take place within the regular examination period.

## Policy for the Scheduling of Classes/Examinations

Normally, the University schedules and conducts classes on weekdays, i.e., Monday to Friday, and sometimes Saturday, and examinations on weekdays and Saturdays, but not Sundays or statutory Holidays. However the University reserves the right, in exceptional circumstances and with the approval of Senate, to schedule classes or examinations on Sundays or statutory holidays, as the case may be.

## Requests for an Alternative Final Examination Time

A student requesting an alternative time for a final examination will be granted that request only in exceptional circumstances. Such circumstances include illness (with medical certificate) or other mitigating circumstances outside the control of the student. Elective arrangements (such as travel plans) are not considered acceptable grounds for granting an alternative examination time. In cases where it is necessary to make changes to examination arrangements late in the term, or Senate has approved exceptional examination arrangements, a special effort will be made to accommodate difficulties the changes may cause for individual students.

The decision whether to grant a student's request for an alternative examination time lies with the instructor of the course concerned as does the responsibility for making the alternative arrangements.

This policy may also be applied at the discretion of the instructor to tests and examinations other than final examinations.

## Retention of Student Work

### Faculties of Architecture and Planning and Engineering

All work executed by students as part of their academic programs in the Faculties of Architecture and Planning and Engineering automatically becomes the property of the University and may be retained for exhibition or other purposes at any time and for an indefinite period.

### Faculty of Computer Science

The Faculty of Computer Science has the right to retain the original or a copy of any work handed in by students. This will only be used for evaluation or for administrative purposes. The permission of the originator of the work is required if it is to be used in any other way.

## Communication with Students

1. 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. This may be done online at <http://www.dal.ca/online>.
2. Email is an authorized means of communication for academic and administrative purposes within Dalhousie. The University will assign all students an official email address. This address will remain in effect while the student remains a student and for one academic term following a student's last registration. This is the only email address that will be used for communication with students regarding all academic and administrative matters. Any redirection of email will be at the student's own risk. Each student is expected to check her or his official email address frequently in order to stay current with Dalhousie communications.
3. Students who change their name while attending Dalhousie must provide proof of name change to the Registrar's Office.

## Freedom of Information and Protection of Privacy

The Freedom of Information and Protection of Privacy Act (FOIPOP) provides for the protection of an individual's right to privacy but also requires that certain records be disclosed upon request unless they are exempted from disclosure. The Act requires that the University not disclose personal information if that information would constitute an unreasonable invasion of personal privacy. Applicants to Dalhousie are advised that information they provide along with other information placed in a student file will be used in conjunction with university practices for internal university use and will not be disclosed to third parties except in compliance with the FOIPOP Act or as otherwise required by law.

## Release of Information About Students

The following information is available, without application through the Freedom of Information and Protection of Privacy Act:

### I. Disclosure to students of their own records

1. 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, faculty or level of study only, are not issued.
2. Students have the right to inspect their academic record. An employee of the Registrar's Office will be present during such an inspection.
3. Students will, on submission of a signed request and payment of a fee where appropriate, have the right to receive transcripts of their own academic record. These transcripts will be marked "ISSUED TO STUDENT". Official transcripts will be sent on a student's request to other universities, or to business organizations, etc. The University will not release copies of transcripts if students owe monies to the University.

4. If transcripts are issued for a student while a senate discipline case is pending and the committee subsequently makes a decision that affects the student's transcript, revised transcripts will be sent to recipients if transcripts are issued while the case was pending.

### II. 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.

### III. Disclosure to Third Parties

1. The following information is considered public information and may be released without restriction:
  - Name
  - Period of Registration
  - Certificates, Diplomas, Degrees awarded
  - Field of Study (as relates to degree awarded)
  - Hometown and Awards/Distinctions\*\*As indicated in the convocation program.
2. 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.
3. 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.
4. In compliance with Statistics Canada requirements, a student's national personal identification number assigned by the university or college first attended will routinely appear on a student's transcript of record.
5. The Federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used only for statistical purposes, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student.

Students who do not wish to have their information used are able to ask Statistics Canada to remove their identifying information from the national database by contacting us by:

Email: [PSIS-SIEP\\_contact@statcan.gc.ca](mailto:PSIS-SIEP_contact@statcan.gc.ca)

Mail: Institutional Surveys Section,  
Centre for Education Statistics,  
Statistics Canada, Main Building  
SC2100-K Tunney's Pasture,  
Ottawa, ON K1A 0T6

Students should also be aware that the Maritime Provinces Higher Education Commission (MPHEC) collects data on behalf of Statistics Canada, and that it uses the data for similar purposes. Statistics Canada will notify the MPHEC of any student choosing to have their personal information removed from the national database, and their information will subsequently be removed from the MPHEC's database.

Further information on the use of this information can be obtained from the Statistics Canada Website: <http://www.statcan.ca>.

6. Other than in the above situations, 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.

## Accommodation Policy For Students

Dalhousie University recognizes the diversity of its students and is committed to providing a learning environment and community in which students are able to participate without discrimination on grounds prohibited by the Nova Scotia Human Rights Act. In particular, the University is committed to facilitating students' access to the University's academic programs, activities, facilities and services.

The University's commitment to safeguarding students and employees from prohibited discrimination is set out in the Statement on Prohibited

Discrimination, and the procedures for addressing alleged violations of the Statement by employees are set out in the Statement on Prohibited Discrimination Procedure for Complaints against an Employee of the University.

As stated in the Statement on Prohibited Discrimination:

The University operates in accordance with the Nova Scotia Human Rights Act. The Act prohibits discrimination in certain activities including the provision of or access to services and facilities, accommodation, publications and employment. Discrimination is defined as making “a distinction, whether intentional or not, based on a characteristic, or perceived characteristic . . . [see list below] that has the effect of imposing burdens, obligations or disadvantages on an individual or class of individuals not imposed upon others or which withholds or limits access to opportunities, benefits and advantages available to other individuals or classes of individuals in society.” The Act prohibits discrimination based on the following grounds or characteristics:

- i) age
- ii) race
- iii) colour
- iv) religion
- v) creed
- vi) sex
- vii) sexual orientation
- viii) physical disability or mental disability
- ix) an irrational fear of contracting an illness or disease
- x) ethnic, national or aboriginal origin
- xi) family status
- xii) marital status
- xiii) source of income
- xiv) political belief, affiliation or activity
- xv) association with an individual or a class of individuals having characteristics referred to in (i) to (xiv)

The University recognizes that its obligation to provide a learning environment and community free from prohibited discrimination includes the obligation to make accommodations for students in instances where a student’s learning environment or the University community in which they operate has a discriminatory effect on the student’s ability to fully participate in, and have access to, University academic programs, activities, facilities and services. In particular, the university is obliged to make every reasonable effort short of undue hardship to take substantial, timely and meaningful measures to eliminate or reduce the discriminatory effects of the learning and community environment, including facilities, policies, procedures, and practices.

The purpose of this policy is to set out clear procedures to be followed in all instances where a student seeks accommodation to eliminate or ameliorate discrimination on one of the prohibited grounds. This policy replaces existing policies or practices concerning student accommodation.

The Office of Student Accessibility and Accommodation and the Human Rights and Employment Equity Office are resources available to students seeking accommodation and to units considering or implementing an accommodation plan.

## Policy

### Definitions

1. In this policy,  
“academic accommodation” means accommodation in relation to the student’s participation in an academic program or particular class;  
  
“administrative head” means the individual with day-to-day operational responsibility for a University operation, activity, service or non-academic program;  
  
“non-academic accommodation” means accommodation in relation to University activities and services that are not otherwise considered academic accommodation;

“student” shall include individuals enrolled at the University;

“Student Accommodation Liaison” means the individual or committee assigned responsibility for managing accommodation requests by each Faculty in accordance with section 3 of this policy.

### Role of Student Accommodation Office, Faculty and Administrative Heads

2. Subject to the terms of this policy, the Student Accommodation Office will be responsible for administering student requests for accommodation, in consultation with the Faculty’s Student Accommodation Liaison in relation to academic accommodation, and in consultation with the relevant administrative head in relation to non-academic accommodation.
3. Each Faculty shall either assign a senior academic administrator or a Faculty, School or Department committee the responsibility to act on behalf of the Faculty in relation to academic accommodation requests under this Policy. Such individuals or committee shall be referred to in this policy as the Student Accommodation Liaison.
4. Prior to the commencement of each academic year, the Student Accommodation Liaison shall be responsible for approving parameters for academic accommodations relative to the Faculty’s particular academic program and class requirements.

### Requests for accommodation

5. It is the student’s responsibility to make a request for accommodation in accordance with this policy. The request for accommodation must be made reasonably in advance of the event or process in relation to which accommodation is being sought so that a decision can be made. Except in rare circumstances when significant psychological or mental health issues arise, there should be no “after-the-fact” accommodation. The University will consider a request for accommodation made by a third party (physician, family member, caregiver, advocate or other representative) only where the student has provided prior written consent.
6. A request for accommodation shall be made by the student in writing to The Office of Student Accessibility and Accommodation, and shall contain the following information:
  - a) the reasons for the accommodation (*i.e. particulars of the discriminatory impact on the student on one of the prohibited grounds*) and any supporting documentation;
  - b) the accommodation being requested and /or any suggestions as to how the accommodation can be achieved;
  - c) where a medical condition is relevant to the request, copies of medical reports or additional medical documentation to substantiate the request and /or to assist in identifying the most appropriate means of accommodation; and
  - d) where the request relates to academic accommodation in relation to a learning disability, a current psycho-educational report describing the nature of the learning disability.

### Assessment and Decisions concerning accommodation

7. The assessment by The Office of Student Accessibility and Accommodation is a two-step process. First, The Office of Student Accessibility and Accommodation screens the requests to ensure that only requests arising in relation to one of the prohibited grounds of discrimination are permitted to proceed. If the request does arise in relation to one of the prohibited grounds, The Office of Student Accessibility and Accommodation shall proceed to the second step, and shall consider all relevant factors in making a preliminary assessment as to whether an accommodation could be made without imposing an undue hardship to the University. In making such an assessment, The Office of Student Accessibility and Accommodation will usually consult with the student making the request. Relevant factors include, but are not limited to, the following:
  - a) Linkage – whether the proposed accommodation will have the practical effect of eliminating or reducing the identified barrier;

- b) Safety – whether the proposed accommodation would pose a safety risk to faculty, staff or other students or to the student seeking accommodation;
  - c) Financial Cost – what are the costs (estimate out-of-pocket expenses to put the accommodation in place together with any long-term costs to sustain the proposed accommodation), and would such costs be prohibitive;
  - d) Size and nature of the program or service – how disruptive would the proposed accommodation be to the program or service, considering the number of students, faculty and staff and the nature and inter-relationships of their roles;
  - e) Impact on academic requirements – whether the proposed accommodation will substantially undermine the academic requirements of the program; and
  - f) Alternatives – where a requested accommodation appears to create an undue hardship based on the above factors, whether an alternative accommodation may be available.
8. Where the request is for academic accommodation, The Office of Student Accessibility and Accommodation, in consultation with the class instructor, shall assess the recommendation in light of the factors set out in section 7 above, and the parameters for academic accommodation approved by the Faculty responsible for the delivery of the class, and shall make a decision concerning the accommodation. Where the circumstances are not addressed by the approved parameters, The Office of Student Accessibility and Accommodation shall also consult with the Student Accommodation Liaison. The Office of Student Accessibility and Accommodation shall inform the student, those who are necessary for the implementation of the decision (such as the course instructor), and the Student Accommodation Liaison of the decision. Except in extraordinary circumstances, decisions concerning accommodation shall be communicated within five (5) working days of the student's request. A request can be expedited at the request of the student if circumstances warrant. In consultation with the Student Accommodation Liaison, and class instructor as required, The Office of Student Accessibility and Accommodation may review accommodation plans from time to time to determine whether any adjustments to the accommodation plan are necessary.
9. Where the request is for non-academic accommodation, The Office of Student Accessibility and Accommodation shall work with the appropriate administrative head to determine what accommodation should be provided, consulting others, including the student making the request, as necessary. The Office of Student Accessibility and Accommodation shall communicate the decision to the student. Accommodation plans may be reviewed from time to time to determine whether any adjustments to the accommodation plan are necessary.
10. The Office of Student Accessibility and Accommodation in consultation with the Student Accommodation Delegates and the administrative heads, as appropriate, will monitor accommodation plans from time to time to ensure that they have been implemented in accordance with this policy.

## Appeals

11. There shall be an Accommodation Appeals Committee comprising two members appointed by the Vice-President Finance and Administration, two members appointed by the Vice-President Academic and Provost, two members appointed by the Vice-President Student Services, and three students appointed by the Vice-President Student Services.
12. Where a student believes that his or her request for accommodation has not been handled in accordance with this policy or is not satisfied with the type of accommodation provided, the student may appeal such decision by providing written notice to The Office of Student Accessibility and Accommodation within ten working days of the date of the decision. Upon receipt of such notice, The Office of Student Accessibility and Accommodation shall ask the Vice-President Academic to select a hearing panel comprising three employees and two student members of the Accommodation Appeals Committee to hear the appeal.

13. The Accommodation Appeals Committee hearing panel may uphold the initial decision concerning the accommodation or may determine that an alternate form of accommodation should be provided.. The decision of the hearing panel is final, and cannot be appealed further.

## Confidentiality

14. Particulars of requests for accommodation, including supporting documentation, shall be treated as strictly confidential, and shall not be disclosed to other persons without the consent of the student requesting accommodation, except and to the extent that such disclosure is reasonably necessary for the effective implementation of the accommodation plan.

## Cooperation

15. All faculty, staff and students shall cooperate with accommodation plans implemented under this policy. Failure to cooperate may be considered prohibited discrimination under the Statement on Prohibited Discrimination.
16. Notwithstanding anything in this policy, students have the right at any time to seek the assistance of the Nova Scotia Human Rights Commission.

## Procedures

1. Requests for accommodation under section 5 of the policy shall be on Form A.
2. The notice of appeal described under section 10 of the policy shall be on Form B.

## Support Services

Dalhousie University endeavours 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 counselling, academic counselling, academic advising, and academic skill training.

**NOTE:** 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

## Policy on Submission of Student Papers

Any instructor may require student papers to be submitted in both written and electronic (computer-readable) form, e.g., a text file on floppy disk or as an email attachment, as defined by the instructor. The instructor may submit the material to a third-party computer-based assessment system(s) for the purpose of assessing the originality of the paper. The results of such assessment may be used as evidence in any disciplinary action taken by the Senate.

## Intellectual Honesty

A university should be a model of intellectual honesty. As such Dalhousie University shares in the academic values of honesty, trust, respect, fairness and responsibility (Centre for Academic Integrity, 1999 - of which Dalhousie University is a member). Failure to meet the University's standards with respect to these values can result in an academic offence. The length of time a student has attended university, the presence of a dishonest intent and other circumstances may all be relevant to the seriousness with which the matter is viewed.

Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offence occurs.

Instructors are responsible for setting examinations and assignments as part of the learning process and for evaluating those examinations and assignments, including ensuring that any rules stated for the procedures used in an examination or assignment are followed. Any violation of such stated rules that could result in a student gaining an unfair or unearned advantage may be considered to be an academic offence.

## Examples of Academic Offences

There are many possible forms of academic dishonesty. Since it is not possible to list all instances of academic dishonesty, the following list of examples should be considered only as a guide. The omission of a dishonest action from this list does not prevent the University from prosecuting an alleged instance of that action.

### A. Plagiarism

Members of academic communities are privileged to share in knowledge generated through the efforts of many. In return, each member of the community has the responsibility to acknowledge the source of the information used and to contribute knowledge that can in turn, be trusted and used by others. Consequently, the University attaches great importance to the contribution of original thought to learning and scholarship. It attaches equal importance to the appropriate acknowledgement of sources from which facts and opinions have been obtained.

Dalhousie University defines plagiarism as the submission or presentation of the work of another as if it were one's own.

Plagiarism is considered a serious academic offence that may lead to the assignment of a failing grade, suspension or expulsion from the University. If a penalty results in a student no longer meeting the requirements of a degree that has been awarded, the University may rescind that degree.

Some examples of plagiarism are:

- failure to attribute authorship when using a broad spectrum of sources such as written or oral work, computer codes/programs, artistic or architectural works, scientific projects, performances, web page designs, graphical representations, diagrams, videos, and images;
- downloading all or part of the work of another from the Internet and submitting as one's own; and
- the use of a paper prepared by any person other than the individual claiming to be the author.

The proper use of footnotes and other methods of acknowledgement vary from one field of study to another. Failure to cite sources as required in the particular field of study in the preparation of essays, term papers and dissertations or theses may, in some cases, be considered to be plagiarism.

Students who are in any doubt about how to acknowledge sources should discuss the matter in advance with the faculty members 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. Students may also take advantage of resources available through the Writing Centre at [writingcentre.dal.ca](http://writingcentre.dal.ca) or the Dalhousie Libraries at [library.dal.ca/services/infolit](http://library.dal.ca/services/infolit).

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

Academic research is based on the presentation of accurate information and data that are obtained honestly. The trustworthiness of our findings is essential to building knowledge in and across fields of study. Therefore, 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 the assignment of a failing grade, suspension or expulsion from the University or the withdrawal of a degree previously awarded.

### C. Other Irregularities

Dalhousie University strives to provide equal opportunities for learners to demonstrate and to be recognized for their abilities. Any behaviour intended to gain unearned advantage over another person violates this principle. A member of the University who attempts, or who assists any other person in an attempt, to fulfill, by irregular procedures, any requirements for a class, commits an academic offence and is subject to a penalty.

In the absence of specific approval from the instructor of a class, all students should assume that every assignment is to be completed independently, without any form of collaboration.

Students should take reasonable precautions to prevent other students from having access, without permission, to their tests, assignments, essays or term papers.

The following are some examples of irregular procedures. The list should be used only as a guide since it is not possible to cover all situations that may be considered by the Senate Discipline Committee to be irregular.

- writing an examination or test for someone else;
- attempting to obtain or accepting assistance from any other person during an examination or test;
- during the time one is writing an examination or test, having material that is not specifically approved by the instructor;
- without authorization, obtaining a copy of an examination or test, topic for an essay or paper, or other work;
- without authorization from the faculty member in charge of that class, submitting any work for academic credit when one is not the sole author or creator;
- without authorization submitting any work that has been previously accepted for academic credit in any other class in any degree, diploma or certificate program, or has been completed as part of employment within the University, for example, as research activity. A repeated class is considered to be a separate class.

### D. Aiding in the Commission of an Academic Offence

No student may encourage or aid another student in the commission of an academic offence, for example,

- by lending another student an assignment knowing that he or she may copy it for submission;
- by allowing another student to copy answers during an examination.

### E. Misrepresentation

Any person who provides false or misleading information during an investigation of a suspected academic offence is guilty of an offence.

## 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 residence discipline policy unless the President determines that some non-residence University interests are involved. Senate is charged with the authority to deal with cases of alleged academic offenses, see examples above, 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 class taken, required to withdraw or who is suspended or dismissed from any class or any Faculty of the University.

## Academic Dishonesty

### Faculty Discipline Procedures Concerning Allegations of Academic Offences

#### I. Preamble

These procedures deal with allegations of academic offences and do not deal with violations of the student code of conduct. The purpose of these procedures is to delegate assessment of certain allegations of academic offences to the Faculty level.

## II. Academic Integrity Officers

1. Academic Integrity Officers are associated with the Faculties of Dalhousie University.
2. The Academic Integrity Officer shall act between the student and instructor, and may appear at Hearing Panels of the Discipline Committee or the Discipline Appeals Board to present the case against the student.
3. The Academic Integrity Officer is the Dean of the Faculty. The Dean may further delegate this role to one or more members of his/her academic staff except those who are Senate Officers, who are otherwise involved in the student discipline process, or who otherwise are in a potential conflict of interest relative to this role. Annually the name of the delegate(s) shall be communicated in writing to the Vice-Chair (Academic Administration) who shall report to Senate.
4. The Academic Integrity Officers shall meet as a group with the Senate Discipline Committee (SDC) at least once a year to discuss relevant policy issues and training requirements with a view to maximizing consistency and predictability in the administration of academic offences across the University. Such meetings will be convened and chaired by the Vice-Chair (Academic Administration).
5. **Penalties:**

Penalties shall follow the guidelines contained within the University's Academic Regulations and the Senate Discipline Committee terms of reference set out in Section 10 of the Senate Constitution, which are reproduced below for convenience.

"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:

  - 1) notation of the fact of discipline on the offender's transcript for a period of one (1) or core years, but not exceed five (5) years;
  - 2) repeat of the assignment that triggered the discipline;
  - 3) a failing grade or mark or assessment in the piece of work triggering the discipline;
  - 4) failure of the class or seminar or program;
  - 5) failure of the academic year;
  - 6) suspension for an academic term or year (to a maximum suspension of three (3) academic years);
  - 7) expulsion from the University;
  - 8) loss of a current or continuing scholarship, or both, or loss of eligibility to receive or to maintain scholarships or prizes or bursaries; and
  - 9) removal from the Dean's List."
  6. **Faculty Procedures**

When an academic offence is suspected, the instructor shall submit a signed statement outlining the basis for the allegation, together with all relevant supporting evidence, to the Academic Integrity Officer of the Faculty which is responsible for the delivery of the course at issue, or in the case of an allegation in relation to a graduate thesis or other non course graduate materials, to the Academic Integrity Officer of the Faculty of Graduate Studies, within 10 working days of becoming aware of the alleged offence, but in any event no later than the deadline for submission of final grades to the Registrar, except in extraordinary circumstances, as determined by the Academic Integrity Officer.
  7. Upon receipt of the material from the instructor, the Academic Integrity Officer shall determine whether or not the material supports a *prima facie* case that the student has committed an academic offence. If no *prima facie* case is made out, no further steps are taken in relation to the allegation, and the instructor and student will be so advised in writing.
  8. If a *prima facie* case is established, then the Academic Integrity Officer will take the following further steps:
    - a) Check the academic discipline database maintained by the Senate Office to determine if the student(s) has a record of prior academic offence(s);
    - b) With the exception of cases involving 2 or more students facing allegations arising from the same fact situation ("common allegation") which shall proceed in accordance with paragraph 9, if the student(s) has a record of prior academic offence(s), forward the allegation to the Senate Discipline Committee;
    - c) If the allegation appears to be a first offense, and in all cases of 2 or more students facing a common allegation, inform the student(s) in writing of the nature of the allegation, the instructor's statement, the evidence, the procedures to be followed, the possible penalties, and possible sources of advice and support (will be a standard document);
    - d) Convene a meeting with the student(s), the student(s)'s advisor, if any, and the instructor within 5 working days upon receipt of the allegation by the student, which time may be extended at the request of the student, instructor, or Academic Integrity Officer, in appropriate circumstances;
    - e) If the meeting does not take place within the time set out above, the Academic Integrity Officer has the discretion to convene another meeting with the student(s), the student(s)'s advisor, if any, and the instructor. The Academic Integrity Officer also has the discretion to convene additional meetings as may be reasonably required. In the event an initial meeting does not occur within a reasonable time after a *prima facie* case is established, the Academic Integrity Officer shall refer the allegation to the Senate Discipline Committee.
  9. Notwithstanding paragraph 8b, in the case of 2 or more students facing allegations arising from the same fact situation ("common allegation"), the Academic Integrity Officer has the authority to convene a meeting with all such students in accordance with paragraphs 8d and 8e and to make findings for all such students under these Procedures, regardless of the fact that one or more of such students may have a record of prior academic offence(s). If the Academic Integrity Officer's assessment is that there is sufficient evidence to support a finding that a student facing a common allegation has committed an academic offence, for any such student who has no record of prior academic offence(s), subject to paragraph 14, the Academic Integrity Officer shall assess an appropriate penalty for the student in accordance with these Procedures; and for any such student who has a record of prior academic offence(s), the Academic Integrity Officer shall forward the matter to the Senate Discipline Committee for assessment of an appropriate penalty.
  10. Following the meeting convened in accordance with paragraph 8, the Academic Integrity Officer shall make a preliminary assessment of whether there is sufficient evidence to support a finding that the student has committed an academic offence, and if there is sufficient evidence, make a preliminary assessment of what penalty would be appropriate in the circumstances. In making the latter assessment, the Academic Integrity Officer shall exercise broad discretion in considering possible mitigating circumstances including but not limited to extraordinary personal circumstances and lack of educational experience.
  11. If the Academic Integrity Officer's assessment is that there is insufficient evidence to support a finding that the student has committed an academic offence, s/he shall inform the student in writing with a copy to the Instructor within 5 working days of the meeting. This does not preclude an Academic Integrity Officer from proceeding with the allegation at a later date, should new evidence become available.
  12. If the Academic Integrity Officer's assessment is that there is sufficient evidence to support a finding that the student has committed an academic offence, AND that the appropriate penalty for the student's conduct is any of the penalties described in paragraph 5, above, except those listed in subparagraphs 5 to 9 the Academic Integrity Officer shall provide the student with the option of accepting the finding and the proposed penalty, or of proceeding to the Senate Discipline Committee for a full hearing. The option shall be presented to the student within 5 working days of the meeting, and the student shall have 2 working days to respond. In the event that the student elects to accept the finding and proposed penalty, the Academic Integrity Officer shall so advise the Vice-Chair (Academic Administration).
  13. Within 14 calendar days of the Vice-Chair (Academic Administration) being advised of the finding and agreed penalty under paragraph 12, the Vice-Chair (Academic Administration), or in his or her absence, the Chair or Vice-Chair (Academic Programs), and a student Senator appointed by the Dalhousie Student Union shall jointly review the finding and agreed penalty to determine whether the process is consistent with the Faculty Discipline Procedures Concerning Allegations of Academic Offences. If so, they shall ratify the matter on

behalf of Senate and the Vice-Chair shall notify the student and the Academic Integrity Officer of such ratification. For ratification to occur, the decision must be unanimous. The finding and agreed penalty shall stand, despite possible insubstantial procedural errors. The Vice-Chair (Academic Administration) shall ensure that the offence is recorded on the Senate Discipline database and that the Registrar and any others are notified of the finding and penalty for immediate implementation. If the Vice-Chair (Academic Administration) and/or the student Senator have any material concerns about the process, the Vice-Chair (Academic Administration) shall consult with the Academic Integrity Officer to determine whether the concerns can be resolved. If the Vice-Chair (Academic Administration) and the Academic Integrity Officer are unable to resolve any concerns, the matter shall be referred back to the Academic Integrity Officer for further consideration under these Procedures, after which the Vice-Chair (Academic Administration) and a student Senator shall jointly re-consider ratification. Should ratification still not occur, the matter shall be referred to the Senate Discipline Committee for a hearing.

14. If the Academic Integrity Officer's assessment is that there is sufficient evidence to support a finding that the student has committed an academic offence, but that the appropriate penalty for the student's conduct is one of those listed in subparagraphs 5 to 9 of paragraph 5 of these Procedures, the Academic Integrity Officer shall, within 5 working days of the meeting, notify the student in writing, with a copy to the instructor, that the matter will be forwarded to the Senate Discipline Committee for a full hearing.
15. Should a student request that an allegation be referred back to the Academic Integrity Officer after it has been forwarded to the Senate Discipline Committee, the Academic Integrity Officer has the discretion to grant such a request. A student's request shall be in writing, and delivered to the Vice-Chair (Academic Administration) within 5 working days of the date the allegation letter is sent to the student by the Vice-Chair (Academic Administration).
16. Prior to a hearing by the Senate Discipline Committee of an allegation against a student, the Academic Integrity Officer shall provide a written allegation to the Senate office identifying the evidence initially presented by the instructor pursuant to paragraph 6 and any additional evidence obtained by the instructor in the course of the assessment of the matter. The written allegation shall not include reference to whether or not any meeting(s) did occur pursuant to paragraph 8d or 8e, any statements that may have been made by the student at such meeting(s), or any alternate versions of the facts and circumstances that may have been presented by one or more students at such meeting(s). The student shall have the opportunity to provide a written submission in response prior to the hearing by the Senate Discipline Committee. Notwithstanding the foregoing, in the event of a statement made by a student at a hearing of the Senate Discipline Committee that is inconsistent with a statement previously made by that student in the meeting(s) with the Academic Integrity Officer, then the Academic Integrity Officer may refer to statements that may have been made by the student at such meeting(s).
17. Confidentiality must be maintained by those involved in each case when an academic offence is suspected and the instructor submits an allegation to the Academic Integrity Officer, except as is reasonably necessary to implement the finding and agreed penalty or as required in subsequent disciplinary proceedings related to the same matter.

## Senate Discipline Committee

### I. Composition

The Committee comprises thirteen representatives of the faculty elected by Senate for staggered three-year terms, one of whom shall be the Chair (chosen annually by the Committee), five representatives of the Dalhousie University student body, and two representatives of the University of King's College 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.

## II. 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:
  - a) been compelled to withdraw academically;
  - b) chosen to withdraw from the class, program or University prior to being disciplined; or
  - c) chosen not to register at the University;
3. assume jurisdiction when a complaint or allegation respecting offenses or irregularities of an academic nature is brought to its attention by the Vice-Chair (Academic Administration); complaints or allegations may be made by faculty or other evaluators of academic work done by students, and guidelines for evaluators are set out in the document entitled *Guidelines for Academic Evaluators Regarding Violations of Academic Regulations* by students;
4. conduct hearings according to the elements of natural justice and 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 Vice-Chair (Academic Administration) 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 Provost).

## III. Appeals

Appeals from decisions of the Senate Appeals Committee may be made to a Senate Appeals Committee, but only on the limited grounds: (a) denial of natural justice; (b) disputed jurisdiction of the Senate Discipline Committee. Decisions of a Senate Appeals Committee are final and binding on all parties. At the time of filing the appeal a student must specifically indicate the facts and allegations that will form the basis of the appeal. An appeal will be limited to matters so alleged.

## IV. 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:

1. 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;
2. repeat of the assignment that triggered the discipline;
3. a failing grade or mark or assessment in the piece of work triggering the discipline;
4. failure of the class or seminar or program;
5. failure of the academic year;
6. suspension for an academic term or year (to a maximum suspension of three (3) academic years);
7. expulsion from the University;
8. loss of a current or continuing scholarship, or both, or loss of eligibility to receive or to maintain scholarships or prizes or bursaries; and
9. removal from the Dean's List.

PLEASE NOTE: If transcripts are issued for a student while a Senate Discipline case is pending, and the Committee subsequently makes a decision that affects the student's transcript, revised transcripts will be sent to recipients of transcripts issued while the case was pending

## University of King's College

The University of King's College Registrar shall notify the Dalhousie Registrar in the event that academic discipline proceedings have been commenced in relation to a Dalhousie student, and shall advise the Dalhousie Registrar of the outcome of such proceedings, including any sanctions imposed against the student. Where the student has been previously sanctioned for academic misconduct, the Dalhousie Registrar will provide the University of King's College Registrar with particulars of the offence and the sanction imposed.

## V. Commentary on Penalties

### A. Proactive Measures

Dalhousie University emphasizes education and proactive engagement, therefore a Proactive Measure, which is a form of recommendation, may be prescribed as an educational aid in addition to a Penalty. It may include but not necessarily be restricted to suggesting that the student seek some form of professional help from the Academic Advising Office or Counseling Services or elsewhere which, for example may be time management or stress management, etc., and /or an apology for the infraction. The main purpose of a Proactive Measure is to help the student learn how to reduce the likelihood of future violations of academic integrity. It is important to note that it is the student's responsibility to decide whether or not to follow the Proactive Measure since it is not a formal Penalty but rather a recommendation. Therefore, there is normally no oversight by the University (AIO or SDC) to ensure that a Proactive Measure is followed.

### B. Consequence

A Consequence is an outcome of the application of a Penalty. A Consequence is not imposed by the University's academic integrity policies but arises from the University's academic policies. For example the consequences of the Penalty of a failing grade may include but not necessarily be limited to : failure in a program, delay of graduation, loss of full-time student status, change in visa status (for a visa student), loss of eligibility for student aid, removal from the Dean's list. Similarly a notation on a transcript may have serious unforeseen consequences for future opportunities, etc. This list is not intended to be exhaustive. Therefore, while the university's academic integrity procedures (AIO or SDC) may foresee some consequences, ultimately the student bears the responsibility for any consequences of a Penalty.

## Code of Student Conduct

### I. Background

Dalhousie University is a community of faculty, staff and students, involved in teaching, research, learning and other activities. Students are members of the University for the period of their registration in an academic program and are subject to the disciplinary authority of the University during that time.

The University does not stand in loco parentis to its students. In the exercise of its disciplinary authority, the University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect:

- the integrity and proper functioning of the academic and non-academic programs and activities of the University or its faculties, schools or departments;
- the peaceful and safe enjoyment of University facilities by other members of the University and the public;
- the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;
- the property of the University or its members.

Other than this, regulation of student behaviour by the University is neither necessary nor appropriate.

Members of the University, including students, are not immune from the criminal and civil law. Provisions for non-academic discipline should not attempt to shelter students from the normal responsibilities of adult citizens nor add unnecessarily to these responsibilities. Thus, conduct that

violates the Criminal Code or other statute should ordinarily be dealt with by the police and criminal courts. In cases, however, in which criminal or civil proceedings would not adequately protect the University's interest and responsibilities as defined above, proceedings may be brought under the Code of Student Conduct.

The University may also define standards of professional conduct for students in programs where these are appropriate, and this Code is not intended to replace or supersede such standards.

## II. Code Of 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:
  - a) 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
  - b) 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.
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. Application

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

1. occurs on the premises of Dalhousie University;
2. occurs elsewhere in the course of activities sponsored by Dalhousie University (or by any of its faculties, schools or departments), or where the conduct is alleged to adversely affect, disrupt or interfere with another person's reasonable participation in Dalhousie University programs or activities; or
3. occurs in the context of a relationship between the student and a third party and involves the student's standing, status or academic record at the University.

However, this Code will not apply to conduct that:

1. is specifically assigned to another disciplinary body within the University; or
2. is subject to action as an alleged failure to meet standards of professional conduct as required by a college, faculty or school; or
3. is 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; or
4. is committed by a student in her or his capacity as an employee of the University unless some non-employment University interests are deemed to be involved, in which case the President may specifically authorize proceedings under this Code;
5. is subject to the disciplinary authority of the Dalhousie Student Union.

### C. Offences

#### 1. Offences Against Persons

- a) No student shall assault another person sexually, or threaten any other person with sexual assault or commit an act of sexual harassment toward another person.

- 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.
- e) No student shall engage in a course of vexatious conduct, harassment or discrimination that is directed at one or more specific persons and that is based on the age, race, colour, religion, creed, sex, sexual orientation, physical disability, mental disability, an irrational fear of contracting an illness or disease, ethnic or national or aboriginal origin, family status, marital status, source of income, political belief or affiliation or activity of that person or of those with whom he or she associates.
- f) No student shall engage in unwelcome or persistent conduct that the student knows, or ought to reasonably know, would cause another person to feel demeaned, intimidated or harassed.  
Examples of such conduct include, but are not limited to:
  - i) following another person, or anyone known to that person;
  - ii) unwanted communication with another person or anyone known to that person;
  - iii) watching the residence or place of work of another person or anyone known to that person;
  - iv) threatening another person or any member of the family, friends or colleagues of the other person;
  - v) coercing, enticing or inciting a person to commit an act that is humiliating or demeaning to that other person or to others.
- vi) breaching terms and conditions of software licensing agreements;
- vii) interfering with the normal operation of computing equipment, facilities, networks or systems by, among other things, flooding the network with messages, sending chain letters or pyramid solicitations;
- viii) using the University's computing equipment, facilities, networks and systems for profit or commercial gain.
- c) No student shall destroy, 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.
- c) No student shall knowingly furnish false information to any person regarding his or her standing, status or academic record at Dalhousie University.

### **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.

### **D. Procedures**

1. Whenever possible and appropriate, reason and informal measures 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. Along with notice of the complaint the accused student shall be advised of her/his right to be represented throughout the process, including by a Student Advocate.
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, or designate. If an informal disposition of the complaint results, such disposition shall be final, and there shall be no subsequent proceedings.
4. An agreement that a student will withdraw from the University for a period of time, or not re-register, may be part of an informal disposition of a complaint. In such instances this will not be recorded on the student's academic record, but a "block" on further registration may be entered in the student information system.

### **2. Disruption**

No student shall, by action, threat or otherwise, disrupt, obstruct or adversely affect any activity organized by Dalhousie University or by any of its faculties, schools or departments, or the right of other 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, misuse, destroy, deface or damage the property 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 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 taken without authorization.
- c) 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 authorized persons.
- b) No student shall use any University computing equipment, facility, network or system for any disruptive or unauthorized purpose, or in a manner that violates any law, Dalhousie University regulations, policies and procedures or in any way that is incompatible with the principles in the Acceptable Use of Information Technology Resources sections. Examples of inappropriate use of computer equipment, facilities, networks and systems include, but are not limited to:
  - i) copying, removing or distributing software and/or data without authorization;
  - ii) using another person's account, or misrepresenting themselves as another user;
  - iii) disclosing confidential passwords, access codes, etc., assigned to themselves or others;
  - iv) interfering with the work of others using computing equipment, facilities, networks, systems or accounts;
  - v) displaying, transmitting, distributing or making available information that is discriminatory, obscene, abusive, derogatory, harassing or otherwise objectionable;

5. The Vice-President, Student Services, shall report annually to Senate regarding the number and nature of complaints that are disposed of informally.
6. 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. In determining whether to refer a case to the Senate Discipline Committee, the Vice-President, Student Services, may seek advice from a student Discipline Advisor or other appropriate source.
7. Where there are criminal or civil proceedings pending against the student for conduct related to the complaint, the Vice-President, Student Services, may defer prosecution of the complaint on such terms and conditions as are appropriate in the circumstances (including an interim suspension) until the conclusion of all or part of such proceedings where the circumstances of the case warrant. Conviction of a criminal offence will be considered *prima facie* evidence of a parallel offence under this Code.
8. Any statements an accused student makes to the Vice-President, Student Services, or designate in the course of an attempt to resolve a complaint informally may not be submitted to the Senate Discipline Committee as evidence.
9. Hearings shall be conducted by the Senate Discipline Committee according to procedures determined by the Committee. In other than exceptional circumstances, a hearing by the Senate Discipline Committee shall occur within sixty calendar days of the referral of a complaint to the Committee.
10. The President or designate shall appoint a person to present the complaint.
11. 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.

## E. 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) **Restitution** – Compensation for loss, damage or injury. This may take the form of appropriate service and/or monetary or material replacement.
  - e) **Discretionary Sanctions** – Work assignments, service to the University or other such discretionary assignments that are considered appropriate by the Discipline Committee.
  - f) **Conditions** – Conditions may be imposed upon a student's continued attendance.
  - g) **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.
  - h) **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.

## F. 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 operations of the University or the activities of its members.
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.

## Protection of Property

1. Dalhousie University is the owner and/or occupier of the lands and buildings which comprise its campuses. In addition to all other processes set out in this Calendar (including the Code of Student conduct), the University reserves the right to exercise all rights and remedies available to it pursuant to any statute, by-law, regulation, ordinance, order, or otherwise, in order to protect campus property and those who use it.
2. Without limiting the foregoing, Dalhousie University may issue a notice against a student pursuant to the *Protection of Property Act* prohibiting entry to all or part of the campuses or prohibiting a particular activity or activities on all or part of the campuses, where circumstances warrant. Such a notice may be issued either separately or in conjunction with the procedures set out in the Code of Student Conduct. The notice may be in force for the period stated in the notice which will normally be for up to one calendar year. If considered appropriate by the Vice-President, Student Services, a notice may be renewed for further periods.
3. A notice under the *Protection of Property Act* may also be issued by Dalhousie University in relation to the Student Union Building at the request of the Student Union. In the case of urgent or emergency situations, such a notice may be issued immediately. If the Student Union request is to have a prohibition extend beyond seven (7) days for a registered Dalhousie University student, the Student Union shall make a written request to the Vice-President, Student Services, providing detailed reasons for the request and the process followed leading up to the request for the notice, including details of when the student was advised that his or her behaviour or activities were inappropriate and ought to cease, the reasons provided to the student, and whether the student was afforded the opportunity to respond or to rectify behaviors or cease the inappropriate activity.
4. A Dalhousie University student may appeal any notice issued against him or her under the *Protection of Property Act* in writing to the Vice-President, Student Services.

## Senate Appeals Committee

(As adopted by Senate May 16, 1996; and amended by Senate September 22, 1997, October 9, 2003 & September 13, 2010)

### Composition

1. The Senate Appeals Committee has 13 members, consisting of one faculty member from each Faculty and two members who are students

appointed by the Student Union. Student members of the Senate Appeals Committee shall not be members of the Senate Discipline Committee. Faculty members are elected by Senate for staggered three-year terms.

2. One faculty member shall be elected as Chair of the Committee by its members and shall hold that position for a two-year term.
3. The Senate Nominating Committee may arrange for nominations to fill vacancies for the remainder of any vacant term or for a longer term.

## Jurisdiction

1. The Senate Appeals Committee has appellate jurisdiction.
2. The Senate Appeals Committee is not an investigative body.
3. The Senate Appeals Committee does not receive or determine:
  - a) allegations of discrimination, which are addressed under the Statement on Prohibited Discrimination, or
  - b) requests for accommodation, which are addressed under the Accommodation Policy for Students.
4. The Senate Appeals Committee shall consider the following appeals initiated by students:
  - a) Academic appeals from decisions or the refusal to make decisions at the Faculty level regarding academic standards, academic evaluation, academic progression, academic advancement, or the application of other University or Faculty academic regulations.
  - b) Discipline appeals from decisions of the Senate Discipline Committee.
5. An appeal may be initiated on the following grounds:
  - a) the decision under appeal was made without jurisdiction,
  - b) a denial of natural justice,
  - c) unfairness in the application of the relevant regulations regarding academic standards, academic evaluation, academic progression, academic advancement, or other University or Faculty academic regulations.
6. The Senate Appeals Committee shall not consider appeals:
  - a) by students in an academic appeal who have not exhausted the approved appeal processes of the relevant Faculty,
  - b) by students from the decision of a Faculty regarding professional unsuitability, said appeals falling under the jurisdiction of the Senate Steering Committee,
  - c) by a Faculty or faculty members,
  - d) by applicants for admission to University programs, or
  - e) by applicants for scholarships, awards or bursaries.
7. A Hearing Panel of the Senate Appeals Committee may:
  - a) dismiss the appeal,
  - b) allow the decision under appeal to stand, despite possible insubstantial procedural errors,
  - c) in an academic appeal, allow the appeal, with an appropriate remedy within the authority of Senate,
  - d) in a discipline appeal, allow the appeal and:
    - i) quash the decision of the Senate Discipline Committee in its entirety,
    - ii) re-hear the matter itself, with the consent of the Appellant and the Faculty, or
    - iii) direct a re-hearing on the merits by a newly constituted panel of the Senate Discipline Committee, no members of which were on the hearing panel whose decision was under appeal
8. In an academic appeal, the Hearing Panel shall not conduct a substantive evaluation of the work of a student, but if unfairness in the evaluation procedure is established, the Panel may direct a re-evaluation of the work to be conducted by qualified persons designated by the Panel.
2. An academic appeal alleging the refusal to make a decision at the Faculty level shall be submitted with reasonable promptness. All other appeals shall be submitted within 30 calendar days of the date that the decision under appeal was sent to the student. An extension of time to submit an appeal may be permitted by the Senate Vice-Chair (Academic Administration), or designate, if the Appellant establishes reasonable grounds for granting the extension.
3. The parties to an appeal are the student, as Appellant, and the Faculty, as Respondent. In an academic appeal, the Dean of the applicable Faculty shall designate one or more representatives to respond to the appeal. In a discipline appeal, the Academic Integrity Officer of the applicable Faculty, or designate, shall respond to the appeal.
4. Upon receiving notice of an academic appeal, the Senate Vice-Chair (Academic Administration) shall require a statement from the Dean of the applicable Faculty confirming that all appeal processes of the Faculty have been exhausted.
5. For each appeal, the Chair of the Committee shall constitute a Hearing Panel in a timely manner. The Hearing Panel shall consist of four faculty members and one student member of the Committee, and shall choose its own Chair. None of the faculty members of a Hearing Panel shall be a member of the Faculty from which the appeal originally emanates or belong to the department or program in which the student is or was enrolled. The student member of a Hearing Panel shall not be a member of the class, department, program, School or College from which the appeal emanates. In the event neither student member of the Committee is able to participate on a Hearing Panel due to the provisions of this paragraph, the Dalhousie Student Union shall appoint an ad hoc member to the applicable Hearing Panel.
6. The Appellant is entitled to an oral hearing, in accordance with the principles of natural justice. The Appellant may participate at an oral hearing in person, or at their expense, by way of teleconference, or by such other means approved in advance by the Hearing Panel. The Appellant may waive the right to an oral hearing and choose to proceed solely by written submissions.
7. Each party is responsible for presenting to the Hearing Panel all relevant evidence and submissions for the Panel to consider in the determination of the appeal. Written submissions are required from each party and shall contain:
  - a) copies of all documents relevant to the appeal,
  - b) supporting arguments,
  - c) a list of all witnesses for that party and a brief description of their anticipated evidence, and
  - d) the decision and any remedy being sought.
8. Written submissions shall be made:
  - a) by the Appellant, within 15 calendar days of the Senate Vice-Chair (Academic Administration) requesting the submission, and
  - b) by the Respondent, within 15 calendar days of receiving the Appellant's submission, but these timelines may be extended or abridged by the Senate Vice-Chair (Academic Administration), or designate, in appropriate circumstances.
9. The hearing of each appeal shall be in camera. The Chair of the Hearing Panel shall determine procedures for the hearing in a manner that is consistent with the principles of natural justice and these Procedures. In extenuating circumstances, the Chair of the Hearing Panel may decide to proceed with the hearing in the absence of one faculty member of the Hearing Panel.
10. The decision of the Hearing Panel shall be by majority. The Hearing Panel shall deliver written reasons for its decision to the Senate Vice-Chair (Academic Administration). The decision of the Hearing Panel shall be final and binding on the parties, with no further appeal.
11. An audio recording of each oral hearing shall be made. The recording and all correspondence and documentary evidence relating to appeal proceedings shall be kept for a period of three calendar years from the date of the decision of the Hearing Panel, in accordance with the policy of the University Secretariat.

## Procedures

1. An appeal shall be initiated by submitting a written Notice of Appeal to the Senate Vice-Chair (Academic Administration), or designate, containing:
  - a) The name, Banner identification number and mailing address of the Appellant,
  - b) a copy of the decision giving rise to the appeal,
  - c) a description of the matter under appeal,
  - d) the grounds for the appeal, and
  - e) the remedy sought by the Appellant.

## Reporting

1. The Senate Appeals Committee shall meet one or more times annually at the call of the Chair of the Committee to review its operation and determine issues relevant to the Committee, or anytime at the written request of any two members, and the Committee shall report annually to Senate concerning the work of

the Committee and the decisions of all Hearing Panels convened during the year.

2. The Senate Appeals Committee shall meet one or more times annually to receive training on these terms of reference, principles of procedural fairness, proper conduct of hearings and other relevant legal principles. Training shall be mandatory for all new members of the committee prior to assuming duties on a hearing panel.

## Acceptable Use of Information Technology Resources

### A. Purpose

The purpose of this policy is to outline appropriate use of Information Technology Resources owned, leased, controlled and/or operated by the University.

### B. Application

This policy applies to all individuals who have been granted a NetID and/or Banner account by the University.

This policy does not replace other policies, procedures or guidelines concerning the use of specific IT Resources or data management but rather sets out a minimum standard of acceptable use.

### C. Definitions

In this Policy,

“User Account” means a NetID and/or Banner account issued by the University;

“Information Technology Resources”, or “IT Resources”, means computing equipment, peripherals, facilities, networks or systems owned, leased, controlled or operated by the University, including those purchased through research funds;

“User” means an individual who has been issued a User Account.

### D. Policy

#### 1. Accounts

- 1.1 Authorized access to IT Resources requires a User Account. User Accounts are non-transferable.
- 1.2 Users are responsible for any and all uses of their User Account and are expected to take reasonable steps to ensure the security of their User Account.

#### 2. Acceptable Use

- 2.1 Users shall use IT Resources for authorized purposes only.
- 2.2 No User shall use IT Resources for any disruptive or unauthorized purpose, or in a manner that violates any law, University regulations, policies or procedures. Examples of unacceptable uses of IT Resources include, but are not limited to, the following:
  - 2.2.1 using another person's User Account, or misrepresenting themselves as another User;
  - 2.2.2 disclosing passwords or other access codes assigned to themselves or others;
  - 2.2.3 interfering with the normal operation of IT Resources by, among other things, unauthorized network interception, network traffic, flooding the network with messages, sending chain letters or pyramid solicitations;
  - 2.2.4 copying, removing or distributing proprietary software and/or data without authorization;
  - 2.2.5 breaching terms and conditions of software licensing agreements;
  - 2.2.6 accessing, displaying, transmitting, or otherwise making available information that is discriminatory, obscene, abusive, derogatory, harassing or otherwise objectionable in a university setting;
  - 2.2.7 destroying, misplacing, misfiling, or rendering inoperable any stored information on a University administered

computer or other information storage, processing or retrieval system;

- 2.2.8 unauthorized use of IT Resources for profit or commercial gain; and
- 2.2.9 attempting to or circumventing security facilities on any system or network.

#### 3. Consequences of Unacceptable Use

- 3.1 If there is reason to suspect that a User has violated this policy, the Assistant Vice-President, Information Technology Services or the Information Security Manager may temporarily revoke or restrict User Account access privileges of any User, pending further investigation by the Information Security Manager
- 3.2 To aid in the investigation of a suspected violation of this policy, the Information Security Manager may examine a User's User Account information, including, but not limited to, emails, files, and any other material or data connected with the User Account, provided that s/he obtains the Assistant Vice-President Information Technology Services' prior written approval. If the User in issue works within the Information Technology Services Department, then approval must be obtained from the President
- 3.3 If the investigation concludes that a violation of this policy has occurred, the Assistant Vice-President Information Technology Services may restrict, suspend or revoke the User's access to any or all of the University's IT Resources, and may
  - 3.3.1 in the case of students, initiate disciplinary proceedings under the Code of Student Conduct;
  - 3.3.2 in the case of employees, refer the matter for consideration of discipline in accordance with applicable collective agreements or human resource policies, as appropriate.

# Faculty of Dentistry

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### Dean Emeritus

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### Assistant Dean for Academic Affairs

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### Assistant Dean for Student Affairs

Lovas, J. G., BSc, DDS (Toronto), MSc (Western), FRCD(C), Oral and Maxillofacial Pathology

### Assistant Dean for Research

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### Secretary of Faculty

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Lee, S.F., BSc, PhD (Guelph), Microbiology & Immunology  
Sutow, E.J., BSc (Penn St), PhD (U. of Penn), MEd (Dal), Biomaterials

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## Department of Oral & Maxillofacial Sciences

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### Professors Emeriti

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Widad, W., BDS (Univ. Baghdad), Cert conservative Dentistry (Univ. Baghdad), DDS (Dal), Periodontics

## I. Introduction

Faculty of Dentistry at Dalhousie University has been providing an outstanding education for our students for 100 years. Our tradition is excellence and our nationally and internationally recognized faculty members educate dental professionals that we are proud to welcome as our colleagues after graduation.

The curriculum integrates biological, medical, and dental sciences, with a strong emphasis on clinical patient treatment activities beginning in the first year. Students will treat dental patients in the Faculty's dental hospital, as well as in local hospitals and Faculty-operated community clinics. Basic science classes of the Dentistry programs are offered by Departments of the Medical Faculty. These arrangements enable students to obtain extensive and varied clinical instruction and experience. The Faculty of Dentistry was founded in 1908 and is home to one of Canada's largest and most modern community dental clinics.

The Faculty of Dentistry offers a four year DDS program, two-year program leading to a Diploma in Dental Hygiene, a two-year DDS Qualifying Program for graduates of non-accredited dental programs to gain a DDS degree, a one-year degree completion program leading to a Bachelor of Dental Hygiene for graduates of an accredited diploma in Dental Hygiene program and a Paediatric Dental General Practice Residency program. A six-year combined graduate program leading to the Degrees of MD/MSc in Oral Maxillofacial Surgery, a three-year Master of Applied Science, Biomedical Engineering, Diploma in Prosthodontics

Program, a three-year MSc in Prosthodontics program (this program is not offered in 2011-2012) and a three year Masters in Periodontics program are offered through the Faculty of Graduate Studies.

The Faculty also has an office for Continuing Education which arranges short classes primarily for dentists and dental hygienists. Alumni are a vital part of the Faculty through the office of Alumni Affairs.

## II. Doctor of Dental Surgery Program

### A. Admission

#### 1. Minimum Academic Requirements

While enrolled in a regular bachelor's degree program whose sole entrance requirement is Nova Scotia grade 12 or its equivalent, completion of the following by the end of the Spring Session of the year of expected entry to the Faculty of Dentistry is required: a minimum of 10 full-year academic courses\* including the following university courses:

Introductory Biology (at least 6 credit hours with lab); Introductory Chemistry (at least 6 credit hours with lab); Introductory Physics (at least 6 credit hours with lab); Organic Chemistry (at least 6 credit hours with lab); Vertebrate Physiology; Introductory Microbiology; Introductory Biochemistry; Writing course (at least 6 credit hours); Humanities and/or Social Science (at least 12 credit hours). A bio-organic chemistry course approved by the Admissions Committee may be substituted for 6 credit hours of Organic Chemistry. A listing of some approved courses to fulfill admission requirements can be found on the Faculty of Dentistry website: [www.dentistry.dal.ca](http://www.dentistry.dal.ca). Courses must have been completed within a reasonable time period prior to admission. Credit will be given for correspondence or distance education courses that are offered by a university as credit courses. Such courses must have their content, sequence, format and testing well defined.

\*a combination of two one-term academic courses in the same discipline is considered equivalent to one full-year academic course.

The Faculty of Dentistry considers it desirable that all students intending to proceed to the study of dentistry should acquire a broad academic background and attain facility in the use of written and spoken English. Therefore, while minimum entrance requirements are established, students are encouraged to proceed to a Bachelor's degree before seeking admission to the Faculty of Dentistry, particularly if there is any intention or likelihood of proceeding to graduate programs in dentistry or associated sciences. This statement is not to be interpreted to mean that any penalty will be imposed upon those who do not have more than the stated minimum requirements and truly outstanding candidates may be admitted after completion of the minimum entrance requirements.

Prior to or after making application to the first year of the DDS program, applicants are strongly encouraged to spend time in the office of a dentist to learn about the dental profession.

Because of the difficulty in comparing marks and grades from the various universities from which dentistry students are drawn, it is not possible to state a minimum standard that ensures serious consideration for admission. Completion of advanced level courses with grades which are better than average is an indication of ability to succeed academically as a dentistry student. An academic record which shows failed or repeated courses, courses passed with low grades or supplementary examinations, particularly in the two years prior to anticipated entry to dental school, makes the prospect of admission unlikely.

Applicants with the best academic record have the greatest chance of admission. Nonetheless, the Admissions Committee can and does make significant use of non-academic factors in deciding which applicants are admitted (e.g. Dental Aptitude Test, interviews, references).

For the information of potential applicants, the following is provided showing the characteristics of the applicants and entering class of 2009/2010.

Number of applicants: 442

Number enrolled: 38 (17 males, 21 females)

Age of Students: Range: 19-37, Mean 23

Residence: Atlantic Provinces - 28; Other Canadian Provinces - 4; International - 8; Mean DAT, reading comprehension - 21; Mean DAT, PAT - 19; Mean DAT, chalk carving - 19; Mean DAT, science average - 19; Mean University final two year - 4.0; Mean University higher sciences average - 4.0.

### 2. Affirmative Action Policy

The Faculty of Dentistry is committed to increasing the number of qualified dentists who belong to African Nova Scotian or aboriginal peoples of the Atlantic region. Applicants from these groups who have completed the entrance requirements by May 1 of the year of expected entry, have achieved a A- grade in the academic factors considered by the Admissions Committee, and a passing score on other admissions criteria considered by the Admissions Committee, will be admitted to the DDS program.

### B. Application Procedure

The Faculty of Dentistry application form must be submitted to the Office of the Registrar by December 1. Applications from all students, including those who have attended Dalhousie or King's must be accompanied by a \$70.00 application fee, which is not refundable and is not applicable to tuition fees. A new application form must be submitted in each year in which application is made.

International applicants may apply through the American Association of Dental Schools Application Services (AADSAS) and such applications must be submitted by September 1st.

Applications must be complete before they will be considered by the Admissions Committee. Applications submitted by the deadline may be completed at any time up to May 1, however, applicants are encouraged to submit supporting documents by February 1. Applications completed after February 1 are considered when completed if unfilled places remain in the entering class. The following documentation must be submitted in support of the application:

1. Faculty of Dentistry application form and application fee.
2. Applicants must submit results from an approved Dental Aptitude Testing Program. Canadian citizens must complete the Canadian Dental Aptitude Test. Applicants must complete the Dental Aptitude Test no later than February to be considered for admission to the following September. Information regarding the Canadian Dental Aptitude Testing Program may be obtained from the Office of the Registrar, from the Faculty of Dentistry, or by writing to the Administrator, Dental Aptitude Test Program, Canadian Dental Association, 1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6. You can also register online by accessing the Canadian Dental Association web page - <http://www.cda-adc.ca/dat>. Information about the American Dental Aptitude Test can be obtained from <http://www.ada.org/>
3. Official transcripts in support of the applicant's academic record must be forwarded to the Faculty of Dentistry by the institution or institutions at which the applicant completed his/her pre-professional studies. If the applicant is still engaged in university studies, it would be advantageous to forward an interim transcript and a final transcript must be forwarded on completion of these credits. Dalhousie University regards an applicant's failure to disclose all his/her previous academic experiences to be an academic offence which could lead to subsequent dismissal from the University. Applicants must ensure that all successful or unsuccessful university attendance is indicated on the application form.
4. Three completed confidential evaluation forms (provided in the application package) in regard to the applicant's character are to be forwarded directly to the Faculty of Dentistry, Dalhousie University Admissions Office, Halifax, NS, B3H 1W2. Two of these forms must be from a university faculty member who has taught the applicant recently or from a recent employer if the applicant is employed. The remaining form should be from someone (not a relative) known to the applicant.
5. A supplemental information form (provided in the application package) providing information on employment, awards and volunteer activities, must be submitted directly to the Faculty of Dentistry.

- Competitive applicants will be required to attend an admissions interview, and will be asked to complete a written “personality inventory” assessment.

An application will not be considered if the applicant has been required to withdraw from studies at any other university dental or medical program at the request of the Faculty of that Institution, unless the application is supported by a recommendation from the Dean of that program.

Transfer students are not normally admitted to the DDS program. All such applications must be accompanied by a recommendation from the Dean of the program. All transfer applicants must meet the admission requirements for the DDS program.

On notice of acceptance to the Faculty of Dentistry, applicants must deposit with the Registrar a tuition deposit before a specified date. This amount is credited toward tuition fees if the student registers, but is not refundable if the student withdraws.

The nature of the programs in the Faculty of Dentistry involve students interacting with patients in a health care environment, and places students in a position of special trust with patients. Therefore, certain Faculty regulations must be adhered to by all students, including but not limited to: requirements for TB testing, immunization and CPR, criminal records and child abuse registry checks, clinic attire and clinical asepsis protocols. All requirements are outlined in the student Clinical Policy and Academic Policy manuals, provided to students at the beginning of each academic year.

#### ***Immunization and CPR Requirements:***

Acceptance into the Faculty of Dentistry clinical programs is normally conditional upon receipt of evidence of complete immunization as follows: Diphtheria-tetanus (dT), Polio, Measles, (Rubeola), Mumps, Rubella, Hepatitis B (including post-immunization AB titres), and Varicella. Applicants are required to complete the Infectious Diseases and Immunization checklist for Health Care Worker Students as a condition of acceptance to the program. If Post-HB vaccination antibody test results have not been completed at the time of acceptance, at a minimum, the applicant must provide blood test results demonstrating a HB viral load  $<10^3$  genome equivalents/ml for acceptance into the program.

Applicants whose immunization results indicate that they are HBeAg positive or who have a viral load  $>10^3$  genome equivalents/ml will not be accepted into any clinical programs. Dalhousie University will reassess eligibility for admission should the applicant's status change.

Students who do not acquire immunity from the HB vaccination series or who refuse the HB vaccine are susceptible to acquiring hepatitis B. Applicants in this category will be denied admission based on this criteria. However, after admission, any student becoming HBeAg positive or whose viral load exceeds  $10^3$  genome equivalents/ml during the course of their studies will be removed from patient care activities. Such modification of the clinical program may prevent a student from meeting graduation requirements.

Students who become HBeAg and whose viral load is greater than  $10^3$  genome equivalents/mL, have an ethical obligation to report their status to the Ad-hoc Committee on Bloodborne Pathogens (contact Ms. MacDonlad at the College of Physicians and Surgeons of Nova Scotia at 421-2209) or to the Infection Control Coordinator, Assistant Dean Clinics, Assistant Dean of Student Affairs or Assistant Dean, Academic of the Faculty of Dentistry.

The cost of all immunizations and titres are the responsibility of the student/applicant.

During the first weeks of studies, students receive a 2-step Mantoux skin test to establish their tuberculin status.

Annual influenza immunization is required for all students during each year of study.

Students accepted to the program must have a current Level C CPR/AED (automated external defibrillator) course

A full explanation of the Faculty of Dentistry policy related to immunizations may be found on the Faculty of Dentistry website: (<http://www.dentistry.dal.ca>).

The admissions procedures may be amended without notice by the Faculty of Dentistry.

#### ***Criminal Records Check and Other Screening Documentation***

The Faculty of Dentistry, Dalhousie University does not require a Criminal Records Check or other screening procedure (e.g. Child Abuse Registry Check, Vulnerable Sector Screen) as a condition of admission into its programs. However, students should be aware that such record checks or other screening procedures may be required by facilities (schools, community clinics, armed forces, etc) outside the University used for clinical placements, or experiences related to an academic course assignment, which, in some instances, may be a requirement for graduation. It is the student's responsibility to have such procedures completed; and the cost of the documentation completion is the responsibility of the student.

Such facilities may refuse to accept students in the basis of information contained in the record check or other screening procedure. If the student is unable to complete a clinical requirement due to a failure to meet the record check or screening requirements of the facility; or, if the student is refused access to the facility on the basis of the information provided, such a student may fail the course, and as a result, in some instances, may not be eligible for progression of graduation.

Note that facility requirements may change from time to time and are beyond the control of the University.

Details on the requirements for such documentation and the deadlines for submission of documentation in a timely manner are provided to students by the Faculty of Dentistry after registration in the program.

Students should also be aware that some professional regulatory bodies may require a satisfactory records check/**screening procedure** as a condition of professional licensure.

### **C. Place of Residence of Students**

The number of students admitted in any one year is limited by the availability of physical facilities.

Preference is given to residents of the Atlantic Provinces but applications from well qualified applicants from other provinces and countries may be considered.

To qualify as a permanent resident of any province, an applicant must meet the following criteria:

- his/her parent(s), guardian, or spouse must reside in that province on a permanent basis; or
- if the applicant is independent of his/her parent(s) or guardian, he/she must have lived and worked on a full-time basis in that province (not attending school on a full-time basis) for a minimum of one full year at the time of the application deadline (December 1); or
- an applicant whose parent(s), guardian, or spouse do not meet the residency requirements as a direct result of a recent employment transfer, either into or out of a particular province would be given the choice (either the province of immediate former or future residency) of his/her province of residence.

### **D. Assessment of Applicants with an International Educational Background**

The Faculty of Dentistry will consider applications to the Doctor of Dental Surgery degree program from individuals who have received their former education outside the Canadian educational system. Such applicants will be assessed on an individual basis and may be required to fulfil specific criteria, such as, but not confined to those outlined below.

- If the applicant's first language is not English, he/she must complete an English language proficiency test such as the TOEFL (Test of English as a Foreign Language) with a minimum score of 580 or computer-based score of 237; or IBT of 90 (students must achieve 4.0 on the essay or

TOEFL writing test); or IELTS score of 6.5; or MELAB score of 81; or CAEL score of 70; or Can Test score of 4.5.

2. Complete an approved Dental Aptitude Test.
3. Original supporting documents from previously completed education must be provided, including course descriptions, and explanation of the grading system used, and course standings.
4. Completion of the prerequisite university study in North America.

### III. DDS Qualifying Program

This program facilitates Dental Graduates of non-accredited programs in gaining a DDS degree by successfully completing a two-year program.

The Faculty of Dentistry accepts up to nine students into the DDS Qualifying Program each year.

Applicants must be Canadian citizens or residents.

#### Application Procedure

Application forms, accompanied by a \$70.00 application fee, must be submitted to the Office of the Registrar, Dalhousie University by September 1. The following documentation must be submitted by October 1 at the latest in support of an application

1. Dental graduation certificate or equivalent.
2. University transcript (or equivalent) and calendar course descriptions, indicating the courses completed for the dental degree referred to in No. 1.
3. Demonstrated proficiency in English, e.g. an acceptable score in English tests such as TOEFL - 580 or computer-based 237; or iBT of 90 (student must achieve 4.0 on the essay or TOEFL writing test); IELTS - 6.5; MELAB - 81; CAEL - 70; CanTest - 4.5.
4. Results of National Dental Examining Board Assessment of Fundamental Knowledge examination. This examination is administered by the National Dental Examining Board of Canada. Information about the examination, application deadlines and registration procedures for the examination are available from the National Dental Examining Board of Canada: at [www.ndeb.ca](http://www.ndeb.ca) 613-236-5912
5. Resume (form provided in application package).

Competitive applicants will be required to complete an admissions interview and further evaluations at the Faculty of Dentistry. Inquiries regarding the DDS Qualifying Program at Dalhousie University should be directed to the Office of the Dean, telephone number (902) 494-1400.

Accepted students will be required to submit a tuition deposit before a specified deadline. This amount is credited toward tuition fees if the student registers, but is not refundable if he/she withdraws.

#### Immunization and CPR Requirements:

Acceptance into the Faculty of Dentistry clinical programs is normally conditional upon receipt of evidence of complete immunization as follows: Diphtheria-tetanus (dT), Polio, Measles, (Rubeola), Mumps, Rubella, Hepatitis B (including post-immunization AB titres), and Varicella. Applicants are required to complete the Infectious Diseases and Immunization checklist for Health Care Worker Students as a condition of acceptance to the program. If Post-HB vaccination antibody test results have not been completed at the time of acceptance, at a minimum, the applicant must provide blood test results demonstrating a HB viral load  $<10^3$  genome equivalents/ml for acceptance into the program.

Applicants whose immunization results indicate that they are HBeAg positive or who have a viral load  $>10^3$  genome equivalents/ml will not be accepted into any clinical programs. Dalhousie University will reassess eligibility for admission should the applicant's status change.

Students who do not acquire immunity from the HB vaccination series or who refuse the HB vaccine are susceptible to acquiring hepatitis B. Applicants in this category will be denied admission based on this criteria. However, after admission, any student becoming HBeAg positive or whose viral load exceeds  $10^3$  genome equivalents/ml during the course of their studies will be removed from patient care activities. Such modification of the clinical program may prevent a student from meeting graduation requirements.

Students who become HBeAg and whose viral load is greater than  $10^3$  genome equivalents/mL, have an ethical obligation to report their status to the Ad-hoc Committee on Bloodborne Pathogens (contact Ms. MacDonald at the College of Physicians and Surgeons of Nova Scotia at 421-2209) or to the Infection Control Coordinator, Assistant Dean Clinics, Assistant Dean of Student Affairs or Assistant Dean, Academic of the Faculty of Dentistry.

The cost of all immunizations and titres are the responsibility of the student/applicant.

During the first weeks of studies, students receive a 2-step Mantoux skin test to establish their tuberculin status.

Annual influenza immunization is required for all students during each year of study.

Students accepted to the program must have a current Level C CPR/AED (automated external defibrillator) course

A full explanation of the Faculty of Dentistry policy related to immunizations may be found on the Faculty of Dentistry website: (<http://www.dentistry.dal.ca>).

#### Criminal Records Check and Other Screening Documentation

The Faculty of Dentistry, Dalhousie University does not require a Criminal Records Check or other screening procedure (e.g. Child Abuse Registry Check, Vulnerable Sector Screen) as a condition of admission into its programs. However, Students should be aware that such record checks or other screening procedures may be required by facilities (schools, community clinics, armed forces, etc) outside the University used for clinical placements, or experiences related to an academic course assignment, which, in some instances, may be a requirement for graduation. It is the student's responsibility to have such procedures completed; and the cost of the documentation completion is the responsibility of the student.

Such facilities may refuse to accept students in the basis of information contained in the record check or other screening procedure. If the student is unable to complete a clinical requirement due to a failure to meet the record check or screening requirements of the facility; or, if the student is refused access to the facility on the basis of the information provided, such a student may fail the course, and as a result, in some instances, may not be eligible for progression of graduation.

Note that facility requirements may change from time to time and are beyond the control of the University.

Details on the requirements for such documentation and the deadlines for submission of documentation in a timely manner are provided to students by the Faculty of Dentistry after registration in the program.

Students should also be aware that some professional regulatory bodies may require a satisfactory records check/screening procedure as a condition of professional licensure.

### IV. Academic Regulations

The following section describes academic regulations within the Faculty of Dentistry. More detailed information is provided to each student at the beginning of the academic year in the Academic Policy Manual and the Clinic Policy Manual. These Policy Manuals contain information for students and faculty members on the following areas: Evaluation of Students, Grade Procedures, Remedial Opportunities, Supplemental Examinations, Promotion and Graduation, Examination Regulations, Appeal Procedures, Course Waivers, Absences, Senate Discipline, Student Course Evaluation and Clinic Protocol and Procedures.

#### A. Academic Program

The course for the degree of Doctor of Dental Surgery extends over four years. The course for the DDS Qualifying Program extends over two years. It is to be distinctly understood that the regulations regarding courses of study, examinations, fees, etc., contained in this calendar are intended for the current year only, and that the University does not hold itself bound to adhere absolutely to the curriculum and conditions laid down.

## B. Academic Year - DDS Program

The academic year for years one and two commences in late August and will continue until the latter part of May. The academic year for year three commences in late August and will continue to mid-June. The academic year for the fourth-year begins in mid-June (with a four-week break in July/August) and terminates in late April. Late registration will be permitted only under very exceptional circumstances, if approved by the Dean. Total length of the program is currently 145 weeks in actual attendance: two 35-week sessions of two terms each, and two 37-week sessions of three terms each.

## C. Academic Year - DDS Qualifying Program

The academic year for year one commences in early April and continues to mid-June of the following year. The academic year for year two commences in mid-June (with a four-week break in July/August) and terminates in late April. Late registration will be permitted only under very exceptional circumstances, if approved by the Dean. Total length of the program is currently 94 weeks in actual attendance: one 57-week session of 4 terms in the first year and one 37-week session of three terms in second year.

## D. Course Outlines and Program Changes

Before the beginning of term, each Course Director must provide a copy of the course outline, including evaluation methods, according to University and Faculty format with any individual additions, to the Office of the Associate Dean for Academic Affairs. Students must be provided with a course outline by the instructor at the first meeting of the class.

Program changes as to content, requirements, etc., may be necessary and may not be reflected in a given edition of the Calendar. Such changes will be included in the course outline provided to students at the first meeting of the class. Instructors may make changes to course outlines at any time. However, if these changes affect any of the following areas, at least two-thirds of enrolled students must approve the changes in order for them to be valid: (a) evaluation; (b) weight of individual evaluation components; (c) examination requirements with a value of 10% or greater.

## E. Course Waiver Policy

Course waivers may be granted for courses in the DDS program only in exceptional circumstances. Requests for such waivers must be directed to the Assistant Dean for Academic Affairs, and must be accompanied by university transcripts, course descriptions, and course outlines. Students must attend all classes and complete all course requirements until notified by the Associate Dean (Academic) that a course waiver has been granted.

Students in the DDS program who are granted a course waiver shall, for the purpose of establishing (1) course rank; (2) grade point average; and (3) prizes and awards, have their final grades computed using only the required courses being taken.

Policies and procedures regarding application for and awarding of course waivers are outlined in the Academic Policy Manual.

## F. Review of Students

Student academic and professional progress is reviewed at least twice each term by the appropriate Academic Standards Class Committee (membership - Course Directors of the respective year of the program), and each student is provided with his/her Achievement Classification (I to VI as described in the Academic Policy Manual). Appropriate remedial actions will be initiated for students with Classifications II to VI. Students with Classifications IV to VI may be placed on probation.

## G. Guidelines for Student Probation

1. A student may be placed on probation for academic or professional reasons, described in classifications IV, V, VI in the Academic Policy Manual.
2. Probation shall usually occur when there are multiple concerns in one or both of the above parameters.
3. Probation shall only be implemented following a thorough review of a student's progress by the appropriate Academic Standards Class Committee.

4. Student(s) on probation must be reviewed regularly at the meeting of the appropriate Academic Standards Class Committee.
5. A student who has fulfilled all of the conditions of probation, in the opinion of the Class Committee, shall be removed from probation and permitted to proceed in the appropriate course as recommended by the Class Committee.
6. A student may not be eligible to sit final examinations and may not be promoted or graduated while on probation.
7. A student who has not met the conditions of probation shall be required to (a) enroll in a supplementary educational program; or (b) repeat an academic year; or (c) withdraw from the Faculty.

## H. Academic Accommodation for Students with Learning Disabilities

See University Regulations, page 11.

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

Students wishing to discuss accommodation for disabilities within the Faculty of Dentistry should contact the Assistant Dean for Student Affairs, Faculty of Dentistry before classes commence.

## I. Examination and Course Grades

### 1. Admission to Examinations

In order to qualify for admission to examinations, candidates must attend the prescribed courses of the curriculum regularly and punctually. Students are expected to attend all lectures, seminars, preclinical and clinical sessions. A student may not be eligible to sit final examinations while on probation. The Examination Regulations of the University are followed, as well as specific Faculty of Dentistry regulations which are provided to students in the Academic Policy manual.

### 2. Promotion and Graduation

A student will not normally be promoted or graduated unless a passing grade in all subjects and an overall grade point average of 2.0 has been achieved.

A student who has achieved an overall grade point average of at least 2.0 and received one or two failing grade(s) may be offered the privilege of supplemental examination(s). Successful passing of the supplemental examination(s) prior to commencement of the academic year will permit promotion. Failure to pass the supplemental examinations may result in the student being offered the privilege of repeating the year.

A student who has obtained an F grade in more than two courses will normally be required to withdraw from the faculty.

As an academic requirement, students are assessed in each year on their aptitude and fitness for the profession of Dentistry as described in course outlines and the Academic Policy Manual. A student who, in the judgment of the Faculty, fails to attain satisfactory standard on this assessment may be retired from the Faculty.

Students must prepare exercises, reports, etc., as may be prescribed, and in courses involving laboratory or practical work they must complete such work satisfactorily before any credit for that course can be given. If Faculty deems it advisable, giving consideration to the students' overall performance in the program and the constraints of available time and resources, students may be given the opportunity to clear any deficiencies by means of remedial programs.

Students who, in the judgment of the Faculty, are deficient for any reason in their clinical practice may be required by Faculty to return for a special clinical session or to repeat the year. The satisfactory completion of this entire clinical session is required in order to allow students either to continue in their regular course or to graduate at a subsequent Convocation.

Final year students are responsible for the completion of patient care and/or the approved transfer of their assigned patients before they are awarded the DDS Degree.

### 3. Graduation with Distinction

Graduation with Distinction may be awarded to graduating Dentistry students whose cumulative grade point average is at least 3.60, who in the opinion of faculty, merit the award.

### 4. Course Grades

Upon completion of a class, a student is awarded a grade of A+, A, A-, B+, B, B-, C, F, or INCOMPLETE, or for designated courses, a grade of PASS or FAIL.

In this system; A+ is the highest and C is the lowest passing grade; an INC grade allows an otherwise qualified candidate to fulfil the course requirements within a specified time in a program determined by Faculty; an F is a failing grade which may allow an otherwise qualified candidate supplemental examination privileges, or may disqualify the student from further evaluation without repeating the course and/or the entire academic year.

Course directors are responsible for defining the requirements for grades.

### 5. Grade Point Equivalents and Averages

The numerical percentage score-letter grade equivalency scale for all courses in the Faculty of Dentistry is as follows:

In this scale 65% is the minimum passing numerical score. GPA equivalencies for final letter grades are consistent with the Dalhousie University GPA equivalency scale.

Numerical Score	Letter Grade	Grade Point Equivalent
95-100	A+	4.30
90-94	A	4.00
85-89	A-	3.70
80-84	B+	3.30
75-79	B	3.00
70-74	B-	2.70
65-69	C	2.00
N/A	INC	0.00
0-64	F	0.00
N/A	P(pass for credit)	Neutral
N/A	W (withdraw)	Neutral
Pending	Neutral	

INC - Incomplete: Students are expected to complete all class work which is required to achieve a passing grade by the prescribed deadlines. Only in special circumstances and with appropriate Academic Standards Class Committee concurrence, or that of the Associate Dean for Academic Affairs acting for the ASCC, may an instructor extend such deadlines. Incomplete work in a course must be completed by a time assigned by the relevant Academic Standards Class Committee and approved by Faculty. An INC will be converted to the earned grade if completed by the deadline. Otherwise, the course grade point value will be calculated as a 0.0 on the student's grade point average, and the INC grade will normally be converted to a failing grade, unless the student is given permission by Faculty to withdraw from the course. Students cannot be promoted with INC grades.

W - Withdrew: A grade of W is recorded for courses in which a student withdrew with Faculty approval. No grade point value is recorded. It should be noted that all courses for a given year must be successfully completed before a student is promoted or graduated.

### 6. Calculation of Average

Each course, except courses with final grades of PASS or FAIL, is assigned a course weight based on its length and the mix of lecture, laboratory or clinical components. An individual student's point equivalent for each course is multiplied by the adjusted course weight. The student's yearly grade point average is calculated by dividing the sum of the weighted grade point equivalents earned for all the separately numbered courses for the academic program year and the sum of the adjusted course weights for all courses.

A cumulative grade point average is calculated by adding the total weighted grade point equivalents earned and dividing by the sum of the

adjusted course weights for all courses taken. The cumulative GPA is used for the awarding of certain prizes, awards and scholarships.

### 7. Supplemental Examinations

A candidate who has received failing grades in not more than two subjects of any year, and who has attained the required overall grade point average of 2.0, may be offered the privilege of taking supplemental examinations in such subjects, provided he or she is qualified in attendance and course work for admission to examination.

Supplemental examinations are normally written after July 15 and before August 10, and are written at Dalhousie, unless approval is obtained to do otherwise.

Application for admission to a supplemental examination must be made on or before July 15th. Application forms may be obtained from the Dean of Dentistry's Office and must be accompanied by a supplemental examination fee.

On passing a supplemental examination or evaluation a notation is made on the transcript that the course is passed by supplemental activity, and no grade point value is assigned. If the student fails the supplemental examination or activity, a grade of F will be recorded for that course. Failing grades must be replaced by passing grades before a student is promoted to the next year of the program. Failure of supplemental examination(s) may result in the student being offered the privilege of repeating the year.

### 8. Illness or Absence

Students are required to attend all assigned classes and clinics. Penalties for not attending clinics are outlined in the clinic course outlines.

It is the student's responsibility to immediately inform the Office of the Dean and, when clinical activities are involved, any scheduled patients, of any absence due to illness, injury, or other cause. A medical certificate will be required before a test/examination is re-scheduled or a clinic penalty/suspension is removed. In the case of a serious personal problem, the student will be required to submit to the Associate Dean for Academic Affairs, a confidential written statement documenting the reasons for absence. Re-scheduled examinations will not be granted without written approval of the Assistant Dean.

Failure to report to classes or clinic or to report an absence due to injury or illness as required may result in suspension of clinic privileges and may limit a student's right to appeal an unsatisfactory course grade or the failure of an academic year. Written policies describing the responsibilities of students in such cases are available to all students in the Academic Policy Manual.

### 9. Appeals

Students have the right to appeal their assigned grade in a given course as well as decisions regarding promotion or graduation. Written policies describing the Faculty's appeal procedures are available to all students in the Academic Policy Manual.

### J. Licensing Regulations

Students are reminded that the degree in Dentistry is not the only requirement for admission to practise in any province. The regulations for admission to practise are established by the licensing board of the province in which the person desires to practise. Information on these requirements may be obtained from the respective Dental Registrars whose names and addresses may be obtained from the Office of the Dean.

The National Dental Examining Board of Canada incorporated under Federal Statute offers an examination leading to a certificate which is recognized by the dental Licensing Boards in all provinces and territories of Canada. Holders of the certificate may be licensed to practise in all provinces sometimes after meeting additional provincial requirements. For further information inquiries should be addressed to: Registrar, National Dental Examining Board of Canada, Suite 103, 100 Bronson Ave., Ottawa K1R 6G8.

The program of dental education in the Faculty has received the approval of the Commission of Dental Accreditation of Canada. The Dalhousie

Doctor of Dental Surgery Degree fulfils the educational requirement for obtaining a certificate from the National Dental Examining Board of Canada, the National Board of Dental Examiners of U.S.A., and the Boards of many of the states of the United States of America.

## K. Instruments, Equipment and Books

All required laboratory and clinic instruments, supplies, equipment, uniforms (not shoes), lockers, manuals, textbooks and 2-step Mantoux skin test are supplied by the Faculty for students in the Auxiliary fees.

There are four parts to these fees:

1. Students Kits - preclinical lab equipment and supplies, uniforms, lockers.
2. Academic Clinic Fee - Dental clinic patient care equipment, supplies, and facilities renewal fees.
3. Mandatory Technology Fee - computer, software warranty, maintenance support, and Help Desk Services.
4. Mandatory Electronic Textbook Fee - all textbooks and supporting Vital Source software, drug data bases, access to the Clinic Patient Information system and many other electronic learning and study features.

See details below. Including the summary of typical fees.

Many instruments and equipment items are signed out to students. Students are financially responsible for lost or damaged items. Degrees are withheld pending the return of or payment for missing/damaged items.

The University obtains all student kit academic clinic fee, mandatory technology and mandatory electronic textbook items for all students in order to maintain minimum standards and to ensure timely delivery and availability for the beginning of classes.

**Student Kit Refunds:** If for any reason, a student leaves their program during the first week of the official start of the program (of any year) the student will receive a full refund of the kit they received for that year of the program upon full return of the kit to the Assistant Dean, Clinics. There will be no refunds after the first official week of the program.

**Academic Clinic Fee Refunds:** There are no refunds of the Academic Clinic fee.

**Mandatory Technology and Mandatory Electronic Textbook Refunds:** There will be no refunds after the first official week of the program in any year. A refund in the first week requires a return of the leased computer and all peripherals including shipping case and back pack to the Coordinator of Building Services.

**The Mandatory Technology Fee:** First year DDS students receive a leased to return, laptop computer and software which replaces textbooks and most manuals and provides access to the clinic patient information system. DDS3 students will turn in their laptop computer provided in first year and receive a new laptop for their use during the 3rd and 4th year of the program. DDS3 and QP1 student laptops are a lease to 'own' at graduation. All software, support and maintenance is provided.

Students are financially responsible for lost or damaged items. Degrees are withheld pending the return of or payment for missing/damaged items.

**Mandatory Electronic Textbook Fee:** All required text books and manuals are in electronic form on each student's laptop computer.

## Fees:

Doctor of Dental Surgery Program 2011/2012

	Electronic Textbooks	Technology Fee (laptop computer)	*Academic Clinic Fee	Student kit Fee	Total
Year 1	\$1,400.00	\$2,500.00	\$5,000	\$6,606	\$15,506
Year 2	\$1,400.00	\$2,500.00	\$4,125	\$4,774	\$12,799
Year 3	\$1,400.00	\$2,500.00	\$3,250	\$2,222	\$9,372
Year 4	\$1,400.00	\$2,500.00	\$3,250	\$1,988	\$9,138
DDS Qualifying Program 2010/2011					
Year 1	\$2,800.00	\$2,500.00	\$5,000	\$8,706	\$19,006
Year 2	\$2,800.00	\$2,500.00	\$5,000	\$1,953	\$10,503

\*The Academic Clinic Fees for academic year 2011/2012 will increase to \$5000 for DDS2 and \$4125 for DDS3, DDS4 and QP2

## V. Doctor of Dental Surgery Degree Requirements

### First Year

- DENT 1112.01: Human Biochemistry
- DENT 1113.06: Gross Anatomy/Neuroanatomy
- DENT 1114.03: Histology
- DENT 1116.03: Basic Mechanisms of Disease
- DENT 1117.03: Pharmacology
- DENT 1118.01: Infectious Diseases
- DENT 1119.03: Physiology
- DENT 1211.06: Patient Care I
- DENT 1311.03: Growth and Development I
- DENT 1411.06: Cariology I
- DENT 1502.00: Elective
- DENT 1503.00: Periodontology Elective
- DENT 1511.03: Periodontology I
- DENT 1550.00: Mindfulness Elective
- DENT 1611.03: Occlusion and Neuromuscular Function I

### Second Year

- DENT 2111.06: Dental Biomaterials Science
- DENT 2117.01: Pharmacology II
- DENT 2119.03: Systematic Pathology and Immunology
- DENT 2211.03: Clinical Patient Care II
- DENT 2212.06: Patient Care II
- DENT 2311.03: Growth and Development II
- DENT 2400.01: Paediatric Dentistry II
- DENT 2412.06: Cariology II
- DENT 2413.03: Endodontics II
- DENT 2501.00: Elective
- DENT 2504.00: Elective
- DENT 2511.03: Periodontology II
- DENT 2512.01: Evidence-Based Dentistry
- DENT 2550.00: Mindfulness Elective
- DENT 2611.06: Removable Prosthodontics

### Third Year

- DENT 3116.01: General Medicine and Patient Health Assessment
- DENT 3117.01: Foundation Sciences in Clinical Practice
- DENT 3211.01: Patient Care III
- DENT 3212.06: Clinical Comprehensive Patient Care
- DENT 3220.03: Clinical Oral Diagnosis and Treatment Planning
- DENT 3400.03: Paediatric Dentistry III
- DENT 3500.06: Oral and Maxillofacial Surgery
- DENT 3505.00: Elective
- DENT 3512.01: Evidence-Based Dentistry
- DENT 3513.01: Diagnosis and Management of Temporomandibular Disorders
- DENT 3521.00: Oral Pathology Elective
- DENT 3550.00: Mindfulness Elective
- DENT 3617.01: Implant Dentistry
- DENT 3618.06: Clinical Prosthodontics
- DENT 3619.03: Didactic Prosthodontics
- DENT 3717.06: Endodontics III
- DENT 3719.06: Periodontology III
- DENT 3811.01: Oral Pathology, Medicine and Radiology
- DENT 3818.03: Orthodontics III

### Fourth Year

- DENT 4211.03: Patient Care IV Seminars
- DENT 4212.06: Clinical Comprehensive Patient Care
- DENT 4223.06: Periodontology IV
- DENT 4220.03: Clinical Oral Diagnosis and Treatment Planning
- DENT 4400.03: Paediatric Dentistry IV
- DENT 4500.06: Oral and Maxillofacial Surgery
- DENT 4507.00: Elective
- DENT 4508.00: ART Elective

- DENT 4509.00: Implant Elective
- DENT 4510.00: Surgical Periodontics Elective
- DENT 4512.00: Endodontics Elective
- DENT 4513.00: Oral Surgery Elective
- DENT 4514.00: Becoming a Dental Educator Elective
- DENT 4517.00: Dental Public Health Elective
- DENT 4521.00: Oral Pathology Elective
- DENT 4550.00: Mindfulness Elective
- DENT 4555.00: Externship Elective
- DENT 4616.12: Prosthodontics IV
- DENT 4717.06: Endodontics IV
- DENT 4811.01: Oral Pathology, Medicine and Radiology
- DENT 4818.03: Orthodontics IV

## VI. Qualifying Program DDS Requirements

Students will be required to successfully complete the following courses and progress will be monitored by instructors, course directors and the Qualifying Program Academic Standards Course Committees (QP I and II).

### Year I

- DENQ 2311.03: Growth & Development
- DENQ 3000.06: Foundation Sciences for Dentistry in Canada
- DENQ 3001.06: Clinical Dental Sciences for Dentistry in Canada
- DENQ 3116.01: General Medicine and Patient Health Assessment
- DENQ 3117.01: Foundation Sciences for Clinical Practice
- DENQ 3211.01: Patient Care III
- DENQ 3212.06: Clinical Comprehensive Patient Care
- DENQ 3220.03: Clinical Oral Diagnosis and Treatment Planning
- DENQ 3400.03: Paediatric Dentistry
- DENQ 3500.06: Oral and Maxillofacial Surgery
- DENQ 3505.00: Elective
- DENQ 3512.01: Evidence-Based Dentistry
- DENQ 3513.01: Diagnosis and Management of Temporomandibular Disorders
- DENQ 3521.00: Oral Pathology Elective
- DENQ 3550.00: Mindfulness Elective
- DENQ 3617.01: Implant Dentistry
- DENQ 3618.06: Clinical Prosthodontics
- DENQ 3619.03: Didactic Prosthodontics
- DENQ 3717.06: Endodontics
- DENQ 3719.06: Periodontology
- DENQ 3811.01: Oral Pathology, Medicine and Radiology
- DENQ 3818.03: Orthodontics

### Year 2

- DENT 4211.03: Patient Care Seminar
- DENT 4212.06: Clinical Comprehensive Patient Care
- DENT 4223.06: Periodontology
- DENT 4220.03: Clinical Oral Diagnosis and Treatment Planning
- DENT 4400.03: Paediatric Dentistry
- DENT 4500.06: Oral and Maxillofacial Surgery
- DENT 4507.00: Elective
- DENT 4508.00: ART Elective
- DENT 4509.00: Implant Elective
- DENT 4510.00: Surgical Periodontics Elective
- DENT 4512.00: Endodontics Elective
- DENT 4513.00: Oral Surgery Elective
- DENT 4514.00: Becoming a Dental Educator Elective
- DENT 4517.00: Dental Public Health Elective
- DENT 4521.00: Oral Pathology Elective
- DENT 4550.00: Mindfulness Elective
- DENT 4555.00: Externship Elective
- DENT 4616.12: Prosthodontics
- DENT 4717.06: Endodontics
- DENT 4811.01: Oral Pathology, Medicine and Radiology
- DENT 4818.03: Orthodontics

## Policy Statement on Interprofessional Health Education

Students in the Faculties of Dentistry, Health Professions and Medicine are required to participate in interprofessional health education activities. These activities, together with specific program requirements, are currently evolving and in transition and are integrated into the curricula of individual programs. Participation is mandatory. The objective of interprofessional education in the Faculty of Dentistry are to:

- knowledge and understanding of, and respect for, the expertise, roles and values of other health and human service professionals
- understanding the concept and practice of patient/client/family-centred care.
- effective communication, teamwork and leadership skills applied in interprofessional contexts.
- positive attitudes related to the value of collaborating and teamwork in health and human service contexts.
- an understanding, from a multi-disciplinary perspective, of the Canadian health and social systems, the legal and regulatory foundation of professional practice, how health and human service institutions are organized and operate, and how different health and human service professions contribute to the systems and ins.

### DENQ 2311.03: Growth and Development II.

A preclinical course that applies and expands upon the concepts and principles learned in Growth & Development I to clinical situations. The scope of this course includes the examination and diagnosis of growing and non-growing patients with specific reference to orthodontics. This course provides an opportunity to develop skills related to the fabrication and analysis of specific diagnostic records including impressions and model fabrication; radiographic analysis; model analysis; and treatment options from space maintenance and occlusal guidance through to various fixed and removable orthodontic appliance treatment.

### DENQ 3000.06: Foundation Sciences for Dentistry in Canada.

Modules included in this course are: Foundation Sciences, Pharmacology and Biomaterials Science. These modules help the candidate to develop critical thinking skills. Lectures and patient care in a problem-based learning approach will be the norm. Candidates will review clinical presentation, differential diagnosis, approaches and management for specific diseases related to the practice of Dentistry in Canada. The principle of patient health assessment will also be presented. The assessment level will be equivalent to that at the end of Year 2 of the DDS program.

### DENQ 3001.06: Clinical Dental Sciences for Dentistry in Canada.

Modules in this course are: Patient Care, Periodontology, Cariology A, Cariology B, Cariology C, Endodontics, Complete Denture Prosthodontics, Removable Partial Denture Prosthodontics, and Pediatric Dentistry. These modules are designed as presented in years one and two of the DDS program to familiarize the candidates with the basic principles and knowledge for treating the patient at the end of year 2 of the DDS program. In a clinical setting, candidates will demonstrate such clinical activities as: use of diagnostic aids, risk assessment, diagnosis, treatment planning, pain control, utilization of allied dental personnel, use of the dental computer system, preventive dental procedures, basic restorative procedures, diagnosis and management of early types of Periodontal disease, treatment of partially and completely edentulous Prosthodontic patients and application of Endodontic principles and techniques.

### DENQ 3116.01: General Medicine and Patient Health Assessment.

The first term is devoted to lectures by physicians and is designed to give the student a broad understanding of the problems and procedures involved in the practice of medicine and to prepare for intelligent cooperation with physicians and other health workers. The course also prepares the student to render a better health care service by recognizing the signs and symptoms of general diseases which require the services of a physician. This series of lectures is followed in the second term by seminars devoted to clinical management of patients with specific disease processes.

### **DENQ 3117.01: Foundation Sciences in Clinical Practice.**

This course will use a case-centred, problem-based format to enable students to develop critical thinking skills and to apply basic science knowledge to the clinical decision making process. Students will integrate basic sciences (anatomy, physiology, biochemistry, pharmacology, pathology, biomaterials, immunology and microbiology) in addressing hypothetical clinical situations.

### **DENQ 3211.01: Patient Care III.**

Provides a forum for many of the professional issues facing dentists. The major components of this course are dental practice management (including options for practice and scope of practice of the dental specialties) and legal issues. Additional topics included are organized dentistry and correspondence with other health care providers and specialties. The Table Clinic component of Scholarship Across the Curriculum is included in this course for QP-1 students.

### **DENQ 3212.06: Clinical Comprehensive Patient Care.**

This course is a comprehensive clinical course conducted during the third and fourth years of the dentistry program. Students gain clinical experience while treating patients in a comprehensive care clinic. The experience gained is based on patient care treatment completions within the disciplines of Endodontics, Periodontics and Prosthodontics and is measured by relative value units (RVU's). Minimal experience in selected procedures is required.

### **DENQ 3220.03: Clinical Oral Diagnosis and Treatment Planning.**

This third year course is designed to create an environment that promotes the philosophy of comprehensive patient care. This goal can be achieved by placing significant emphasis on the oral diagnosis and treatment planning of patients who present to our comprehensive treatment planning clinic. Each third year student will develop a comprehensive problem list for each patient assigned to him/her during the oral diagnosis/treatment planning clinic rotation. A comprehensive problem list will be developed after a thorough examination of the patient which will include a detailed medical/dental history, intra/extra oral examination and development of a diagnostic summary from which a properly sequenced and logical active/inactive problem list will be created. In this clinical environment students will gain experience by beginning at the basic level and progressing to the more advanced concepts of comprehensive treatment planning during his/her fourth year.

### **DENQ 3400.03: Paediatric Dentistry III.**

This clinical course builds upon the didactic course material in DENT 2400 - Paediatric Dentistry. Students will gain clinical experience in dentistry for children during rotations in the faculty clinics. Students will be assigned child and adolescent patients for comprehensive treatment. Students will also rotate through the faculty's satellite clinics at Harbour View School in Dartmouth, and the Nelson Whynder School in North Preston to obtain clinical and oral health promotion experiences. Primary and essential oral health care will be given with particular emphasis on prevention. Students will have a one-week rotation through the Dental Department IWK Health Centre. There will be additional didactic material presented through a series of lectures. Topics will include behaviour management, local anaesthesia techniques for children, and management of medically compromised and special needs patients.

### **DENQ 3500.06: Oral and Maxillofacial Surgery III.**

Lectures/seminars each week throughout third year will cover topics pertaining to clinical oral and maxillofacial surgery and provide the students with an orientation to General Anesthesia. Students develop clinical skills in oral surgery by treating patients in the Oral Surgery Clinic. A hospital rotation permits a student to become familiar with surgical care for patients in an ambulatory and operating room setting.

### **DENQ 3505.00: Elective.**

This course is designed to allow students to pursue, in depth, dentally related and to a lesser extent other health topics of particular interest to them that are not covered in other scheduled courses.

### **DENQ 3512.01: Evidence Based Dentistry III.**

This course is designed to expand upon the principles for Evidence-Based Dentistry I and II. Students will learn to critically appraise clinical articles using examples from the dental literature.

### **DENQ 3513.01: Diagnosis and Management of Temporomandibular Disorders.**

Students will study the etiology, pathogenesis, and clinical characteristics of conditions causing pain and altered function to the craniomandibular complex. During the second term of third year, lectures relating to craniomandibular pain will be presented that cover the most appropriate topics in neurophysiology, psychology, occlusion, pharmacotherapy, diagnosis, conservative management, and surgery. These multidisciplinary presentations will emphasize the recognition of abnormalities, the construction of differential diagnosis, arriving at definitive diagnoses, and patient management.

### **DENQ 3521.00: Oral Pathology Elective.**

This elective aims to provide supplementary clinical and laboratory experience in oral pathology, clinical oral pathology and oral medicine. Students will observe or assist in patient management in the Faculty of Dentistry Oral Pathology Clinic, and the QEII Oral and Maxillofacial Surgery Department. Clinical photographs of oral lesions will be taken when possible. Students will follow any biopsies of their patients through the oral pathology laboratory where they will assist in accessioning, grossing, histopathological evaluation and sign-out. Gross and microscopical photographs will be taken when possible. Students will assemble a portfolio of cases in a Clinico-Pathologic Conference (CPC) format.

### **DENQ 3550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong, breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

### **DENQ 3617.01: Implant Dentistry.**

This is an introductory course in implant dentistry, which provides fundamental knowledge of osseointegrated implants, diagnosis and treatment planning. The course emphasizes what the student needs to know. The team approach to providing implant supported care is emphasized through teaching by specialists in Prosthodontics and Oral and Maxillofacial Surgery.

### **DENQ 3618.06: Clinical Prosthodontics.**

In this preclinical and clinical course, students will provide comprehensive patient treatment for assigned patients and will develop experience and competence in designated prosthodontic procedures and operative dentistry procedures. Management of restorative treatment, esthetic dentistry, dentin bonding principles and techniques for the fabrication of removable prostheses and communication with commercial dental laboratories will be required.

### **DENQ 3619.03: Didactic Prosthodontics III.**

This course is designed to expand and reinforce the knowledge base for the student's clinical experiences. The course consists of a series of lectures and pre-clinical sessions. Various clinically related subjects in patient care, treatment and prevention will be covered with particular emphasis on the management of caries as a disease and the repair or replacement of teeth. The application of biomaterials in prosthodontics, caries prevention and management will also be presented.

### **DENQ 3717.06: Endodontics III.**

This course is an extension of the preclinical component of Cariology II and is designed to reinforce and expand the knowledge base for third year students' endodontic clinical experience. The course consists of didactic and clinical components. The **didactic part** provides a series of lectures dealing with the basic biological principles and techniques in the area of biology of the dental pulp and periradicular tissue, pulp and periapical pathosis; diagnosis and treatment planning. Following the diagnostic lectures, students must pass their endodontic clinical diagnostic examination prior to doing endodontic consults on patients.

Additional lectures will include pretreatment and temporization; considerations in molar endo; procedural errors; local anesthesia; endodontic emergencies; a review of instrumentation and obturation; restoration of endodontically treated teeth; endodontic failures and retreatment; apexification and apexogenesis techniques and; vital and non-vital bleaching procedures. The **clinical component** focuses on diagnosis and the application of endodontic principles and techniques while providing comprehensive treatment to assigned patients. Knowledge and skills will be developed through various assessments that include both Clinical and Clinical Simulations. Students must pass a Clinical Simulation Endodontic Skills Assessment Test prior to treating Clinical Patients.

### **DENQ 3719.06: Periodontology III.**

The didactic component of this course will build upon understanding of periodontal diagnosis and treatment planning and will emphasize surgical procedures used in management of periodontal diseases. It will assist the student in appreciating and understanding the interrelationships between periodontics and other disciplines. Students will develop experience and competence in designated periodontic procedures while providing comprehensive treatment to assigned patients.

### **DENQ 3811.01: Oral Pathology, Oral Medicine and Oral Radiology.**

This course is presented to third year dental students in the first and second terms. Students study the cause, pathogenesis, clinical, radiographic and microscopic characteristics of diseases affecting the head and neck. Emphasis is placed on clinical and radiographic recognition of abnormalities, detailed description of lesion features, summary of features as clinical descriptive categories, formulation of differential diagnoses, arrival at definitive diagnoses, patient management and above all, understanding the behaviour of important oral diseases. A foundation is provided for rotations through the Oral Pathology Clinic, and the practice of dentistry.

### **DENQ 3818.03: Orthodontics III.**

This course exposes the students to the integration of theoretical and clinical growth and development and orthodontic treatment. The didactic portion of the course provides theoretical and clinical knowledge underlying clinical orthodontic practice. Discussions are related to recognition, diagnosis, treatment planning, case selection, appliance selection and application, and treatment of a variety of orthodontic diagnoses frequently encountered by general dentists. These include topics such as Class I malocclusion, oral habits and maxillary expansion. The clinical portion of the course is designed to expose the undergraduate dental student to the collection and analysis of orthodontic records, orthodontic diagnosis and minor orthodontic treatment through patient care.

### **DENQ 4521.00: Oral Pathology Elective.**

This elective aims to provide supplementary clinical and laboratory experience in oral pathology, clinical oral pathology and oral medicine. Students will observe or assist in patient management in the Faculty of Dentistry Oral Pathology Clinic, and the QEII Oral and Maxillofacial Surgery Department. Clinical photographs of oral lesions will be taken when possible. Students will follow any biopsies of their patients through the oral pathology laboratory where they will assist in accessioning, grossing, histopathological evaluation and sign-out. Gross and microscopical photographs will be taken when possible. Students will assemble a portfolio of cases in a Clinico-Pathologic Conference (CPC) format.

### **DENT 1112.01: Human Biochemistry.**

This class covers a broad spectrum of biochemistry. It highlights selected dental - related topics such as structures and biosynthesis of connective tissue macromolecules; endocrine control of tissue remodeling; fluoride, mercury, and calcium and phosphorus metabolism; pH, saliva and dental caries; molecular biology and cancer. A handbook of lecture material is provided.

### **DENT 1113.06: Gross Anatomy/ Neuroanatomy.**

This course has two components. The first half of the courses consists of the gross anatomy of the thorax, abdomen and upper limb. The main emphasis is on the gross anatomy of the head & neck. This part of the course is presented through lecture, laboratory with cadaver dissections,

clinical case presentation and x-rays. As part of the course, students can view gross anatomy videos done by Dr. Sinha which are to be used as a self evaluation tool for the thorax, abdomen and head & neck. The clinical cases are used for review of the entire course material. The second half of the course focuses on the neuroanatomy. The main focus of this portion of the course is the anatomical organization of the central and peripheral nervous system. Texts: B. Liebgott, Anatomical Basis of Dentistry; Rohen/ Yokochi, Color Atlas of anatomy; and Crossman and Neary, Neuroanatomy: An Illustrated Text. Lecture handouts and Dissection Guides are provided. DVD videos are used as an aid for lab preparation and resource.

### **DENT 1114.03: Histology.**

This course describes the structure of the body at the level of tissues and organs as seen with the microscope. Oral structures and tissues are emphasized. It is a Foundation Course for Physiology, Pharmacology and Pathology. Text: Wheeler's Functional Histology; Tencate, Oral Histology.

### **DENT 1116.03: Basic Mechanisms of Disease.**

This course uses patient cases in a modified problem-based learning format to introduce students to the basic concepts and fundamental mechanisms of disease. Supplementary lectures are provided as indicated. Topics include cell injury, adaptation and death, inflammation, repair, immunology, vascular disease and neoplasia.

### **DENT 1117.03: Pharmacology.**

This course is built on other Foundation Science courses and serves as a basis to Therapeutics (Patient Care) and Pharmacology and treatment planning in years 2 and 4. It emphasizes the basic principles of drug action, with special attention given to drugs used commonly in dental practice (local anaesthetics, analgesics, anti-inflammatories) and on drugs whose presence in the body may affect dental procedures.

### **DENT 1118.01: Infectious Diseases.**

This course builds upon a background in infectious diseases and provides a general knowledge of the major groups of clinically important bacteria and other microbes. The course focuses on the etiology, pathogenesis, epidemiology, diagnosis, prevention and treatment of major infectious diseases related to dental practice.

### **DENT 1119.03: Physiology.**

This lecture-based review course is designed to survey seven essential areas of human physiology: cellular, nervous system, cardiovascular, respiratory, renal, gastrointestinal and endocrine physiology. This course addresses how molecular, subcellular, and cellular mechanisms determine the function of tissues, organs, and systems. Each series of lectures is followed by a tutorial. The overall objective of this course is to provide a solid foundation of facts about physiological mechanisms as well as a knowledge of underlying principles which, when brought together, allow the student to find solutions to new problems. The relationship between organ systems will also be emphasized to underscore the integrative mechanisms for homeostasis.

### **DENT 1211.06: Patient Care I.**

This is an introductory integrated pre-clinical course that will prepare students to safely and effectively care for their patients by developing skills that are common to all areas of dentistry. Students in this course will cover four major themes: 1) Professional issues: ethics, Canadian health law, organized dentistry and professional responsibilities; 2) Concepts of health: population health, health promotion and interdisciplinary health issues; 3) Evidence for care: basic concepts of evidence based decision-making and scientific review, and 4) Clinical care: introductory elements of chair-side care through observation and participation in infection control procedures, patient assessment and treatment that includes an understanding of the interrelationships of medication to diagnosis and treatment objectives. Using simulated and clinic patients, psychomotor and behavioral skills will be developed by learning clinic protocols, communication skills, and radiographic diagnosis and technique.

### **DENT 1311.03: Growth and Development I.**

This course provides the student with basic concepts and principles of pre-natal and post-natal human physical growth and development. It focuses on the growth of the dentofacial region. This course also provides an introduction to the application of this knowledge to clinical orthodontic practice.

**DENT 1411.06: Cariology I.**

This course introduces the etiology, diagnosis, prevention and operative management of dental caries. The course is designed to present the foundation for caries management in dental practice. The major areas covered include: histopathology, etiology, epidemiology, diagnosis, prevention and operative principles. Lectures, laboratory exercises and course discussions are used to present the topics covered in the class.

**DENT 1502.00: Elective.**

This course is designed to allow students to pursue in depth, dentally related and to a lesser extent other health topics of particular interest to them that are not covered in other scheduled courses.

**DENT 1503.00: Periodontics Clinical Teaching Elective.**

This course is designed to provide students with an experience in clinical teaching in the DDS1 Periodontology course (D1511)

**DENT 1511.03: Periodontology I.**

This course will provide students with a basic knowledge of the periodontium in health and disease. The identification of etiologic factors, their significance and methods for their control will be included. Clinical experience in basic identification of the features of health and disease, control of etiology and management of gingivitis will be provided as part of this course.

**DENT 1550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

**DENT 1611.03: Occlusion and Neuromuscular Function I.**

This course consists of two parts. In the first term, a seminar and laboratory course in Dental Anatomy is designed for the study of tooth morphology and the structure of teeth and their parts. During the second term, in a seminar, clinical and laboratory setting, students will be exposed to the functional anatomy of the stomatognathic system. Cognitive and psychomotor skills will be developed while learning occlusal morphology related to mandibular movement.

**DENT 2111.06: Dental Biomaterials Science.**

This course aims to help the student develop critical thinking in the application of biomaterials science to dentistry: both in understanding the modern science of biocompatibility and in the application of current and emerging dental materials technologies. In the first instance, this course will review relevant core concepts including structure-function relationships that underpin basic materials science and host-material interactions that define biocompatibility. These concepts will then be applied to the technology of metals, plastics, ceramics, and composite materials as used in dental clinical practice, as well as with the emerging fields of tissue engineering and regenerative medicine. Through assignments and discussion, the course also seeks to enhance the student's ability to interpret and assess information on biomaterials and their application from the scientific literature, regulatory bodies, and other sources.

**DENT 2117.01: Pharmacology II.**

This course builds on the student's foundation established in year 1. It will continue to emphasize the basic principles of drug action with special attention to drugs used commonly in dental practice (antimicrobial agents, analgesics, sedatives, centrally acting agents) and on drugs whose presence in the body may affect dental procedures management.

**DENT 2119.03: Systemic Pathology and Immunology.**

The systemic pathology course, for second year dental students uses patient cases in a problem-based learning approach. Cases involving the organ systems, such as cardiovascular, respiratory, hematopoietic, gastrointestinal, genitourinary, endocrine, central and peripheral nervous system, muscle, bone and joint will be presented. Cases focus on diseases important in the management of dental patients and those which illustrate

important mechanisms of disease. Students will gain a deeper understanding of the basic mechanisms of disease and will apply knowledge acquired in basic science courses to the patient cases.

**DENT 2211.03: Clinical Patient Care II/ DENT 2212.06: Patient Care II.**

These courses are designed to familiarize the student with the basic principles and knowledge for patient care activities. In a clinical setting, students will gain experience in such basic patient care activities as: use of diagnostic aids, risk assessment, diagnosis, basic level treatment planning, pain control, utilization of dental auxiliaries, use of a dental computer system, preventative dental procedures and basic level dental restorative procedures. Students will also acquire skills for the diagnosis and management of patients with early stages of periodontal disease.

**DENT 2311.03: Growth and Development II.**

A preclinical course that applies and expands upon the concepts and principles learned in Growth & Development I to clinical situations. The scope of this course includes the examination and diagnosis of growing and non-growing patients with specific reference to orthodontics. This course provides an opportunity to develop skills related to the fabrication and analysis of specific diagnostic records including impressions and model fabrication; radiographic analysis; model analysis; and treatment options from space maintenance and occlusal guidance through to various fixed and removable orthodontic appliance treatment.

**DENT 2400.01: Paediatric Dentistry II.**

Paediatric Dentistry II is a didactic and laboratory course designed to prepare the students for their paediatric clinical experience beginning in third year. This course includes lectures related to the following topics in paediatrics: examination of the child, soft tissue pathology, dental anomalies, radiology, early childhood caries and infant oral health care, outcomes related to the use of various restorative materials and techniques that are used to therapeutically manage childhood dental caries, pulp therapy in the primary and young permanent dentition, pharmacotherapy for paediatric dental patients and dental trauma. The course also includes labs on paediatric radiographic technique and interpretation and advanced paediatric and restorative techniques. There will also be a new patient exam experience with a paediatric dental patient at one of Dalhousie outreach dental clinics.

**DENT 2411.09: Cariology II.**

This technique course will build upon Cariology I and will provide a foundation in restorative therapy for the individual permanent tooth. Opportunity will be provided for practice to develop experience, psychomotor skills, and competency in restorative technique procedures, making use of plastic filling materials, cast metal restorative materials and provisional restorative materials.

**DENT2413.03 Endodontics II**

This technique course of Art and Science will build upon Cariology II and will provide a foundation for the treatment of pulpal disease in the individual permanent tooth. Opportunity will be provided for practice to develop experience, judgment, and psychomotor skills in endodontic technique procedures. The base principles and practice of root canal therapy, eradication of root canal irritants, obturation of the root canal system and preservation of the natural dentition will be presented for the management of the diseased dental pulp.

**DENT 2504.00: Elective.**

This course is designed to allow students to pursue, in depth, dentally related and to a lesser extent other health topics of particular interest to them that are not covered in other scheduled courses.

**DENT 2511.03: Periodontology II.**

This course is designed to provide a foundation in the management of a patient with periodontal disease. This patient oriented clinical and didactic experience will provide an opportunity for the student to develop skills necessary for the diagnosis and prognosis of periodontal diseases, as well as the nonsurgical management of patients with early attachment loss. Treatment planning for periodontal diseases as it interrelates with comprehensive dental care will also be introduced.

### **DENT 2512.01: Evidence-Based Dentistry II.**

This course is designed to expand upon the principles from the Evidence-Based Dentistry component in Patient Care I. The student will learn to critically appraise therapy articles, develop a clinical question, and correctly write and reference a scientific review paper. They will be expected to critically appraise a clinical article on therapy, using examples from the dental literature.

### **DENT 2550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting meditation, standing and walking forms of meditation, qi gong breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

### **DENT 2611.06: Removable Prosthodontics II.**

A course that uses seminars, web resources, demonstrations, laboratory and clinical experiences to help students learn the fundamental principles and techniques of managing partially and completely edentulous patients.

### **DENT 3116.01: General Medicine and Patient Health Assessment.**

The first term is devoted to lectures by physicians and is designed to give the student a broad understanding of the problems and procedures involved in the practice of medicine and to prepare for intelligent cooperation with physicians and other health workers. The course also prepares the student to render a better health care service by recognizing the signs and symptoms of general diseases which require the services of a physician. This series of lectures is followed in the second term by seminars devoted to clinical management of patients with specific disease processes.

### **DENT 3117.01: Foundation Sciences in Clinical Practice.**

This course will use a case-centred, problem-based format to enable students to develop critical thinking skills and to apply basic science knowledge to the clinical decision making process. Students will integrate basic sciences (anatomy, physiology, biochemistry, pharmacology, pathology, biomaterials, immunology and microbiology) in addressing hypothetical clinical situations.

### **DENT 3211.01: Patient Care III.**

Provides a forum for many of the professional issues facing dentists. The major components of this course are dental practice management (including options for practice and scope of practice of the dental specialties) and legal issues. Additional topics included are organized dentistry and correspondence with other health care providers and specialties. The Table Clinic component of Scholarship Across the Curriculum is included in this course for QP-1 students.

### **DENT 3212.06: Clinical Comprehensive Patient Care.**

This course is a comprehensive clinical course conducted during the third and fourth years of the dentistry program. Students gain clinical experience while treating patients in a comprehensive care clinic. The experience gained is based on patient care treatment completions within the disciplines of Endodontics, Periodontics and Prosthodontics and is measured by relative value units (RVU's). Minimal experience in selected procedures is required.

### **DENT 3220.03: Clinical Oral Diagnosis and Treatment Planning.**

This third year course is designed to create an environment that promotes the philosophy of comprehensive patient care. This goal can be achieved by placing significant emphasis on the oral diagnosis and treatment planning of patients who present to our comprehensive treatment planning clinic. Each third year student will develop a comprehensive problem list for each patient assigned to him/her during the oral diagnosis/treatment planning clinic rotation. A comprehensive problem list will be developed after a thorough examination of the patient which will include a detailed medical/dental history, intra/extra oral examination and development of a diagnostic summary from which a

properly sequenced and logical active/inactive problem list will be created. In this clinical environment students will gain experience by beginning at the basic level and progressing to the more advanced concepts of comprehensive treatment planning during his/her fourth year.

### **DENT 3400: Paediatric Dentistry III.**

This clinical course builds upon the didactic course material in DENT 2400 Paediatric Dentistry. Students will gain clinical experience in dentistry for children during rotations in the faculty clinics. Students will be assigned child and adolescent patients for comprehensive treatment. Students will also rotate through the faculty's satellite clinics at Harbour View School in Dartmouth, and the Nelson Whynder School in North Preston to obtain clinical and oral health promotion experiences. Primary and essential oral health care will be given with particular emphasis on prevention. Students will have a one-week rotation through the Dental Department of IWK Health Centre. There will be additional didactic material presented through a series of lectures. Topics will include behaviour management, local anaesthesia techniques for children, and management of medically compromised and special needs patients.

### **DENT 3500.06: Oral and Maxillofacial Surgery III.**

Lectures/seminars each week throughout third year will cover topics pertaining to clinical oral and maxillofacial surgery and provide the students with an orientation to General Anesthesia. Students develop clinical skills in oral surgery by treating patients in the Oral Surgery Clinic. A hospital rotation permits a student to become familiar with surgical care for patients in an ambulatory and operating room setting.

### **DENT 3505.00: Elective.**

This course is designed to allow students to pursue, in depth, dentally related and to a lesser extent other health topics of particular interest to them that are not covered in other scheduled courses.

### **DENT 3512.01: Evidence Based Dentistry III.**

This course is designed to expand upon the principles for Evidence-Based Dentistry I and II. Students will learn to critically appraise clinical articles using examples from the dental literature.

### **DENT 3513.01: Diagnosis and Management of Temporomandibular Disorders.**

Students will study the etiology, pathogenesis, and clinical characteristics of conditions causing pain and altered function to the craniomandibular complex. During the second term of third year, lectures relating to craniomandibular pain will be presented that cover the most appropriate topics in neurophysiology, psychology, occlusion, pharmacotherapy, diagnosis, conservative management, and surgery. These multidisciplinary presentations will emphasize the recognition of abnormalities, the construction of differential diagnosis, arriving at definitive diagnoses, and patient management.

### **DENT 3521.00: Oral Pathology Elective.**

This elective aims to provide supplementary clinical and laboratory experience in oral pathology, clinical oral pathology and oral medicine. Students will observe or assist in patient management in the Faculty of Dentistry Oral Pathology Clinic, and the QEII Oral and Maxillofacial Surgery Department. Clinical photographs of oral lesions will be taken when possible. Students will follow any biopsies of their patients through the oral pathology laboratory where they will assist in accessioning, grossing, histopathological evaluation and sign-out. Gross and microscopical photographs will be taken when possible. Students will assemble a portfolio of cases in a Clinico-Pathologic Conference (CPC) format.

### **DENT 3550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong, breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

### **DENT 3617.01: Implant Dentistry.**

This is an introductory course in implant dentistry, which provides fundamental knowledge of osseointegrated implants, diagnosis and treatment planning. The course emphasizes what the student needs to know. The team approach to providing implant supported care is emphasized through teaching by specialists in Prosthodontics and Oral and Maxillofacial Surgery.

### **DENT 3618.06: Clinical Prosthodontics.**

In this preclinical and clinical course, students will provide comprehensive patient treatment for assigned patients and will develop experience and competence in designated prosthodontic procedures and operative dentistry procedures. Management of restorative treatment, esthetic dentistry, dentin bonding principles and techniques for the fabrication of removable prostheses and communication with commercial dental laboratories will be required.

### **DENT 3619.03: Didactic Prosthodontics III.**

This course is designed to expand and reinforce the knowledge base for the student's clinical experiences. The course consists of a series of lectures and pre-clinical sessions. Various clinically related subjects in patient care, treatment and prevention will be covered with particular emphasis on the management of caries as a disease and the repair or replacement of teeth. The application of biomaterials in prosthodontics, caries prevention and management will also be presented.

### **DENT 3717.06: Endodontics III.**

This course is an extension of the preclinical component of Cariology II and is designed to reinforce and expand the knowledge base for third year students' endodontic clinical experience. The course consists of didactic and clinical components. The **didactic part** provides a series of lectures dealing with the basic biological principles and techniques in the area of biology of the dental pulp and periradicular tissue, pulp and periapical pathosis; diagnosis and treatment planning. Following the diagnostic lectures, students must pass their endodontic clinical diagnostic examination prior to doing endodontic consults on patients. Additional lectures will include pretreatment and temporization; considerations in molar endo; procedural errors; local anesthesia; endodontic emergencies; a review of instrumentation and obturation; restoration of endodontically treated teeth; endodontic failures and retreatment; apexification and apexogenesis techniques and; vital and non-vital bleaching procedures. The **clinical component** focuses on diagnosis and the application of endodontic principles and techniques while providing comprehensive treatment to assigned patients. Knowledge and skills will be developed through various assessments that include both Clinical and Clinical Simulations. Students must pass a Clinical Simulation Endodontic Skills Assessment Test prior to treating Clinical Patients.

### **DENT 3719.06: Periodontology III.**

The didactic component of this course will build upon understanding of periodontal diagnosis and treatment planning and will emphasize surgical procedures used in management of periodontal diseases. It will assist the student in appreciating and understanding the interrelationships between periodontics and other disciplines. Students will develop experience and competence in designated periodontic procedures while providing comprehensive treatment to assigned patients.

### **DENT 3811.01: Oral Pathology, Oral Medicine and Oral Radiology.**

This course is presented to third year dental students in the first and second terms. Students study the cause, pathogenesis, clinical, radiographic and microscopic characteristics of diseases affecting the head and neck. Emphasis is placed on clinical and radiographic recognition of abnormalities, detailed description of lesion features, summary of features as clinical descriptive categories, formulation of differential diagnoses, arrival at definitive diagnoses, patient management and above all, understanding the behaviour of important oral diseases. A foundation is provided for rotations through the Oral Pathology Clinic, and the practice of dentistry.

### **DENT 3818.03: Orthodontics III.**

This course exposes the students to the integration of theoretical and clinical growth and development and orthodontic treatment. The didactic portion of the course provides theoretical and clinical knowledge

underlying clinical orthodontic practice. Discussions are related to recognition, diagnosis, treatment planning, case selection, appliance selection and application, and treatment of a variety of orthodontic diagnoses frequently encountered by general dentists. These include topics such as Class I malocclusion, oral habits and maxillary expansion. The clinical portion of the course is designed to expose the undergraduate dental student to the collection and analysis of orthodontic records, orthodontic diagnosis and minor orthodontic treatment through patient care.

### **DENT 4211.03: Patient Care IV Seminars.**

This course is designed to provide senior students with additional knowledge in the subject areas of practice management, jurisprudence and ethics. The course will be a combined lecture/seminar format with a lecture series in the first term and a seminar format in the second term. The seminars will use a case based learning method. As well, a paper on the topic of their Table Clinic comprise a part of this course.

### **DENT 4212.06: Clinical Comprehensive Patient Care.**

This course is a comprehensive clinical course conducted during the third and fourth years of the dentistry program. Students gain clinical experience while treating patients in a comprehensive care clinic. The experience gained is based on patient care treatment completions within the disciplines of Endodontics, Periodontics and Prosthodontics and is measured by relative value units (RVU's). Minimal experience in selected procedures is required.

### **DENT 4220.03: Clinical Oral Diagnosis and Treatment Planning.**

This fourth year course is designed as a continuation and advancement from the previous year's course that promotes the philosophy of comprehensive patient care. This goal can be achieved by placing significant emphasis on the oral diagnosis and treatment planning of patients who present to our comprehensive treatment planning clinic. Each student will develop a comprehensive and timely treatment plan for each patient assigned to him/her during the oral diagnosis/treatment planning clinic rotation. Each treatment plan will be developed after a thorough examination of the patient, which will include a detailed medical/dental history, intra/extra oral examination and development of a diagnostic summary, from which a proper and logical active/inactive problem list will be created. Treatment planning experiences will encompass various degrees of patient complexities. In this clinical environment, students will continue to gain experience and apply more advanced concepts of oral diagnosis and treatment planning, in preparation for general practice.

### **Dent 4223.06: Periodontology IV.**

This course is designed to expand the student's knowledge and skills in a wide variety of areas in periodontics and prepare students for the management of patient's oral health needs. The course consists of a didactic and a clinical component. The didactic portion offers a series of lectures on various topics in periodontics, dental implants and temporomandibular joint disorders (TMDs). Moreover, students will get the opportunity to present clinical cases on temporomandibular joint disorders. In the clinical component of the course, students will develop diagnostic skills, experience and competence in providing non-surgical therapy for patients suffering from various forms of periodontal and TMD.

### **DENT 4400.03: Paediatric Dentistry IV.**

This full-year clinical/didactic course is offered through the Division of Paediatric Dentistry, Department of Dental Clinical Sciences. Throughout the class, students will be expected to apply didactic and clinical knowledge acquired in previous years to the diagnosis, treatment planning, and management of pediatric patients. Practical experience will be gained through rotations at the Harbour View School Clinic in Dartmouth, the North Preston Community Oral Health Clinic. Additional experience may be gained through a rotation at the Paediatric Dental Unit at the IWK Health Centre on an elective basis. New topics discussed will include an introduction to sedation in the Paediatric population and child protection. Other topics will include a series regarding common questions asked by parents to general practitioners in practice. The emphasis will be on practical clinical management related to these topics. Topics will include grinding and attrition of primary teeth, ectopic eruption, management of the patient with hypoplastic six year molars, frenums and others.

#### **DENT 4500.06: Oral and Maxillofacial Surgery IV.**

Surgical Conferences are held weekly during the first term. These seminars stress topics of clinical relevance to the patient requiring surgery in the oral and maxillofacial region. Senior students enhance their clinical skills by performing oral surgical procedures under supervision in the Oral Surgery clinic. On a rotational basis, minor and major oral and maxillofacial surgery is demonstrated in the following affiliated hospitals: Queen Elizabeth II Health Sciences Centre (Victoria General Hospital) and IWK Grace Health Care Centre (Izaak Walton Killam Hospital for Children). During the rotation an orientation to admission procedures, operating room protocol and support management of hospitalized patients is provided.

#### **DENT 4507.00: Elective.**

This course is designed to allow students to pursue, in depth, dentally related and to a lesser extent other health topics of particular interest to them that are not covered in other scheduled courses.

#### **DENT 4508.00: ART Elective.**

This course will provide additional clinical and didactic experience in advanced restorative techniques. The course will build on the principles taught in DENT/DENQ 3619 and in DENT/DENQ 4616. Students will be able to carry out advanced clinical procedures under close instructor supervision. The emphasis of the course will be on providing esthetic restorations that are in harmony with the patient's smile. Relevant classical and current literature on restorative techniques will be reviewed.

#### **DENT 4509.00: Implant Elective.**

The Implant Dentistry Elective in DDS IV builds on the DDS III Implant Dentistry course by providing more extensive study of the underlying principles and current research as found in the literature. It also provides opportunities for the students to treat patients with implant supported prostheses. Students' treatment experiences will include single and multiple fixed restorations as well as overdenture treatment. Students will also be expected to be familiar with implant surgical techniques and will assist at implant surgeries.

#### **DENT 4510.00: Surgical Periodontics Elective.**

This course has a didactic and a clinical component. The didactic component consists of a series of lectures/seminars on the rational, indications and the general principles of periodontal surgical therapy. In addition, a variety of surgical procedures, with an emphasis on those performed in the general dental practice, will be presented and discussed. In the clinical component of the course, the students will provide surgical periodontal care to patients. Each student is expected to perform a minimum of 6 periodontal surgical procedures under the supervision of the course director. These include periodontal flap procedures, crown-lengthening procedures and free gingival grafts. The student evaluation will be based on a written final examination and clinical performance.

#### **DENT 4512.00: Endodontics Elective.**

This course will provide new technology clinical endodontics and didactic experience in the use of rotary instrumentation in endodontic root canal preparation and vertical compaction of thermosoftened gutta percha for obturation of the prepared canal space. Although current literature on rotary instrumentation and thermosoftened gutta percha will be reviewed, the emphasis of the course will be on clinical next level techniques, new technologies and tips for success.

#### **DENT 4513.00: Oral and Maxillofacial Surgery Elective.**

This elective in DDSIV allows the student to gain extensive exposure to the specialty of oral and maxillofacial surgery. Students will be involved in research, scholarly activity and clinical care of surgery patients in the hospital setting.

#### **DENT 4517.00: Dental Public Health Elective.**

Dental public health involves activity directed toward the promotion and improvement of the population's oral health, especially in marginalized groups. The course will include seminars focusing on prevention and community dentistry, as well as clinical rotations to promote oral health and provide basic dental care of patients in underserved communities.

#### **DENT 4521.00: Oral Pathology Elective.**

This elective aims to provide supplementary clinical and laboratory experience in oral pathology, clinical oral pathology and oral medicine. Students will observe or assist in patient management in the Faculty of Dentistry Oral Pathology Clinic, and the QEII Oral and Maxillofacial Surgery Department. Clinical photographs of oral lesions will be taken when possible. Students will follow any biopsies of their patients through the oral pathology laboratory where they will assist in accessioning, grossing, histopathological evaluation and sign-out. Gross and microscopical photographs will be taken when possible. Students will assemble a portfolio of cases in a Clinico-Pathologic Conference (CPC) format.

#### **DENT 4550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong, breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

#### **DENT 4616.12: Prosthodontics IV.**

While providing comprehensive patient treatment to assigned patients, students will develop experience and competence in designated fixed/removable prosthodontic procedures, and operative dentistry procedures. Students in the implant elective program will gain experience with implant supported prostheses. Students in the ART elective will gain experience with advanced restorative techniques. Students will also receive didactic material in a lecture/seminar format during the first term. Management of fixed restorative treatment, aesthetic dentistry, dentin bonding principles and techniques for the construction of fixed and removable prostheses including communication with commercial dental laboratories will be discussed. Relevant biomaterials topics will be discussed. Students will be required to complete a pre-clinical extracurricular assignment in Term 1.

#### **DENT 4717.06: Endodontics.**

The course consists of a clinical component supplemented by a series of lectures and seminars. **Clinical** content will focus on the application of endodontic principles and techniques while providing comprehensive treatment to assigned patients. **Lectures** will deal with the basic biological principles and techniques in the areas of diagnosis, treatment, perio-endo inter-relationships, endodontic surgery, new instrumentation techniques and management of dental traumatic injuries. **Seminars** will be a individual case presentations by students. The purpose of these seminars is to provide students with an opportunity to share clinical experiences with one another. Students will also submit a written case report for evaluation.

#### **DENT 4811.01: Oral Pathology, Medicine and Radiology.**

Students will study the etiology, pathogenesis, clinical and microscopic characteristics of diseases affecting the head and neck area. Emphasis is placed on recognition of abnormalities, construction of differential diagnoses, arrival at definitive diagnoses and patient management. Appropriate topics in oral medicine, head and neck oncology and interpretation of oral radiology will be included. Students will attend a rotation in the Mouth Clinic in the dentistry building and a rotation to the Cancer Treatment and Research Foundation at the Oncology Clinic at the Camp Hill Medical Centre.

#### **DENT 4818.03: Orthodontics IV.**

This course consists of two parts: the clinical orthodontic component and the didactic orthodontic component. The clinical course is designed to expose the undergraduate dental student to the collection and analysis of orthodontic records, orthodontic diagnosis, treatment planning, case selection and minor orthodontic treatment appropriate for a general dentist through patient care. The didactic portion of this course is student seminar based and provides a forum for debate and exchange of ideas concerning current orthodontic topics involving the general dentists. It also reviews basic treatment principles important to the general dentist and the role a general dentist plays in the provision of orthodontic treatment.

## VII. Graduate Studies in Oral and Maxillofacial Surgery

The Department of Oral and Maxillofacial Sciences offers a six-year combined graduate program leading to the degrees of MD/MSc. Graduates of this program are eligible for examination by the Royal College of Dentists (Canada). Details covering the program are contained in the Calendar of the Faculty of Graduate Studies.

## VIII. Graduate Studies in Prosthodontics Combined with Biomedical Engineering

Program not offered in 2011-2012

Graduate Studies in Prosthodontics combined with Biomedical Engineering is a three-year program designed to provide extensive clinical and research experience in the related fields of Prosthodontics and Biomedical Engineering. Students will provide treatment for patients with complex needs in areas of Fixed and Removable Prosthodontics, Implants and Maxillofacial Prosthodontics. Clinical and research work is conducted in dedicated space in the Faculty of Dentistry clinics and dental laboratories, as well as the fully equipped biomaterials research and the tissue engineering facilities. More information is contained in the calendar of the Faculty of Graduate Studies and at the following URL: <http://www.dentistry.dal.ca/programs/gradpros>.

Graduate training is primarily delivered through seminars, laboratory and clinical activities and a research thesis. Students require a minimum of 5 two-term courses in Prosthodontics and 6 one-term courses taken for the 5000-level courses offered by the School of Biomedical Engineering in addition to their research thesis.

There is potential for tailoring the focus of study depending on your area of interest by selecting from the 5000-level courses offered by the School of Biomedical Engineering <http://www.dal.ca/biomedical>.

A research thesis representing original work by the student will be carried out under supervision of a faculty member of the School of Biomedical Engineering.

All students in the program will be given the opportunity to teach in the undergraduate DDS program. Stipends will be available. Graduates will meet all requirements for certification and licensure as dental specialists in Prosthodontics in Canada and the United States.

## IX. Graduate Studies in Prosthodontics

Program not offered in 2011-2012

Graduate Studies in Prosthodontics is a three year program designed to provide clinical experience in Prosthodontics, research experience and experience in dental education. The program leads to a MSc in Prosthodontics degree. Students will provide treatment for patients with complex needs in areas of Fixed and Removable Prosthodontics, Implants and Maxillofacial Prosthodontics. Clinical and research work is conducted in dedicated space in the Faculty of Dentistry clinics and dental laboratories and research laboratories. More information is contained in the calendar of the Faculty of Graduate Studies and at the following URL: <http://www.dentistry.dal.ca/programs/gradpros>.

Graduate training is primarily delivered through seminars, laboratory and clinical activities and a research thesis. Students will take courses in Prosthodontics, research design, statistics, adult education, and biomedical sciences.

A research thesis representing original work by the student will be carried out under supervision of a faculty member of the Faculty of Dentistry.

All students in the program will be required to teach in the undergraduate DDS program. Stipends are available for qualified students. Graduates will meet all requirements for certification and licensure as dental specialists in Prosthodontics in Canada and the United States.

## X. Paediatric Dental General Practice Residency

The IWK Health Centre Dental Department (IWK) in conjunction with the Division of Paediatric Dentistry, Department of Dental Clinical Sciences (DCS) offers a one-year Commission on Dental Accreditation of Canada (DDAC) accredited Dental Residency Program focusing on Paediatric Dentistry. This new one-year post graduate program will offer an enhancement of clinical skills for recently graduated dentists (DDS/DMD or equivalent) who have an interest in Pediatrics and Hospital based dental care. The total number of students in the offerings of the program will not exceed two students for the year.

Students will require a Doctor of Dental Surgery (DDS) or equivalent from a CDAC accredited or reciprocal accredited institution. A minimum 'B' average in undergraduate and professional coursework will be required. Students will have displayed an interest and aptitude in Paediatric Dentistry in their undergraduate curriculum as displayed by their marks in third and fourth year Paediatric Dentistry and reference letters.

## XI. The Graduate Program in Periodontics

The Graduate Program in Periodontics is a three-year Masters in Periodontics program designed to train clinicians for the specialty practice of periodontics using an evidence based approach. Students will be trained to the level of proficiency in the management of patients in need of treatment for a variety of periodontal diseases and mucogingival defects, Temporomandibular Joint Disorders (TMDs), dental implant therapy and conscious sedation. A major emphasis will be placed on patient care utilizing an evidenced based approach. In addition, students will be expected to complete a research project that is suitable for publication in a peer-reviewed journal.

## XII. Continuing Dental Education

Manager, Continuing Dental Education, Alumni Affairs and Development

The Faculty of Dentistry has an office for Continuing Dental Education which organizes courses for dentists, dental hygienists, and other allied dental health personnel. The principal objective of these courses is to assist in the maintenance of competence for the dental profession. Presentations include the review of basic knowledge and introduction of new concepts and techniques. Members of faculty, local resource people, and visiting clinicians are employed. Most of the continuing education programs are offered in Halifax, but some are also presented in other centres. Current Dental and Dental Hygiene students are also allowed to attend regular sessions at no charge. The content, location, and scheduling of the various courses are based on advice received from professional associations, assessment of client needs, current trends, and the Faculty Continuing Education Committee, a sub-committee of the Faculty of Dentistry Curriculum Committee. Tuition fees are cost related and are set individually for each class.

Interested persons should address inquiries to:

Continuing Dental Education  
Faculty of Dentistry  
Dalhousie University  
Halifax, NS B3H 3J5  
Phone: (902) 494-1674  
Fax: (902) 494-5101

# Dental Hygiene

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## School of Dental Hygiene

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### Director

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## Academic Staff

### Associate Professor

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### Assistant Professors

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Grant, P.D., DipDH, BA (SMU), MEd (Dal)  
Maillet, P.J., DipDH, BA, MEd (Dal)  
Mitchell, T., DipDH, BSc, MEd (Dal), CGN (MSVU)  
Neish, N., DipDH (Dal), BA (Acadia), MEd (Dal)  
Robb, C.L., DipDH (Dal), BA (Moncton), MEd (Dal)  
Tax, C., DipDH, BA (Manitoba), MEd (MSVU)

### Adjunct Assistant Professor

Hornett, P., DDS (WNSM), MSc (London)

### Lecturer

Blei, B., DipDH, LLBC (Dal)

### Instructors

Bekkers, S., BSc (St.F.X.), DipDH (Dal)  
Bell, H., BSc (Dal), Dip DH (Dal)  
Fougere, K., BA (Dal), DipDH (Dal)  
Harris, T., DipDH (Dal)  
Haslam, K., DipDH, BA (Dal)  
Hawthornth, P., DipDH (Dal)  
Kohler, M. DipDH (Dal)  
MacCallum, T., DipDH, BDH (Dal)  
MacPherson, M., BSc (Toronto), Dip DH (George Brown College)  
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Parker, A., DipDH (Dal), BEd (MSVU)  
Pascher, D., DipDH (Dal)  
Reid, K., DipDH, BEd (MUN)  
Thistle, C., DipDH, BSc (Dal)  
Thompson, S., DipDH, BA (Dal)

## I. Introduction

Dental Hygiene was first offered as a formal educational program in 1913 at the Fones School in Bridgeport, Connecticut, USA. Since then the profession has grown steadily and there are now over 55 dental hygiene programs in Canada. In recent years, the movement has spread to other countries as well. In 1961 a diploma program in dental hygiene was established in the Faculty of Dentistry, Dalhousie University.

Dental Hygienists are health professionals educated to prevent dental disease and help people maintain oral health. Their activities in oral health promotion are both clinical and educational and take place in private dental offices, schools, clinics, hospitals and other settings in the community.

Most Dental Hygienists are employed in private dental offices. There are, however, other areas of practice such as local governments and schools, provincial and federal government departments, industry, hospitals and teaching in allied dental health programs.

Courses in the dental hygiene program are offered within the Faculties of Medicine and Dentistry. The educational program is supplemented by student attendance in Faculty-operated community-based clinics. The School of Dental Hygiene is located on Carleton Campus at Dalhousie University.

The School of Dental Hygiene, Faculty of Dentistry offers a one-year degree completion program. The degree completion program provides dental hygiene diploma graduates the opportunity to further their studies in the field of dental hygiene. Graduates are awarded a Bachelor of Dental Hygiene degree. Enrolment is limited to 16 students.

University regulations applicable to the students of all Faculties are found in the general section of this Calendar.

## A. Provincial Regulations

Students are reminded that the Diploma in Dental Hygiene is not the only requirement for admission to practice in any province. The regulations for admission to practice are established by the licensing board of the province in which the person desires to practice. Information on these requirements may be obtained from the respective licensing boards whose names and addresses are available from the School of Dental Hygiene.

## B. Diploma

The two-year program leads to a Diploma in Dental Hygiene.

## C. Degree

The one year degree completion program leads to a Bachelor of Dental Hygiene. Students must have successfully completed a Diploma in Dental Hygiene and be eligible for licensure in Nova Scotia.

## D. Transfer Credits from Dental Hygiene to the Faculties of Arts and Social Sciences and Science

Students who have completed the Diploma in Dental Hygiene at Dalhousie University may receive 5 credits towards a BA or BSc.

Applicants should seek additional information from the Faculties of Science and Arts and Social Sciences.

## II. Admission

### Diploma in Dental Hygiene (2 year program)

Applicants must have completed before June 1 of the year of expected entry to Dental Hygiene, at least five full year university courses\*, including full-year courses in biology, psychology, sociology, an approved writing course\*\* and a one-term course in introductory statistics and a one-term course in introductory chemistry.

\*a combination of two one-term academic courses in the same discipline is considered equivalent to one full-year academic class.

\*\*Writing course: a course which involves a significant written component which is evaluated for composition, structure, grammar (e.g., 2 major papers; 4-6 minor papers)

The School of Dental Hygiene is committed to increasing the number of qualified dental hygienists who belong to Black or aboriginal peoples of the Atlantic region. Applicants from these groups who have completed the entrance requirements may self-identify to the Admissions Committee in the form of a letter.

Selection of accepted candidates is primarily based on academic performance in the required courses and overall academic standing in university. The Admissions Committee may make use of non-academic factors in the selection process including additional information submitted by applicants.

## Bachelor of Dental Hygiene

Applicants to the one-year Bachelor of Dental Hygiene degree completion program must have completed a diploma in Dental Hygiene from an accredited program in Canada or the United States, and must be licensed or eligible for licensure to practice dental hygiene in Nova Scotia.

All applicants must have completed before June 1 of the year of expected entry to the Bachelor of Dental Hygiene, at least five full year university level courses\*, including a one-term course in introductory statistics.

\*A combination of two one-term academic courses in the same discipline is considered equivalent to one-full year academic class. In compliance with Dalhousie University degree regulations, all students must complete at least 45 credit hours at Dalhousie to be granted a degree. The Bachelor of Dental Hygiene courses equal a total of 30 credit hours. Therefore, students who have not completed at least 15 credit hours and/or a diploma in Dental Hygiene at Dalhousie will be required to complete 15 credit hours of elective courses before the Bachelor of Dental Hygiene degree can be awarded. See the Faculty of Dentistry Hygiene website: (<http://www.dentistry.ca>) for further details.

### A. Assessment of Applicants with an International Educational Background

The Faculty of Dentistry will consider applications to the Diploma in Dental Hygiene program from individuals who have received their former education outside the Canadian educational system. Such applicants will be required to fulfil specific criteria, as outlined below.

1. If the applicant's first language is not English, he/she must complete an English language proficiency test such as the TOEFL (Test of English as a Foreign Language) with a minimum score of 580 or computer-based scored 237 or iBT score of 90 (students must achieve 4.0 on the essay or TOEFL writing test); or IELTS score of 6.5; or MELAB score of 81; or CAEL score of 70; or CanTest score of 4.5.
2. Original supporting documents from previously completed education must be provided, including course descriptions, and explanation of the grading system used, and course standings. If this documentation does not clearly indicate completion of the prerequisite courses at a competitive level, the applicant must complete one year of prerequisite university study in North America.

### B. Application Procedure

Persons who have satisfied the entrance requirements may apply for admission. Applications must be made on the undergraduate application forms, and must be submitted to the Office of the Registrar by March 15 in order to be considered for admission in the following academic year. Applications must be complete with academic grades by March 15 to be considered by the Admissions Committee. However, applications filed by the deadline can be completed any time up to June 1 and will be considered when completed if unfilled places remain in the entering class. Preference will be given to residents of the Atlantic Provinces. While all applications will be reviewed by the Admissions Committee, the Committee will decide on an annual basis if any positions will be offered to applicants who are not residents of the Atlantic Provinces. To qualify as a permanent resident of any province, an applicant must meet the following criteria:

1. Applicant's parent(s), guardian, or spouse must reside in that province on a permanent basis;  
or
2. If the applicant is independent of his/her parent(s) or guardian, he/she must have lived and worked on a full-time basis in that province (not attending school on a full-time basis) for a minimum of one full year;  
or
3. An applicant whose parent(s), guardian, or spouse do not meet the residency requirements as a direct result of a recent employment transfer, either into or out of a particular province would be given the choice (either the province of immediate former or future residency) of his/her province of residence.

A new application form must be submitted each year in which application is made. Official transcripts in support of the academic record must be forwarded to the Admissions Office, Faculty of Dentistry, Dalhousie University, Halifax NS B3H 1W2 by the institution or institutions at which

the applicant completed pre-profession studies. If the applicant is still engaged in university studies, an interim transcript should be submitted. However, a final transcript must be forwarded on completion of these credits. Dalhousie University regards an applicant's failure to disclose all his/her previous academic experiences to be an academic offence which could lead to subsequent dismissal from the University. Applicants must ensure that all successful or unsuccessful high school and/or university attendance is indicated on the application form. Applicants to dental hygiene must complete the dental hygiene supplementary information form, available in the application package or from the School of Dental Hygiene or the Registrar's Office, Dalhousie University.

An application will not be considered if the applicant has been required to withdraw from studies at any other School of Dental Hygiene at the request of the Faculty of that institution, unless the application is supported by a recommendation from the Director of that School.

Competitive applicants may be requested to make themselves available for an admissions interview or an orientation session.

On notice of acceptance to the School of Dental Hygiene, applicants must deposit with the Registrar a tuition deposit before a specific date.

These regulations may be amended without notice by the Faculty of Dentistry.

The nature of the programs in the Faculty of Dentistry involve students interacting with patients in a health care environment, and places students in a position of special trust with patients. Therefore, certain Faculty regulations must be adhered to by all students, including but not limited to: requirements for TB testing, immunization and CPR, criminal records and child abuse registry checks, clinic attire and clinical asepsis protocols. All requirements are outlined in the student Clinical Policy and Academic Policy manuals, provided to students at the beginning of each academic year.

#### *Immunization and CPR Requirements*

Acceptance into the Faculty of Dentistry clinical programs is normally conditional upon receipt of evidence of complete immunization as follows: Diphtheria-tetanus (dT), Polio, Measles, (Rubeola), Mumps, Rubella, Hepatitis B (including post-immunization AB titres), and Varicella. Applicants are required to complete the Infectious Diseases and Immunization checklist for Health Care Worker Students as a condition of acceptance to the program. If Post-HB vaccination antibody test results have not been completed at the time of acceptance, at a minimum, the applicant must provide blood test results demonstrating a HB viral load  $<10^3$  genome equivalents/ml for acceptance into the program.

Applicants whose immunization results indicate that they are HBeAg positive or who have a viral load  $>10^3$  genome equivalents/ml will not be accepted into any clinical programs. Dalhousie University will reassess eligibility for admission should the applicant's status change.

Students who do not acquire immunity from the HB vaccination series or who refuse the HB vaccine are susceptible to acquiring hepatitis B. Applicants in this category will be denied admission based on this criteria. However, after admission, any student becoming HBeAg positive or whose viral load exceeds  $10^3$  genome equivalents/ml during the course of their studies will be removed from patient care activities. Such modification of the clinical program may prevent a student from meeting graduation requirements.

Students who become HBeAg and whose viral load is greater than  $10^3$  genome equivalents/mL, have an ethical obligation to report their status to the Ad-hoc Committee on Bloodborne Pathogens (contact Ms. MacDonald at the College of Physicians and Surgeons of Nova Scotia at 421-2209) or to the Infection Control Coordinator, Assistant Dean Clinics, Assistant Dean of Student Affairs or Assistant Dean, Academic of the Faculty of Dentistry.

The cost of all immunizations and titres are the responsibility of the student/applicant.

During the first weeks of studies, students receive a 2-step Mantoux skin test to establish their tuberculin status.

Annual influenza immunization is required for all students during each year of study.

Students accepted to the program must have a current Level C CPR/AED (automated external defibrillator) course.

A full explanation of the Faculty of Dentistry policy related to immunizations may be found on the Faculty of Dentistry website: (<http://www.dentistry.dal.ca>).

#### ***Criminal Records Check and Other Screening Documentation***

The Faculty of Dentistry, Dalhousie University does not require a Criminal Records Check or other screening procedure (e.g. Child Abuse Registry Check, Vulnerable Sector Screen) as a condition of admission into its programs. However, Students should be aware that such record checks or other screening procedures may be required by facilities (schools, community clinics, armed forces, etc) outside the University used for clinical placements, or experiences related to an academic course assignment, which, in some instances, may be a requirement for graduation. It is the student's responsibility to have such procedures completed; and the cost of the documentation completion is the responsibility of the student.

Such facilities may refuse to accept students in the basis of information contained in the record check or other screening procedure. If the student is unable to complete a clinical requirement due to a failure to meet the record check or screening requirements of the facility; or, if the student is refused access to the facility on the basis of the information provided, such a student may fail the course, and as a result, in some instances, may not be eligible for progression of graduation.

Note that facility requirements may change from time to time and are beyond the control of the University.

Details on the requirements for such documentation and the deadlines for submission of documentation in a timely manner are provided to students by the Faculty of Dentistry after registration in the program.

Students should also be aware that some professional regulatory bodies may require a satisfactory records check/**screening procedure** as a condition of professional licensure.

### **C. Transfer Students**

Transfer students are not normally admitted to the diploma in Dental Hygiene program. In order to be considered for admission as a transfer student, applicants must have met the admission requirements to the diploma in Dental Hygiene program, and submit a letter of recommendation from the director of their current program. Transfer students will be considered only under exceptional circumstances, if places are available in the program and if the curriculum of the current program closely matches the curriculum at Dalhousie.

## **III. Academic Regulations**

The following section describes academic regulations within the Faculty of Dentistry. More detailed information is provided to each student at the beginning of the academic year in the Academic Policy Manual and the Clinic Policy Manual. These manuals contain information for students and faculty members on the following areas: Evaluation of Students, Grade Procedures, Remedial Opportunities, Supplemental Examinations, Promotion and Graduation, Examination Regulations, Appeal Procedures, Course Waivers, Absences, Senate Discipline, Student Course Evaluation and Clinic Protocol and Procedures.

### **A. Academic Year**

The academic year for the first, second year and BDH in Dental Hygiene begins in early September and continues until the latter part of April. Courses begin immediately after the regular registration date. Late registration will be permitted only under exceptional circumstances and with the approval of the Dean.

### **B. Course Outlines and Program Changes**

Before the beginning of term, each Course Director must provide a copy of the course outline, including evaluation methods according to University

and Faculty format with any individual additions, to the Associate Dean for Academic Affairs.

Students must be provided with a course outline by the instructor at the first meeting of the class. Program changes, as to content, requirements, etc., may be necessitated and may not be reflected in a given edition of the calendar. Such changes will be included in the course outline provided to students at the first meeting of the class. Instructors may make changes to course outlines at any time. If, however, these changes affect any of the following areas, at least two-thirds of enrolled students must approve the variations in order for them to be valid: (a) assessment components; (b) weight of individual assessment components; (c) examination requirements with a value of 10% or greater.

### **C. Course Waiver Policy**

Course waivers may be granted for courses in the Dental Hygiene program only in exceptional circumstances. Requests for such waivers must be directed to the Assistant Dean for Academic Affairs and must be accompanied by University transcripts, course descriptions, and course outlines.

Students who are granted a course waiver shall, for the purpose of establishing grade point average, have their final grades computed using only the required courses being taken.

Students who are granted a course waiver must complete at least 80% of the program to be eligible for prizes or awards.

Policies and procedures regarding application for and awarding of course waivers are outlined in the Academic Policy Manual.

### **D. Review of Students**

Student academic and professional progress is reviewed at least twice each term by the appropriate Academic Standards Class Committee (membership - Course Directors of the respective year of the program), and each student is provided with his/her Achievement Classification (I to VI as described in the Academic Policy Manual). Appropriate remedial actions will be initiated for students with Classifications II to VI. Students with Classifications IV to VI may be placed on probation.

### **E. Guidelines for Student Probation**

1. A student may be placed on probation for academic or professional reasons, described in classifications IV, V, VI in the Academic Policy Manual.
2. Probation shall usually occur when there are multiple concerns in one or both of the above parameters.
3. Probation shall only be implemented following thorough review of a student's progress by the appropriate Academic Standards Class Committee.
4. Student(s) on probation must be reviewed regularly at the meeting of the appropriate Academic Standards Class Committee.
5. A student who has fulfilled all of the conditions of probation, in the opinion of the Class Committee, shall be removed from probation and permitted to proceed in the appropriate course as recommended by the Class Committee.
6. A student may not be eligible to sit final examinations and may not be promoted or graduated while on probation.
7. A student who has not met the conditions of probation shall be required to (a) enroll in a supplementary educational program; or (b) repeat an academic year; or (c) withdraw from the Faculty.

### **F. Academic Accommodation for Students with Learning Disabilities**

See University Regulations, page 11. Dalhousie University is committed to providing equal educational opportunity and full participation for students with learning disabilities. Students wishing to discuss accommodations for disabilities within the Faculty of Dentistry should contact the Assistant Dean for Student Affairs, Faculty of Dentistry before classes commence.

## G. Examinations and Course Grades

### 1. Admission to Examinations

In order to qualify for admission to examinations, candidates must attend the prescribed courses of the curriculum regularly and punctually.

Students are expected to attend all lectures, seminars, preclinical and clinical sessions. A student may not be eligible to sit final examinations while on probation. The Examination Regulations of the University are followed, as well as specific Faculty of Dentistry regulations which are provided to students in the Academic Policy Manual.

### 2. Promotion and Graduation

A student will not normally be promoted or graduated unless a passing grade in all subjects and an overall grade point average of 2.0 has been achieved.

A student who has achieved an overall grade point average of 2.0 and received one or two failing grades may be offered the privilege of taking a supplemental examination(s). Successful passing of the supplemental examination(s) prior to commencement of the academic year will permit promotion. Failure to pass the supplemental examination(s) may result in the student being offered the privilege of repeating the year.

As an academic requirement, students are assessed in each year on their aptitude and fitness for the profession of Dental Hygiene (professionalism) as described in course outlines and the Academic Policy Manual. A student who, in the judgment of the Faculty, fails to attain satisfactory standard on this assessment may be retired from the Faculty.

Students must prepare exercises, reports, etc. as may be prescribed, and in-class laboratories or practical work satisfactorily before any credit for that course can be given. If Faculty deems it advisable, giving consideration to the student's overall performance and the constraints of time and resources, students may be given the opportunity to clear any deficiencies by means of remedial programs.

Students who, in the judgment of the Faculty, are deficient for any reason in their clinical practice may be required to return for a special clinical session or to repeat the year. The satisfactory completion of this entire clinical session is required in order to allow students either to continue in their regular class or to graduate at the next subsequent Convocation.

### 3. Course Grades

Upon completion of a class, a student is awarded a grade of A+, A, A-, B+, B, B-, C, F, or INCOMPLETE, or for courses designated, a grade of PASS, FAIL.

In this system; A+ is the highest and C is the lowest passing grade; an INC grade allows an otherwise qualified candidate to fulfil the course requirements within a specified time in a program determined by Faculty; an F is a failing grade which may allow an otherwise qualified candidate supplemental examination privileges, or may disqualify the student from further evaluation without repeating the course and/or the entire academic year.

The Course directors are responsible for defining the requirements for grades.

### 4. Grade Point Equivalents and Averages

The numerical percentage score-letter grade equivalency scale for all courses in the Faculty of Dentistry is as follows:

In this scale 65% is the minimum passing numerical score. GPA equivalencies for final letter grades are consistent with the Dalhousie University GPA equivalency scale.

Numerical Score	Letter Grade	Grade Point Equivalent
95-100	A+	4.30
90-94	A	4.00
85-89	A-	3.70
80-84	B+	3.30
75-79	B	3.00
70-74	B-	2.70
65-69	C	2.00

N/A	INC	0.00
0-64	F	0.00
N/A	P(pass for credit)	Neutral
N/A	W (withdraw)	Neutral
Pending	Neutral	

INC - Incomplete: Students are expected to complete all class work which is required to achieve a passing grade by the prescribed deadlines. Only in special circumstances and with appropriate Academic Standards Class Committee concurrence, or that of the Associate Dean for Academic Affairs acting for the ASCC, may an instructor extend such deadlines. Incomplete work in a course must be completed by a time assigned by the relevant Academic Standards Class Committee and approved by Faculty. An INC will be converted to the earned grade if completed by the deadline. Otherwise, the course grade point value will be calculated as 0.0 on the student's grade point average, and the INC grade will normally be converted to a failing grade, unless the student is given permission by Faculty to withdraw from the course. Students cannot be promoted with INC grades.

W - The grade of W is recorded for courses in which a student withdrew with Faculty approval. No grade value is recorded. It should be noted that all courses for a given year must be successfully completed before a student is promoted or graduated.

### 5. Calculation of Average

Each course, except courses with final grades of PASS or FAIL, is assigned a course weight based on its length and the mix of lecture, laboratory or clinical components. An individual student's point equivalent for each course is multiplied by the adjusted course weight. The student's yearly grade point average is calculated by dividing the sum of the weighted grade point equivalents earned for all the separately numbered courses for the academic program year by the sum of the adjusted course weights for all courses.

A Cumulative Grade Point Average is calculated by adding the total weighted grade point equivalents earned and dividing by the sum of the adjusted course weights for all courses taken. The Cumulative GPA is used for the awarding of certain prizes, awards and scholarships.

### 6. Supplemental Examinations

A candidate who has received failing grades in not more than two subjects of any year and who has attained the required overall grade point average of 2.0 may be offered the privilege of taking supplemental examinations in such subjects, provided he or she is qualified in attendance and class work for admission to examination.

Supplemental examinations are normally written after July 15 and before August 10, and are normally written at Dalhousie, unless approval is obtained to do otherwise.

Application for admission to a supplemental examination must be made on or before July 15th. Application forms may be obtained from the Dean of Dentistry's Office and must be accompanied by a supplemental examination fee.

On passing a supplemental examination or evaluation, a notation is made on the transcript that the course is passed by supplemental activity, and no grade point value is assigned. If the student fails the supplemental examination or activity, a grade of F will be recorded for that course. Failing grades must be replaced by passing grades before a student is promoted to the next year of the program. Failure of supplemental examination(s) may result in the student being offered the privilege of repeating the year.

### 7. Illness or Absence

It is the student's responsibility to immediately inform the Office of the Dean and, when clinical activities are involved, any scheduled patients, of any absence due to illness, injury, or other serious cause.

In the case of illness or injury, the student may be required to present a valid medical certificate documenting the illness/injury. In the case of a student missing a test/examination, a medical certificate will be required before a rescheduled test/examination is planned or a clinic penalty/

suspension is removed. In the case of a serious personal problem, the student will be required to submit to the Associate Dean for Academic Affairs, a confidential written statement documenting the reasons for absence. Re-scheduled examinations will not be granted without written approval of the Assistant Dean.

Students are required to attend all assigned clinics. Penalties for not attending clinics are indicated in the clinic course outline.

Failure to report to classes or clinic or to report an absence due to injury or illness as required may result in suspension of clinic privileges and may limit a student's right to appeal an unsatisfactory course grade or the failure of an academic year. Written policies describing the responsibilities of students in such cases are available to all students in the Academic Policy Manual.

## 8. Appeals

Students have the right to appeal their assigned grade in a given course as well as decisions regarding promotion or graduation. Written policies describing the Faculty's appeal procedures are available to all students in the Academic Policy Manual.

## H. Instruments, Equipment, Textbooks

All required laboratory and clinic instruments, supplies, equipment, uniforms (not shoes), lockers, manuals, textbooks and a 2-step Mantoux skin test are supplied by the Faculty for students in the fees. There are three parts to these fees:

1. Students Kits - preclinical lab equipment and supplies, uniforms, lockers
2. Academic Clinic Fee - Dental clinic patient care equipment and supplies and facilities renewal fees.
3. Mandatory Technology Fee - computer, software warranty and maintenance support and Help Desk services.
4. Mandatory Electronic Textbook Fee - all textbooks and supporting Vital Source software, drug databases, access to the Clinic Patient Information system and many other electronic learning and study features.

See details below including the summary of typical fees.

Many instruments and equipment items are signed out to students. Students are financially responsible for any lost or damaged items. Diplomas/Degrees are withheld pending the return of or payment for missing/damaged items.

The University obtains all student kit and academic clinic fee items for all students in order to maintain minimum standards and to ensure on time delivery and availability for September.

**Student kit Refunds:** If for any reason, a student leaves their program during the first week of the official start of the program (of any year) the student will receive a full refund of the kit they received for that year of the program upon full return of the kit to the Assistant Dean, Clinics. There will be no refunds after the first official week of the program.

**Academic Clinic Fee Refunds:** There are no refunds of the Academic Clinic Fee.

**Mandatory Technology and Mandatory Electronic Textbook Refunds:** There will be no refunds after the first official week of the program in any year. A refund in the first week requires a return of the leased computer and all peripherals including shipping case and back pack to the Coordinator of Building Services.

**Mandatory Technology Fee:** 2010/11 is the second year of the gradual implementation of the new electronic curriculum begun in 2009/2010. First year DH students receive a lease to own, laptop computer and software which replaces textbooks and most manuals and provides access to the clinic patient information system. All software, support and maintenance are provided.

Diplomas/Degrees are withheld pending the return of or payment for missing/damaged items.

**Mandatory Electronic Textbook Fee:** For DH 1 and 2 all required text books and manuals are in electronic form on each student's laptop computer.

\*Fees:

Diploma in Dental Hygiene and Bachelor of Dental Hygiene 2011/12

	Textbooks	Electronic Technology Fee (laptop computer)	*Academic Clinic Fee	Student Kit Fee	Total
Year 1	\$1142.00	\$1908.00	\$2500.00	\$3073.00	\$8623.00
Year 2	\$1142.00	\$1908.00	\$1625.00	\$902.00	\$5577.00
BDH Program					
Year 1			\$250.00	\$918.00	\$1168.00

\*The Academic Clinic Fee for academic year 2011/12 for DH2 will increase to \$2500.00.

It is estimated that students will spend approximately \$150.00 in second year on expenses related to completion of special projects and transportation to external clinical rotations.

## IV. Academic Program

### Policy Statement on Interprofessional Health Education

Students in the Faculties of Dentistry, Health Professions and Medicine are required to participate in interprofessional health education activities. These activities, together with specific program requirements, are currently evolving and in transition and are integrated into the curricula of individual programs. Participation is mandatory. The objective of interprofessional education in the Faculty of Dentistry are to:

1. Learn and develop skills and strategies for working effectively to address complex problems and issues with other professionals, colleagues and clients/consumers/patients; and
2. Develop an awareness of, and respect for, the expertise, roles and values of other professionals, colleagues and clients/consumers/patients.

### First Year - Diploma in Dental Hygiene

#### DEHY 2550.00: Mindfulness Elective.

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

#### DEHY 2800.00: Elective.

This course is designed to allow students to pursue, in depth, dental hygiene related, and to a lesser extent, other topics of particular interest to them that are not covered in scheduled courses.

#### DEHY 2825.06: Radiology.

This course includes the technical and theoretical aspects of radiology, preliminary interpretation of radiographs, as well as the hazards and safety of radiation. Course material will be presented through lectures, small group activities and laboratory sessions. Laboratory sessions include a "hands on" portion that allows students to take radiographs using prototype heads. The principles of digital imaging will be implemented and students will use this technology to complete practical assignments.

#### DEHY 2805.01: Periodontics.

This course presents the basic clinical, histologic and radiographic parameters needed for the assessment of normal and diseased periodontal structures. Likewise, this course also covers the basic elements of the inflammatory process and the immune response, and the microbiologic and histopathologic changes associated with the initiation of gingivitis and its progression to chronic periodontitis. Finally, the course deals with the cellular interpretation of the clinical response of the periodontium to the initial phase of treatment.

### **DEHY 2806.03: Dental Biomaterials Science.**

This course involves the study of the composition and properties of dental materials that are relevant to dental hygiene practice. The application of biomaterials science to clinical practice is considered through lectures, demonstrations and laboratory exercises. Emphasis is placed on the reasons why specific materials are used and how these materials interact with their environment.

### **DEHY 2809.03: Nutrition for Preventive Dentistry.**

This course provides information and an opportunity for discussion on nutrition, how it impacts on our way of life, our health and dental hygiene. The learner will be exposed to and given an understanding of how to interpret food intakes in relation to healthy eating and dental hygiene using the tools: Canada Food Guide for Healthy Eating and the new Dietary Reference Intakes (DRI).

### **DEHY 2812.03: Fundamentals of Clinical Dental Hygiene - Theory.**

This full year lecture course is an introduction to the knowledge and concepts necessary to understand and practice clinical dental hygiene as a process of care.

### **DEHY 2816.01: Dental Hygiene Ethics.**

Dental Ethics is presented in a series of lectures and problem solving exercises on the theory and principles of ethics. Topics discussed include professional models as well as a thorough examination and application of the CDHA Code of Ethics. The approach to the Code of Ethics is one that encourages ethical reasoning, problem-solving and critical thinking.

### **DEHY 2817.09: Fundamentals of Clinical Dental Hygiene.**

This course is an introduction to the knowledge, concepts and skills necessary to understand and practice clinical dental hygiene as a process of care. This dental hygiene process of care involved four phases: assessment, planning, implementation and evaluation. This course is competency based, with an expectation that the student will master specified didactic (theory) material as well as laboratory and clinical competencies.

### **DEHY 2820.03: Behavioral Foundations - Communication & Motivation.**

The constructs, principles, and methods of effective communication and motivation in health education and behavioral change will be examined. Concepts covered include theories of motivation, principles of teaching and learning, the client centered approach to education and counselling, and aspects of psychology which are fundamental to dental hygiene practice. Emphasis will be on the one-on-one clinical setting with reference to the community environment. Learners will be prepared for the second year clinic course where they will critique their communication skills in clinical patient interaction using DVD recording.

### **DEHY 2821.03: Behavioral Foundations - Smoking Cessation and Patient Education Counselling Techniques.**

This course will be a continuation of the theories and research into interpersonal communication. There will be an emphasis on motivational and counselling techniques for tobacco cessation and oral hygiene instruction, which will be incorporated into the dental hygiene process of care. Learners will self critique motivational interviewing techniques using DVD recording to prepare them for competencies in second year.

### **DEHY 2822.03: Oral Anatomy and Dental Histology.**

This course focuses on the anatomy and morphology of primary and permanent teeth. In addition, it includes the study of eruption patterns, occlusion and dental histology.

### **DEHY 2823.01: Embryology and Pathology.**

This class covers the areas of embryology and pathology. The embryology portion of the course covers gametogenesis and fertilization, cleavage and implantation, formation of the bilaminar germ disc, establishment of body form, fetal membranes and placenta, orofacial development I and II, and branchial arch development I and II.

Pathology topics include: introduction to pathology, the nature, causes and mechanisms of development of disease, tissue renewal and repair,

diseases of immunity, genetic disorders, neoplasia and non-neoplastic disturbances of growth.

(Related basic clinical oral pathology will be covered in the first year Clinical Fundamentals course. Detailed clinical oral pathology will be covered in second year).

### **DEHY 2850.03: Introduction to General and Oral Microbiology.**

Introductory microbiology includes a study of the structure and physiology of microorganisms, the ways microorganisms cause diseases in humans and the ways they affect humans' well-being. Roles of microorganisms in oral health and diseases will be emphasized. Laboratory work provides experience in basic microbiological techniques including those used in oral microbiology.

### **DEHY 2851.03: Basic Human Anatomy.**

This class is offered by the Department of Anatomy and Neurobiology and is restricted to students in the School of Dental Hygiene. Upon successful completion of the class, the student will be able to explain and describe, at a basic level, the gross anatomy and histology of the human body. An online Virtual Human Cadaver Dissection Laboratory will be offered.

INSTRUCTOR(S): G.V. Allen

FORMAT: Lecture 3 hours

RESTRICTION: Restricted to Dental Hygiene students

### **DEHY 2852.03: Gross Anatomy of Head and Neck.**

This class is taught by the Department of Anatomy and Neurobiology in the Faculty of Medicine and is designed especially for, and restricted to, Dental Hygiene students. It deals with the detailed gross anatomy of the head and neck. This class complements DEHY 2851.03 and DEHY 2853.06

FORMAT: Lecture/lab 2.5 hours

RESTRICTION: Restricted to Dental Hygiene students

### **DEHY 2853.06: Human Physiology.**

This is an introductory human physiology course directed mainly to Health Profession and Dental Hygiene students. The functions of body organs and body systems and the integration functions of the whole organism are studied.

FORMAT: Lecture 3 hours, weekly assignments, and tutorials

CROSS-LISTING: PHYL 1010.03

## **Second Year - Diploma in Dental Hygiene**

### **DEHY 2601.00: Student Table Clinics.**

Second Year Students will prepare and present a table clinic on a topic they have chosen. The topic may be based on an aspect of clinical practice or on a research project that the student has completed. The table clinic is graded on a pass/fail basis and required presentations are judged for prizes during a public presentation.

### **DEHY 3001.12: Dental Hygiene Clinic.**

This course is the clinical application of skills and knowledge to provide comprehensive dental hygiene care. Students will use the dental hygiene process of care: assessment, planning, implementation and evaluation. Students will gain additional experiences by attending rotations through pediatric, geriatric, orthodontic, restorative, oral pathology and oral surgery clinics.

### **DEHY 3002.06: Population Health.**

An introduction to the promotion of oral health and the prevention of oral disease in populations. The population and health promotion approaches aim to improve the health status of the entire population and to reduce health inequities among population groups by taking action on the full range of health determinants. Course requirements include practical experience in community settings such as health centres, schools, and extended care facilities.

### **DEHY 3003.03: Exceptional Clients.**

This lecture & seminar course explores the provision of dental hygiene care for members of exceptional populations. These populations include: the geriatric population, the exceptional population including but not limited to the visually, hearing and intellectually impaired as well as those who may be medically compromised, and the population representing people who are receiving treatment for cancer. Course requirements include a practical experience of providing mouth care for residents in a long-term care facility.

**DEHY 3005.03: Professional Issues.**

A study of the ethical, legal and practice management issues related to dental hygiene practice and regulation. The course includes topics such as resume writing and interview preparation as well as a wide variety of other topics pertinent to dental hygiene practice. Students learn about the regulatory framework for dental hygiene practice and the role of the national and provincial dental hygiene associations.

**DEHY 3007.01: Pharmacology.**

A broad overview of the drugs which are used frequently in dental practice, and drugs used by dental patients which influence choice of treatment, may have significant interactions, or may lead to complications during dental/dental hygiene treatment.

**DEHY 3009.01: Dental Specialties.**

An introduction to five specialties of dental practice, particularly as they relate to the active roles of the dental hygienist in collaborative practice settings, and to the specific needs of patients. The five specialties are endodontics, fixed and removable prosthodontics, pediatric dentistry, orthodontics, and oral surgery.

**DEHY 3014.03: Fear, Pain and Anxiety Management.**

This course will provide an integrated overview of the psychology, anatomy, physiology and pharmacology associated with dental pain, fear and anxiety management for patients receiving dental care. Students will be educated at an appropriate clinical level to recognize and support the management of a dental patient's pain, fear and anxiety. The Local Anesthesia section of the course is designed to provide students with the basic principles and knowledge necessary to administer maxillary and mandibular local anesthesia for pain management. The neurophysiology of pain, the pharmacology of local anesthetics and vasoconstrictors, preparation of the armamentarium, anatomical considerations, local and systemic complications and patient assessment and management techniques are included in the course.

**DEHY 3015.01: Clinical Oral Pathology.**

This course is based on DEHY 2815.01 but differs from it in that it discusses diseases of the mouth based on their clinical presentation rather than the pathologic processes that produced them.

**DEHY 3016.06: Study Group - Clinical Cases.**

This course is designed to develop critical thinking skills and evidence based decision making in clinically based situations. Through case-based learning, students will be given an opportunity to demonstrate integration, application, synthesis and evaluation of didactic knowledge gained from a variety of disciplines and their clinical experience. They will be expected to research various issues that arise while working through the cases and present their findings within a study group learning situation. Initial cases will introduce the students to the process of case-based learning and the final cases will be of a more complex nature where the technique of "progressive disclosure" will be utilized.

**DEHY 3017.03: Clinical Periodontics.**

A continuation of the Periodontics course given in the first year, this course focuses on non-surgical periodontal therapy rendered by the dental hygienist. A wide variety of topics on clinical periodontics are covered including, but not limited to: antimicrobial and occlusal therapies, the management of medically compromised patients and principles of periodontal surgery.

**DEHY 3550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

**DEHY 3900.00: Elective.**

This course is designed to allow students to pursue, in depth, dental hygiene related, and to a lesser extent, other topics of particular interest to them that are not covered in scheduled courses.

**DEHY 3901.00: Restorative Elective.**

This course includes lecture, laboratory, and pre-clinical experience in the placing, contouring and finishing composite resin, amalgam or temporary restorations and related supporting procedures. In Term 2, students will gain experience placing, contouring and finishing composite resin, amalgam or temporary restorations and related supporting procedures for clinic patients.

**DEHY 4001.03: Introduction to Health Research.**

This course is designed to help students make sense of the research they can be expected to encounter in their professional practices. By focusing on the role of research in contemporary health professional practice this course will provide the student with a sound basis in the principals underlying research theory, measurement issues, experimental, exploratory and descriptive research designs, data analysis and communication skills including the development of research protocols and scientific manuscript preparation. In developing these skills students will become prepared for the life-long investigation of research materials required in the conduct of their own practices and research.

INSTRUCTOR(S): A. Webber

FORMAT: Web-based

CROSS-LISTING: HSCE 3010.03

**DEHY 4002.03: Applied Oral Health Research.**

This course requires that each student work with a faculty supervisor in the design and implementation of a simple, focused research project with a plan for dissemination of results to facilitate knowledge transfer and exchange. Plenary sessions at the beginning of the course will reinforce basic design and methods.

INSTRUCTOR(S): J. Clovis

FORMAT: Minimal Lectures/Primarily work with faculty research supervisor

PREREQUISITE: DEHY 4001.03

**DEHY 4003.03: Alternative Practice Settings.**

The course includes a fixed clinical placement for the dental hygienist that would involve exceptional care clients and/or medically compromised clients, and/or clients in long-term care. Alternatively, approved placement with a public health department or health agency is acceptable.

INSTRUCTOR(S): T. Mitchell

FORMAT: External Placement

**DEHY 4005.03: Case Studies Seminar.**

This course is designed to use both web based and traditional formats in the study and presentation of cases with a focus on cultural diversity, socio-cultural attitudes in health and interprofessional health care delivery. It is intended to familiarize the participant with the professional case presentation format using an evidence-based approach study to clinical practice. Each student will be expected to prepare a case suitable for presentation to a professional group or for a professional publication. It is planned to facilitate the student's ability to integrate knowledge gained from across the curriculum as well as the individual's clinical experience. Students may draw from their experience in dental hygiene practice, 4003.03 Alternate Practice Settings as well as experience in selected Interprofessional Learning modules for their care study.

**DEHY 4006.03: Health Policy.**

This course provides an overview of the impact of social, political and economic environments on social policy, health, oral health and the practice of dental hygiene. Topics include how policy is made in Canada, as well as contemporary themes in health care quality, access to care, regulation, financing and delivery of oral health care.

COURSE DIRECTOR: J. Clovis

FORMAT: Lecture

**DEHY 4007.03: New Venture Creation Entrepreneurship.**

This class is about venturing – the process of creating new ventures in both the for-profit and not-for-profit environment. The issue of Social Entrepreneurship will receive specific attention. The course is designed to expose students to the issues, problems, and challenges of creating new ventures and to provide students with the opportunity, within the framework of a formal class, to explore and develop venture ideas that they have been considering or wish to investigate. Experiential exercises enable the student to better understand him/herself, his/her venture

potential, and the merits of his/her new venture ideas. A major field project requires the development of a detailed plan for the new venture.  
COURSE DIRECTOR: E. Leach  
FORMAT: Lecture/experiential exercises/field project  
CROSS-LISTING: MGMT 3907.03

### **DEHY 4008.03: Independent Study and/or Approved Elective(s).**

This course can be designed by the student appropriate to their practice setting or other approved interest area. Presentations to professional groups, e.g., study clubs, professional and health organizations, and/or health agencies would also meet the criteria for this course and include program development.

The approved elective option would be chosen from a list of selected courses, or any other course of interest that does not appear on the list, and is approved by the Bachelor of Dental Hygiene program director.

COURSE DIRECTOR: P. Maillet

FORMAT: Self-directed study/primarily work with appropriate faculty advisor

### **DEHY 4009.06: Teaching Methodologies and Practicum.**

This course provides students with a seminar course in teaching methodologies and the opportunity to practice teaching within an undergraduate dental hygiene program under the supervision and mentorship of dental hygiene faculty members. In addition to clinical teaching experience, students may choose to broaden their teaching experience in an alternative setting such as case-based facilitation, classroom lecturing or any other approved educational setting.

INSTRUCTOR(S): C. Tax

FORMAT: Active participation in chosen field/Primarily work with faculty advisor for individual setting.

### **DEHY 4550.00: Mindfulness Elective.**

This elective is designed to provide an oasis of holistic self-care, in an otherwise rigorous, science-based curriculum, geared towards helping others. Interested students will learn to establish an ongoing mindfulness practice in a supportive, small-group environment of like-minded classmates, staff and faculty. Mindfulness practice involves sitting, standing and walking forms of meditation, qi gong breathing exercises, brief readings, brief journaling, and brief discussions to help integrate mindfulness skills into daily life.

# Faculty of Law

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Kimberley R. Brooks, B.A. (U. of T.), LL.B. (U.B.C.), LL.M. (York)

## Associate Dean, Academic

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## Associate Dean, Graduate Studies and Research

Richard Devlin, LL.B. (Queen's, Ireland), LL.M. (Queen's, Ont.)

## Assistant Dean, Academic

Elizabeth J. Hughes, B.A., LL.B., LL.M. (Dal.)

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Christian Wiktor, LL.M. (U. of Wroclaw), M.S. in L.S. (Col.)  
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Mohamed Khimji, LL.B. (U. of Bristol), LL.B. (U. of Windsor), LL.M. (U. of London) (LOA)  
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Ronald Murphy B.A. (U.P.E.I.), LL.B. (Dal), LL.M. (U of T), LL.M., SJD (Harvard) (LOA)

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Sheila Wildeman, B.A. (U. of T.), M.A. (Columbia), LL.B. (Dal.)  
Michelle Williams-Lorde, B.S.W. (Dal.), LL.B. (U. of T.), LL.M. (NYU), Director, Indigenous Black & Mi'kmaq Initiative

## Adjunct Professors

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Teresa Scassa, B.A. (Concordia), BCL, LL.B. (McGill), LL.M., J.S.D. (Mich.)  
G.R. Winham, B.A. (Bowdoin), Dip. Int'l Law (Manchester), Ph.D. (North Carolina)

## Part-Time Faculty

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The Honourable Barbara J. Beach, B.A. (U. of T.), LL.B. (Dal.)  
Subrata Bhattacharjee, B.Sc., B.A., LL.B. (Dal.)  
Roger Burrill, B.A. (Queen's), LL.B. (Dal.)  
Rob Carmichael, B. Comm., LL.B. (Dal.)  
Brian Casey, B.A. (Victoria, BC), LL.B. (Dal.)  
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Marc Chisholm, Q.C., B.B.A. (St.F.X.), LL.B. (Dal.)  
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Alex Keaveny, B.A. (Concordia), LL.B. (McGill)  
Kevin Kindred, B.A., LL.B. (U.N.B.)  
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James MacDuff, B.A., B.Comm. (Queen's), LL.B. (Dal.), B.C.L. (Oxford)  
Robert Mann, B.A. (Kings), M.P.A./LL.B. (Dal.)  
James Martin, B.Comm., LL.B. (Dal.)  
M. Kathleen McManus, B.Sc., B.A., LL.B. (Dal.), Ph.D. (London)

Aidan Meade, B.Eng. (McGill), M.Sc. (Queen's), LL.B. (Dal.)  
 John P. Merrick, B.A. (Acadia), LL.B. (Dal.)  
 Metallic, Naomi, B.A., LL.B. (Dal), LL.L (Ottawa)  
 Robert Miedema, B.Sc. (Queen's), LL.B. (Dal.)  
 Cheluchi Onyemelukwe, LL.B. (U. of Nigeria), LL.M. (Dal.)  
 Michael Osborne, B.A. (U. of Sask.), M.A. (U. of T.), LL.B. (Dal.)  
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 Jennifer Ross, B.A. (Ottawa), M.A. (Calgary), LL.B. (Dal.)  
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 John Shanks, B.A. (Acadia), LL.B. (U.N.B.)  
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 Ann Marie Simmons, B.Sc. (Dal), LL.B. (Dal)  
 Eric Slone, B.Sc. (McGill), LL.B. (Osgoode)  
 Krista Smith, B.A. (U. Of California), M.A. (Indiana U), LL.B. (Dal.)  
 G.R. Winham, B.A. (Bowdoin), Dip. Int'l Law (Manchester), Ph.D. (North Carolina)

## Legal Aid Clinic

Donna Franey, B.A. (Saint Mary's), LL.B. (Dal), Director Legal Aid Clinic  
 Shawna Y. Hoyte, B.A., B.S.W., LL.B., MSW. (Dal)  
 Susanne Litke, B.S.W. (Dal.) M.S.W., LL.B. (McGill)  
 Claire McNeil, B.A., LL.B. (Dal)  
 Heather McNeill, B.A., (M.St. V), LL.B. (Dal)  
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 Rose Godfrey, Director Admissions and Career Development  
 Karen Kavanaugh, Director Alumni & Development

## I. Introduction

Schulich School of Law is the oldest university common law school in the British Commonwealth, and in 1983 celebrated the 100th anniversary of its founding. From its inception in 1883, the school has sought to perpetuate the vision of its founder and long-term Dean, Richard Chapman Weldon, a vision which encompasses a solid preparation for the practice of law and which encourages respect for and participation in public life. Despite its regional base, Dalhousie is perceived as a "national" law school, and encourages applicants from all parts of Canada. Indeed, over the years graduates of Dalhousie have had a distinguished influence on the development of law, legal education and public institutions throughout Canada. The JD degree from Dalhousie is recognized for the purposes of Bar admission in all Canadian provinces.

The Law School is located in the Weldon Law Building on the main university campus. Designed to meet the special needs of law students and staff, the building contains class and seminar rooms, faculty and administrative offices and lounge space for students and staff. The Law Library, opened in October 1989, houses our collection of over 202,000 volumes of common law materials and legal periodicals which includes a very good selection of international legal materials, and a fast-growing marine and environmental law section. Our marine and environmental law holdings represent one of the best collections of its kind in the world, attracting scholars from many countries. The law school publishes the Dalhousie Law Journal, a well-respected legal periodical.

The full-time JD program at Dalhousie entails three years of study. The first year program is entirely compulsory, while the second and third year programs are, for the most part, optional. The first year program consists of the following seven classes: Judicial Rule-Making and the Law of Contract, Criminal Justice: The Individual and the State, Orientation to Law, Fundamentals of Public Law, Legal Research and Writing, Property in its Historical Context, and Tort Law and Damage Compensation. The second year required classes are Civil Procedure and Constitutional Law. The third year required class is The Legal Profession and Professional Responsibility. As well, students in second and third year are required to complete at least one "major paper" class per year. A more detailed description of all our class offerings follows.

A limited number of students are permitted to complete their JD on a part-time basis, subject to more detailed regulations set out below. The intent of this program is to accommodate the special needs of individuals for whom three years of full-time attendance at Law School could cause hardship or even inability to attend at all.

The Law School is home to the Dalhousie Health Law Institute, the Law and Technology Institute, and the Marine & Environmental Law Institute. For details, please consult the section on "Centres and Institutes" in this calendar.

Schulich School of Law has an active clinical law program, Dalhousie Legal Aid Service. Through its community law office in downtown Halifax, the Clinic provides a legal aid service for low-income clients in the Halifax-Dartmouth area. Students, lawyers and paralegals conduct cases for individual clients and also work in areas of community development, preventive law and law reform, all under the supervision of staff lawyers and faculty members. The Clinic also acts as a teaching centre for third-year students. The law school offers another type of clinical experience, dealing solely with criminal law, in which, to complement special classes and seminars, students are assigned to either a judge, a Crown Counsel, or a defence lawyer, to observe and participate in criminal law work. Students receive academic credit for both clinical programs.

The Law School, in conjunction with several other faculties, offers four combined degree programs. The JD/MBA program allows students to obtain the Juris Doctor degree and the Master of Business Administration in four years instead of the five which would be required to take the degrees separately. The JD/MPA (Juris Doctor/Master of Public Administration), the JD/MLIS (Juris Doctor/Master of Library and Information Studies), and the JD/MHA (Juris Doctor/Master of Health Administration) are similarly structured to permit the completion of the two degrees in four years instead of the usual five. Students intending to make application to any of the combined programs should inquire directly to the Registrar's Office, Dalhousie University.

Students are able to participate in several moot programs. All second and third year students are required to participate in Moot Court, second year students as counsel, and third year students as judges. The best second year counsel compete in their third year for the Smith Shield, a prestigious Dalhousie award. As well, students can participate in the Jessup International Moot Court Competition, a world-wide competition on a problem of international law, the Canadian-American (Trilateral) Moot Court Competition (among Dalhousie, the University of New Brunswick and the University of Maine), the Laskin Moot (an administrative-constitutional moot), a Securities Law Moot and the Gale Cup Moot Court Competition (among all Canadian common law schools), and the Sopinka Trial Advocacy Competition.

Dalhousie, in cooperation with the Supreme Court of Nova Scotia, offers a voluntary Judge's Clerkship Program for third year students. This program, which is in addition to regular classes and not for credit, allows qualified students to spend one week during the term with a Supreme Court Justice in Chambers, and offers a valuable and practical learning experience. Some students each year may also have the opportunity to act as student assistants, for credit, to the N.S. Appeal Court and some may do the same with the Nova Scotia Supreme Court.

Schulich School of Law has established exchange programs with the University of Maine School of Law at Portland, National University of Singapore, the Canadian civil law schools, the EU Consortium of Law Schools and the North American Consortium on Legal Education with law

schools in the United States and Mexico. Third year students may do one term at these schools for academic credit at Dalhousie. There is also the possibility of directed research classes to be taken at the Vrije Universiteit, the Netherlands, for academic credit at Dalhousie.

The law school has an active graduate degree program, offering both the Master of Laws (LLM) and the JSD (Doctor of Laws) degrees. The Master's degree is normally acquired on the basis of thesis and class work, and can be taken either full-time in one year or part-time over two years. The Master's degree may also be taken on the basis of class work only, which is particularly appropriate for part-time students. In recent years, supervision has been offered in the following areas, among others: international law, human rights law, health law, administrative law, constitutional law, taxation, business law, labour law, law of the sea, maritime law, fisheries law, environmental law, critical race and legal theory 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. More detailed information on the graduate degree program follows.

### A. Student Life

The first year class normally consists of 160 people, and the total student population in the JD program is approximately 460. Many of our students, usually 50%, are residents of provinces outside the Atlantic region. In addition to the JD students, approximately 20 students are in the LLM program, and several students are enrolled in the JSD program each year. The student body is very diverse, with students from a wide variety of backgrounds and experience. We are sometimes able to accept a small number of students who wish to transfer to Dalhousie from another Canadian law school, or who have received their law degree in Québec. Application for transfer may be made to the Director of Studies, Schulich School of Law, Halifax, B3H 4H9.

All law students are members of the Law Students' Society which appoints representatives to faculty committees, arranges for speakers to visit the school, and organizes social events and programs. It also oversees publication of a law students' newspaper, *The Weldon Times*, *The Dalhousie Journal of Legal Studies*, and the annual yearbook. Dalhousie has an active sports and social program with something to appeal to most students. Some of the student organizations active at the school are the Association of Women and the Law, the Environmental Law Students' Society, the Dalhousie Aboriginal Law Students Association, the Dalhousie Black Law Students Association, the John Read International Law Society, and the Speakers' Committee. Dalhousie University features a major athletics and sports complex known as Dalplex. Indoor facilities there include a 50 metre swimming pool and a gymnasium/field house the size of a football field.

### B. Scholarships and Bursaries

Schulich School of Law administers a very generous scholarship and bursary program. Well over 60% of the students enrolled at Schulich School of Law receive some sort of financial support from programs administered by the School. Besides entrance and in-course scholarships, discretionary awards and bursaries are offered annually to students with financial need. Eligible students may apply for discretionary awards and bursaries in October, when application forms and information are distributed. More detailed information on scholarships and bursaries can be found in the section on Awards on page 151 of the calendar.

Funding may also be available for students who are Mi'kmaq or Indigenous Black Nova Scotians and who are part of Schulich School of Law's Indigenous Black and Mi'kmaq (IB and M) Initiative. For further details, please see the description of the IB and M Initiative on page 51 of this calendar.

### C. Dalhousie Law Alumni Association

President, Jeanne Desveaux

The association has over 5,500 members composed of graduates and faculty of the Schulich School of Law. In addition, current students are considered non-voting members until graduation. The aims of the Dalhousie Law Alumni Association are to promote and encourage active participation of graduates in the life of the school and to establish and maintain strong relationships among alumni.

The Dalhousie Law Alumni mission statement: To promote cohesion of the community of Dalhousie Law graduates and support the Law School in its mission to provide a first class legal education incorporating liberal and professional elements, to students interested in the study of law.

The association has established branches in Alberta, British Columbia, Saskatchewan, Manitoba, New Brunswick, the Yukon and the Northwest Territories, Nunavut, Southern Ontario, Southeastern Ontario, Québec, Newfoundland, Prince Edward Island, and Cape Breton, Nova Scotia. Each branch organizes its own local activities. Association members participate in admissions interviews. They act as firm contact persons for articling applicants, and take part in student information seminars on practice and law-related careers. In addition, each year the Association organizes an Alumni dinner, held in conjunction with class reunions.

The law alumni magazine and newsletter, *Hearsay* and the *Ansul* respectively, are each sent out once a year to all graduates of the school to keep them informed of the latest events at the law school. In conjunction with the Law Students Society, the Law Alumni Association administers the Award for Excellence in Teaching Law. The Dalhousie Law Alumni Association also sponsors The Weldon Award for Unselfish Public Service. This annual award is given to a graduate for recognition of their unselfish public service to the community, and serves as a tribute to the school's first dean, Richard Chapman Weldon.

### D. Career Development Office

Director, Career Development: Rose Godfrey

The Career Development Office provides resource materials to assist students and graduates in finding articling positions, permanent jobs, summer jobs, and law-related opportunities. Individual career and job search counselling is also available to students. Some law firms, particularly from the Atlantic Provinces and central Canada, conduct interviews at the law school. Career Development Office materials and notice boards communicate information on specific jobs, scholarships and clerkships and about graduate law study programs and awards.

Students on the Career Development Committee participate in organizing placement seminars and recruitment days to assist students in pursuit of the diverse range of opportunities available to graduates with a legal education.

Preliminary placement surveys of students conducted in June of their graduating year indicate that placement has been well over 96% for the past several years.

### E. Admission to the Practice of Law

Prospective students are advised to consult the Law Society in the law district where they hope to practise for specific information on qualifications for admission to the Bar. Specific inquiries should be directed to the appropriate bar society.

Under the Rules and Regulations of the Nova Scotia Barristers' Society a student desiring admission to the Bar of Nova Scotia must serve under articles of clerkship with a practising solicitor for a period of twelve consecutive months after receiving a degree in Law from Dalhousie or any other approved University. Students are also required to complete the Bar Admission Course, and to pass examinations given during the Course.

Students who complete a period of articles in another province may apply to the Credentials Committee of the Barristers' Society for credit towards the twelve month requirement.

The Law Society of Upper Canada admits holders of the Dalhousie Juris Doctor degree to the Bar Admission Course conducted by the Society for candidates for admission to the practice of law in Ontario.

In other provinces of Canada where the common law system is in effect the degree of JD from Dalhousie is recognized as fulfilling academic qualifications and as preparation for practical training for admission to the Bar. Information concerning particular elective classes recommended by the law society of a Province for inclusion in a student's class of studies is available from the Career Development Office.

## **Juris Doctor (Subject to approval by the Board and MPHEC)**

Beginning 2011, Dalhousie University is changing the designation of our first degree in law from LLB (Bachelor of Laws) to JD (Juris Doctor). Juris Doctor has become the more common designation for first professional law degrees in Canada, and the change at Dalhousie has been undertaken to ensure our degree is well recognized across Canada and internationally. The academic program remains unchanged from the LLB. The move to the JD (Juris Doctor) represents simply a change of designation and does not indicate any change in academic status of the law degree program. The JD degree remains a first professional degree to which students are usually admitted following three or four years of undergraduate study.

The change will take effect September 1, 2011 and those entering our first year class in September 2011 will graduate with a Juris Doctor (JD) degree. Students currently enrolled in the program will have the opportunity to graduate with their choice of an LLB degree designation or a JD degree designation.

### **Conversion of Degrees**

Graduates of the Bachelor of Laws (LLB) program have the option to convert their degrees from LLB to a JD if they wish. If a graduate chooses to do nothing, their degree will remain as originally awarded. There is no time limit on conversions.

To have a Bachelor of Laws (LLB) degree converted to the Juris Doctor (JD), graduates must complete and return the Application for Change of Degree Designation form. The form can be found at <http://www.registrar.dal.ca/forms/index.html>. There will be an administrative fee of \$50 to cover the cost of conversion of the LLB to JD. This is the standard parchment replacement cost and includes any courier delivery costs.

Those who convert from LLB to a JD must submit the completed form along with their original LLB degree parchment and fee to the Registrar's Office. The replacement parchment will be printed in English; reflect the degree name as Juris Doctor; and bear the signatures of the current Dean, President and Chair of Senate. The date on the parchment will be the date the replacement parchment is produced. The lower left hand corner of the parchment will bear a red ink stamp with the words "Issued to replace original Bachelor of Laws dated \_\_\_\_\_"; which will be the date the original LLB was awarded.

Any graduate who has lost their original parchment must submit an affidavit from a lawyer, commissioner of oaths or a notary public to confirm the loss, stating their full name, birth date, current address, graduating year, degree and circumstances of the loss.

The degree parchment can be picked up from the Registrar's Office or will be mailed by courier based on the preference indicated on the form. Please note that once a graduate has chosen the Juris Doctor (JD) option, they will not be able to return to the original designation of Bachelor of Laws (LLB).

When the degree is converted, the official University record will also be adjusted and the change noted. The conversion will be noted on the transcript as follows: Bachelor of Laws: DD-MM-YYYY, followed by the comment: Converted to Juris Doctor: DD-MM-YYYY.

One copy of the revised official transcript will be enclosed at no cost with the new parchment.

For further information or assistance with degree conversions, please contact:

Janet MacDonald, Convocation Clerk  
Office of the Registrar  
Dalhousie University  
Tel: 902-494-6777  
Email: [janet.t.macdonald@dal.ca](mailto:janet.t.macdonald@dal.ca)

## **II. Admission**

Director of Admissions: Rose Godfrey

## **A. Admissions Procedure**

Any student seeking admission to the Law School for the first time must complete the online application and submit academic transcripts, letters of reference and Personal Statement to the Admissions Office, Dalhousie University, Halifax, N.S. B3H 4H6, by February 28. An application fee, which is not refunded, must accompany each application. Applicants who wish to be considered for entrance scholarships must file these applications by November 30. It is the responsibility of the applicant to ensure that all materials relevant to the application are received by the committee.

Students applying for admission are required to submit results of the Law School Admission Test, a service of the Law School Admission Council (<http://www.lsac.org>). The test is offered several times per year across Canada and the U.S., usually in October, December, February, and June. LSATs written in June will not be considered for positions in the class commencing the following September.

The Admissions Committee may consider applications as soon as they are received or it may postpone consideration of some or all applications until June. A non-refundable deposit of \$200 is required to hold a place in the law program. All prepaid deposits are applied to the first installment due for tuition fees. Prospective applicants should confirm from the faculty that this information has not been changed subsequent to this printing.

## **B. Admissions Policy**

In assessing applications, emphasis is placed primarily on an applicant's academic record and LSAT score. The Admissions Committee also considers non-academic experience, letters of reference and other factors in making its decisions. Interviews by the Admissions Committee of applicants with significant non-academic experience may be held at the discretion of the Committee. Interviews will normally take place in May or June.

## **C. Juris Doctor (Full and Part Time)**

Students are admitted to the JD program through one of the categories set out below.

### **1. Regular Applicants**

The Admissions Committee of the Faculty of Law may admit applicants as regular candidates for the LLB degree if the applicant:

- has received, with high standing satisfactory to the Admissions Committee, the degree of Bachelor of Arts, Science or Commerce, or an equivalent degree from Dalhousie University or from another degree-granting college or university recognized by the Senate; or
- has at least three full years' of study after junior matriculation or two full years after senior matriculation of a class leading to the degree of Bachelor of Arts, Science or Commerce or an equivalent degree at Dalhousie or at another degree-granting college or university recognized by the Senate. Normally, this means that the applicant is within one year of receiving a degree in the undergraduate program followed. For the purposes of this rule junior matriculation means Nova Scotia Grade XI or equivalent and senior matriculation means Nova Scotia Grade XII or equivalent.

### **2. Special Status Applicants**

An applicant who is considered as a regular applicant may also be considered as a special status applicant if the application indicates a significant amount of non-academic involvement to which the Admissions Committee is prepared to give special consideration. A special status applicant is a person not less than twenty-five years of age who has had at least five years' experience in a significant employment capacity or in a significant community activity. A special status applicant must submit a Personal Statement and should arrange to have additional Reference Statements forwarded to the Admissions Committee from persons familiar with the applicant's non-academic experience.

In all other respects, Special Status Applicants must meet the same requirements as Regular Applicants.

### 3. Mature Applicants

Where the applicant has not met the foregoing formal educational requirements the Admissions Committee may, in very exceptional circumstances, admit a limited number of applicants as mature students where it is of the opinion that, in all the circumstances, the applicant has demonstrated by the length and quality of non-academic experience the equivalent in substance of the formal education specified for regular applicants.

Mature applicants must be twenty-six years of age on or before September 1st of the year for which they seek admission to law school. Mature applicants are also required to write the Law School Admissions Test, to have an interview with the Admissions Committee, and to submit to the Committee a detailed resume of their non-academic experience along with letters of assessment from persons who are familiar with their contributions and achievements. The Committee is particularly interested in gathering information with respect to the candidates' ability to organize their life and their work in order to cope with the demands of law school, their ability to reason and analyze, their ability to express themselves orally and in writing, and their potential for contribution to the community. Generally, the Committee requires, as a minimum, an accumulation of five or more years of experience in a candidate's particular field of endeavour. Candidates are strongly encouraged to successfully complete some university-level courses before applying.

### 4. Applicants to Indigenous Black and Mi'kmaq Initiative

#### 1. Admissions

The Indigenous Blacks & Mi'kmaq (IB&M) Initiative was established in 1989 to reduce structural and systemic discrimination by increasing the representation of Indigenous Blacks and Mi'kmaq in the legal profession.

The Initiative involves:

- community outreach and recruiting;
- a holistic approach to assessing applicants;
- limited financial support, based on need, for students who meet the definitions of "Indigenous Black" and "Mi'kmaq" set out below;
- the facilitation of Aboriginal and African Canadian legal scholarship;
- the provision of academic support, primarily in the form of tutoring, upon request; and
- the provision of career placement support.

The primary focus of the IB&M Initiative is on students who are either:

- Indigenous Black Nova Scotians; that is, individuals who are Black and were born or raised in Nova Scotia or
- have a substantial connection with a Black community in Nova Scotia, or
- Mi'kmaq; that is, individuals who are Mi'kmaq and were born or raised in a Mi'kmaq community or
- have a substantial connection with a Mi'kmaq community.

The IB&M Initiative places the admission of African Nova Scotian and Mi'kmaq students as its priority, however, other Black and Aboriginal students are also urged to apply to Schulich School of Law. If in any given year all qualified Indigenous Black and Mi'kmaq students have been admitted and there are still spaces available through the IB&M category, the Admissions Committee may decide to admit Black students who are not indigenous to Nova Scotia and Aboriginal students who are not Mi'kmaq.

It is recommended that all students who apply for admission through the IB&M Initiative have completed a university degree or at least ten university credits prior to admission. A limited number of mature students may be admitted, where it is determined that the applicant has demonstrated that the length and quality of his or her non-academic experience is equivalent in substance to the formal academic education required of other applicants.

The application form for the IB&M Initiative is the same as the application form for all students applying to Schulich School of Law and applicants are required to write the LSAT. Applicants should indicate their desire to be considered for admission through the IB&M category on the Law School Application Form, and in their personal statement. The Admissions

Committee reviews all applications and determines which applicants should be interviewed.

#### Pre-Law

The Pre-Law Course is a four-week course for qualified IB&M applicants, usually offered during the month of May. The focus of Pre-Law is to provide an intensive introduction to the legal research, reasoning and writing skills critical to success at law school. Pre-law also evaluates students for admissions purposes, and students in Pre-Law must successfully complete the course in order to attend Schulich School of Law. Applicants with particularly high academic qualifications may be given the choice of whether or not to take the Pre-Law course.

#### Funding

Partial funding for tuition, books and housing may be available for Indigenous Black and Mi'kmaq students, on the basis of need. Students who do not meet the definition of Indigenous Black or Mi'kmaq as set out above are not eligible for funding from the IB&M Initiative; however, all students may apply for general bursary assistance from Schulich School of Law.

### 5. Native Applicants

Those native applicants who are not eligible for the Indigenous Black and Mi'kmaq Initiative and whose previous academic background does not meet the admissions standards, are eligible to apply for admission to the Faculty of Law through successful completion of the Program of Legal Studies for Native People at the University of Saskatchewan, College of Law. Application forms and further information are available from Professor Ruth Thompson, Director, Program of Legal Studies for Native People, University of Saskatchewan, College of Law, Saskatoon, Saskatchewan, S7N 0W0.

### 6. JD/MBA, JD/MPA, JD/MLIS, JD/MHSA

Students intending to make application for any joint program should inquire directly to the Registrar's Office, Dalhousie University.

### D. Transferring From Another Canadian Law School

Students of other Canadian law schools who satisfy the standards for admission to the JD program may apply to the Assistant Dean, Academic to transfer to Schulich School of Law, provided they are in good standing where previous studies have been undertaken, the work they have completed is satisfactory to the Law School Studies Committee, and the classes to be completed for an JD degree can be arranged. To qualify for a degree the student must complete two full years at Dalhousie. Well qualified graduates of a Quebec law school may be admitted into a special one year program. Enquiries should be directed to the Assistant Dean, Academic at the law school.

### E. Admission as an Occasional Student

Subject to University and Law School regulations, a professional in law or a related field may be admitted as an occasional student to attend one or two classes at the most. Attendance or performance in classes or any examinations is not credited for degree qualifications. As a general rule, occasional students are not permitted to attend first year law classes. Those wishing to be admitted as occasional students should apply to the Law School Studies Committee. Undergraduate students may not take courses at the law school. Graduate students may, in certain circumstances, be permitted by the Faculty of Law to take a law course at the Law School and should contact the Associate Dean, Academic to enquire.

### F. Students with Disabilities

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

### G. Additional Information for Part Time Applicants

Students interested in pursuing a part-time JD at Dalhousie should do the following:

1. In addition to completing the regular admissions package, submit a brief written statement outlining your reasons for seeking admission to the Part-time Studies Program and indicating whether you wish to do

First Year on a full-time or half-time basis. This statement should be in addition to the Personal Statement which forms part of the regular application material. Admission to the Part-time Program is limited. Not all students who meet the standards for acceptance to the JD program will be permitted to do the degree on a part-time basis. You should note that, in considering whether to admit an applicant into the Part-time Studies Program, the Committee in its discretion will give special consideration to factors such as family responsibilities, financial hardship, employment commitments, and health problems. Note that students in the part-time program take a reduced number of courses, but those courses are offered with the regular full-time students. No special evening classes are offered.

- Students already accepted into the full-time JD who wish to enter the Part-Time Studies Program should write a letter supplying the information requested in the previous paragraph and send it to Ms. Rose Godfrey, Admissions Office, Schulich School of Law, Halifax, Nova Scotia, B3H 4H9. This letter may be sent along with your confirmation of acceptance and your deposit. It may also be sent at any time before registration, though earlier applications are likely to fare better than later ones. Take note that, even for those already accepted into the full-time JD, acceptance into the Part-Time Studies Program is not automatic.
- Applicants interested in the Part-Time program should contact the law society of any province in which they might want to practice law, in order to ascertain whether a Part-time JD from Dalhousie meets individual law society requirements.

### III. Exchange Programs

Schulich School of Law is committed to promoting student opportunities to study in other countries and in civil law traditions. Exchanges are normally for one term and open to third year students. Home tuition arrangements generally apply where Dalhousie students are allowed to study at exchange partner institutions without additional tuition fees.

The application deadline is on or about February 15 each year and students wishing to undertake an exchange must forward a letter of interest and CV to the Chair of the International Linkages Committee. Selection may be competitive and the following criteria may be considered: fluency in local language of instruction; demonstrated interest in a particular field of law which is an area of emphasis or specialization at the exchange law school in question; reasons for studying abroad; how the exchange experience will enhance career plans; academic performance (students must have at least a B grade average in law school). No student shall receive credit for participation in more than one exchange program, and students may not participate in an exchange and a letter of permission in the same academic year.

Students wishing to obtain further details on existing exchanges, listed below, are advised to consult the latest information available at the Law Library's Reserve Desk (listed under Exchange Programs). A public information session about available exchange opportunities is normally held in the Law School each January. Appropriate websites, faculty liaison persons and the Chair of the International Linkages Committee may also be consulted.

Students wishing to study away on a letter of permission for a year or a term at another Canadian law school should speak to the Associate Dean Academic for more details. Students who spend a term at another Canadian law school will not be permitted to participate in an exchange program during the same academic year.

#### Semester at a Québec Law School (Civil Law)

Students may receive credit for a semester of study at any civil law faculty in Quebec.

Students interested in getting involved in such a program must have sufficient capacity in the French language to attend classes given in French, although examinations could be written in English.

#### The Vrije Universiteit Amsterdam Exchange Program

The Vrije Universiteit Amsterdam (VU) now offers its classes in two semesters, each being roughly equal to 15 credits at Dalhousie. Up to four Dalhousie students may study at VU for one term each.

### National University of Singapore

Up to four Dalhousie students per year may study at the Faculty of Law, National University of Singapore (NUS), which has wide offerings in commercial law, environmental law, maritime law and international law. Further information may be obtained at <http://www.nus.sg/NUSinfo/LAW/handbook/index.html>.

### European Exchanges

The Faculty of Law has established exchanges with Lund University in Sweden, and with the private Bucerius Law School in Germany. Up to two Dalhousie students may study in one term at any of these three institutions, although the students going to Bucerius may do so only in the Fall Term as Bucerius runs a special Fall Section for all incoming students.

### North American Consortium on Legal Education (NACLE)

Schulich School of Law, in collaboration with McGill, the University of Ottawa, and the University of British Columbia has entered into an exchange agreement with partner institutions in the United States and Mexico. Dalhousie students may study for a term at the University of Arizona James R. Rogers College of Law, the University of Houston Law Centre (which has a noted Health Law program and may therefore be of great interest to Dalhousie students interested in Health Law), Universidad Panamericana (Mexico City) and the Instituto Tecnológico de Estudios Superiores de Monterrey, Escuela de Derecho (ITESM). (Please note: even though an exchange agreement is in place, the need to achieve equal numbers of incoming and outgoing students may mean places at Arizona may not be available.) Fluency in Spanish is required for Panamericana and highly recommended for Monterrey. In addition, special research exchanges may be arranged with the Universidad Nacional Autónoma de México, Instituto de Investigaciones Jurídicas. Consult <http://www.nacle.org> for further information.

### Queensland University of Technology (QUT)

Located in Brisbane and one of Australia's largest law schools, QUT Faculty of Law offers a broad range of courses with particular strengths in business law, information technology, environmental law and property law. Up to four Dalhousie students may study for a full academic term at QUT per year. For further information consult <http://www.qut.edu.au/>

### China University of Political Science and Law (CUPL)

Up to two Dalhousie students may study at CUPL for one term each. CUPL is located in Beijing and is considered to be one of the top law schools in China.

## IV. Faculty Regulations

Associate Dean: Michael Deturbide  
Assistant Dean: Elizabeth J. Hughes

Note: The Studies Committee oversees the implementation of the faculty academic regulations in specific cases. Students must address requests for accommodation under, or exemptions from, particular regulations to the Studies Committee. The Associate Dean is the Chair of the Studies Committee.

The Academic Year consists of one session of two terms\* covering a period of about thirty weeks. Please consult the faculty for final confirmation of start and end dates.

\*There is a third term in the summer for Dalhousie Legal Aid Clinic students only, the dates of which are May 1 - August 31 inclusive.

### A. Registration

Students are registered for the whole session only and not for one or other of the terms. Late registration requires the approval of the Dean of the Faculty, and payment of an extra fee.

### B. Class Work and Attendance

In order that their class work may be recognized as qualifying for a degree, candidates must conform to the following requirements:

- All students are expected to attend the classes of their prescribed courses regularly and punctually.

2. They must appear at all examinations and prepare all essays and assignments satisfactorily.
3. In determining pass lists the standings attained in prescribed class exercises and research work and in the various examinations are taken into consideration.

### C. Class Outlines

Students will be provided with a class outline by the instructor at the first meeting of the class. After the final course change date for each term, changes to the outline which affect assessment components, the weight of individual assessment components, or examination requirements with a value of ten percent or more must have the unanimous approval of all enrolled students in order to be valid. Within four weeks after the beginning of each term class outlines will be placed on file with the office of the Associate Dean, Academic.

### D. Classes from Another Faculty for Law School Credit

Law students may take a university class from another faculty for credit at the Law School, if that class is sufficiently relevant to the student's law program. The non-law class should be at the graduate level, and may be the equivalent of no more than a total of 3 hours per year credit, as determined by the Assistant Dean, Academic. The grades awarded in non-law classes will be on the basis of Pass/Fail, and a student's average will be computed on the basis of law classes only. Non-law classes cannot be included in a student's program to satisfy the major paper requirement. Students wishing to take non-law classes must obtain the written consent of the particular university department, and arrange to have the class description sent to the Assistant Dean, Academic. Normally, students may take non-law classes in their third year only. (Please note that students registered in the combined JD/MBA, JD/MPA, JD/MLIS, and JD/MHSA programs are governed by separate regulations.)

### E. Auditing Classes

A second or third year law student may audit one class by sitting in on classes with the permission of the Assistant Dean and the instructor, if there is room in the class. The instructor may require a student to keep up with class work and may record attendance. Only one class may be taken as an audit in each of second and third year. First year students are not permitted to audit. In most cases, only law students will be permitted to enrol in or audit law school courses. Occasionally, a professional in law or a related field may audit an upper year class with permission of the Associate or Assistant Dean and the instructor, if there is room in the class. First year classes may not be audited. Students are not permitted to audit short, intensive courses such as the European Union Law Visiting Professorship, or clinical courses.

### F. Pass Requirements

The pass mark in any particular class is 50%, but an overall weighted average of 55% is required for advancement. A student who fails to attain the required average of 55% by regular and special examinations or assignments fails the year. Students must attain an overall weighted average of 55% and pass every subject, by regular, special, or supplemental examination, before advancing to Second or Third Year. A student who fails in more than two classes also fails the year regardless of overall average.

Additional rules apply in the following specific situations:

- Applicable only to Third Year** - The University "up-and-down" Rule: A Third Year student who, without recourse to supplementals, fails only one class and attains an average on the work of the year that exceeds 50% by twice as much as the failure in the class is below 50% is permitted to graduate. Please note this rule is not applicable to mandatory courses such as Legal Profession and Professional Responsibility.
- A Part-time Rule for Those with One Failure:** A student in Second or Third Year who fails only one class and, without recourse to supplementals, is not eligible for or does not opt for advancement or graduation under (a) may take the class again on a part-time basis and may write the next regular examination or assignment in the class. Where the failed class is optional, the student may petition the Studies

Committee for permission to take a class or classes other than the one that was failed. This part-time year counts as one of the four years during which a student must complete the full-time JD course to qualify for the degree. For greater certainty, the choice is between writing a supplemental exam (where eligible) or re-taking the course, but not both.

### c. Supplemental Privileges - Clinical Law, Clinical Class in Criminal Law

- For the purposes of paragraphs (a) and (b) of these Pass Requirement rules, a failure in Clinical Law or in the Clinical class in Criminal Law shall be deemed to be a failure in more than one class.
- Except as provided in clause (iii) a student who fails Clinical Law or the Clinical Class in Criminal Law shall not be entitled to supplemental privileges and shall be deemed to have failed the academic year.
- The Studies Committee may permit supplemental privileges to a student who has failed either Clinical Law or the Clinical Class in Criminal Law where:
  - The basis of a failing grade is the student's paper, in which case a written memorandum may be authorized as the mode of supplemental examination; or
  - The failure is related to a specific assignment that can be replicated as a supplemental.

### G. Supplemental and Special Examinations and Assignments

Regular Examinations and Assignments: Final examinations are held immediately before the December vacation and after the completion of lectures in the spring. A student who does not sit an exam or a moot (whether regular, special or supplemental) as scheduled, without express prior permission of the Studies Committee, will receive a grade of zero in that exam or moot.

#### 1. Special Examinations and Assignments

Students must write their examinations and moots as scheduled unless they have express prior permission from the Studies Committee in advance for alternate arrangements. Students are expected to submit assignments by their due date and time unless they have express prior permission from the Studies Committee for an extended deadline. Individual instructors and faculty members cannot grant extensions in response to individual student requests, and all student requests for special accommodation must be directed to the Associate Dean's office.

Where it can be established that, for medical or personal reasons, a student's ability to write an examination is significantly hampered, the Studies Committee may allow the student to write a special examination. Requests for special exams must be made to the Office of the Associate Dean as soon as possible, and before the exam is to be written. Where a student becomes ill during an exam, the student must immediately contact the Associate Dean's Office, before the end of the exam.

Where it can be established that for medical or personal reasons a student's ability to work on a major paper or other assignment has been significantly hampered, the student may request an extension on the paper or assignment. Such a request must be made to the Office of the Associate Dean as soon as possible, and in all cases before the paper or assignment is due.

#### 2. Medical Withdrawal

A student may apply to the Studies Committee for a medical withdrawal from law school if substantiating medical documentation demonstrates that the student's ability to continue his or her studies is significantly hampered. If a medical withdrawal is granted, the time the student is absent from law school is not counted for the purposes of Regulation V. A) 1) (the "four year rule").

A student wishing to be readmitted to law school after a medical withdrawal must provide substantiating medical evidence to the satisfaction of the Studies Committee of their ability to resume their studies.

Where the Studies Committee has received a request from a student in two or more consecutive semesters for deferral of exams or assignments due to an ongoing medical condition or other personal circumstances, the Studies Committee may require the student to provide further medical or other documentation regarding their ability to continue with their studies, and may determine that the only appropriate accommodation is a medical withdrawal from the academic year or term.

### 3. Supplemental Examinations and Assignments

A student who attains the required average of 55% by regular and special examinations or assignments and who has failed not more than two classes is entitled to write supplemental examinations or to complete supplemental assignments in the classes failed. The student must pass the supplemental examination(s) before advancing to the next year. If a student writes a supplemental exam, only the result of the supplemental exam will be taken into account in determining whether the student passes or fails the course, even if the course uses other evaluative methods (such as assignments, moots, presentations).

Students permitted to write special examinations or complete special assignments will be entitled to write supplemental examinations or complete supplemental assignments should they fail the special, provided they otherwise meet the requirements for entitlement to write supplementals. Moreover, a student who encounters medical or personal difficulties in preparing for or writing a supplemental assignment may, upon petition, be granted permission to complete the class requirements by supplemental procedures at a later date.

All special and supplemental exams are written in July of the same academic year as the regular exam. Special and supplemental assignments and papers must be completed by the date determined by the Studies Committee. Students are responsible for ascertaining from the professor the scope of the material to be covered in a special or supplemental exam, as special and supplemental exams serve different purposes and may cover different material.

Where a student fails a class and writes a supplemental examination, both the mark in the final examination and the mark in the supplemental examination appear on the record. Supplemental examinations and assignments are marked "Pass" or "Fail". A student's mark in the regular examination or assignment is used for all purposes connected with the computation of the average, including class standing. Marks in supplementals are used only for purposes relating to the satisfactory completion of a particular class.

### 4. Application for Supplemental and Special Examinations

Application to write a supplemental examination must be made on a form to be obtained from the Office of the Associate Dean and must be accompanied by the proper fee.

## H. Examination Regulations

1. Students writing examinations in Schulich School of Law are expected to act honourably, in accordance with the spirit as well as the letter of these regulations. Invigilation is provided primarily to assist students with problems. Where there is no invigilation, and particularly in the case of supplementals, specials and other examinations not written in the normal course of events, these rules apply with such variations as are practically required.
2. Time for Writing Examinations - All examinations in the Law School shall commence at the appointed hour and, in the absence of an extension of time granted to the class generally by the instructor who sets the paper, they shall end at the appointed time. In the event of a student being late for an examination for justifiable cause, he or she shall report this fact as soon as is reasonably practicable to the Associate Dean or his or her nominee, and the Associate Dean, or nominee, in consultation with the examiner, shall have authority to make immediate alternative arrangements for the student to sit the examination. The term "justifiable cause" includes, but is not restricted to, temporary illness, delay caused by a snowstorm or transportation difficulties.
3. (i) Identification of Examination Papers - Examinations in the Law School are written by code number only and students must not write

their names on exam papers or otherwise seek to indicate their authorship. Students will be provided with code numbers before the commencement of examinations and must record their code number on each examination booklet or submitted paper. Students should also indicate the name of the class, the professor's name and the date of the examination on the first page of the examination paper.

(ii) It is a serious matter for a student to circumvent, either intentionally or otherwise, the anonymity of the examination process by identifying themselves on a Law School exam. An obvious case of self-identification is the placing of one's name on the cover or on any other part of the exam paper. Self-identification may take an indirect form as where a student informs a professor after the exam that he or she has written the exam in a particular distinctive ink colour. Where a professor believes that a student has self-identified, they should report the matter to the Associate Dean. The Associate Dean shall then refer the matter to the Studies Committee.

Gratuitous references in an exam answer to personal identifying information shall constitute self-identification within the meaning of this regulation. However reliance on and reference to personal background or experience relevant to answering the question shall not constitute self-identification.

A student who is granted an accommodation by the Studies Committee which results in an exam written at a time or in a format which might identify the student will not be found to have self-identified within the meaning of this policy.

Where the Studies Committee determines that a student has deliberately or carelessly identified him or herself on an exam, the Committee shall impose a five per cent penalty. The imposition of the penalty does not depend on finding of intent to self identify. The fact of self-identification is sufficient to warrant the imposition of the penalty.

4. Use of Materials by Students - Unless otherwise specified by the instructor concerned, no printed or written materials may be consulted by a student during the examination. When reference to printed or written materials by a student during the examination is permitted the instructor or nominee will indicate this fact to the class in advance and will list at the beginning of the question paper all permitted materials. It is an academic offence to bring prohibited material into an examination. Students who bring prohibited material into an examination shall be referred to the Senate Discipline Committee.
5. Prohibited Materials - Materials not permitted for reference in an examination must be left outside the examination room but not in the hallways or lavatories in general use during the examinations.
6. Data Transmission Devices Prohibited - With the exception of computers being used for the purpose of writing an exam, data transmission or storage devices such as cell phones, smart phones, etc. are not permitted in the exam room.
7. Communication Between Students - Students shall not communicate or attempt to communicate with other students during examinations.
8. Smoking and Noise in the Examination Room - Smoking is not permitted in the Law School. Students are reminded that any noise is distracting to others writing an examination.
9. Leaving the Examination Room During Examination - A student may, with the permission of the invigilator, but only then, be permitted to leave the room and return to the examination. Only one student may be excused at a time, and, when permitted to leave, must do so as quietly as possible. The only areas considered "in bounds" for students outside the examination room are the hallways adjacent to the room, and corridors and stairways connecting student lavatories. All other areas are out of bounds, including lockers.
10. All examinations shall be typed or written in blue or black ink unless otherwise permitted by the professor in the particular course.
11. Submission of Examination Papers to Invigilator at end of Examination - Students must submit their examinations promptly when the invigilator signifies that time has expired, whether the answers are completed or not.

## I. Late Penalties

In order to ensure that all students are treated equally and that no student is allowed to profit from taking extra time to complete an exam, paper or assignment, late penalties will be imposed for work that is not completed on time. The quantum of penalty imposed will vary depending on the

amount of time allowed for the student to complete the assignment, the degree of lateness, and in some cases the existence of any mitigating circumstances.

Please consult the Schulich School of Law Regulations Handbook on the Law School website or the Associate Dean's Office for specifics about how late penalties are calculated.

## J. Academic Accommodation for Students with Disabilities

Students seeking special accommodation with regard to course evaluation, such as exam deferral and extensions to deadlines, should consult with the Associate Dean or Assistant Dean Academic as soon as possible and before an exam is scheduled to be written or an assignment is due. Requests for special accommodation for reasons such as illness or personal circumstances will require an application to the Studies Committee, and must be directed to the Associate or Assistant Dean's Office.

Students wishing to discuss arrangements for in-class study assistance should see the Faculty Advisor to Students with Disabilities.

**NOTE:** Where self-disclosure or prior arrangements have not been made with the University, Dalhousie is not liable to accommodate special needs owing to a physical, intellectual, or psychological disability.

## K. Grading Information and Evaluation

Evaluation - Courses designated as exam courses must have a final exam worth at least 60% of the total evaluation. Courses designated as major paper courses must ensure the paper comprises at least 60% of the total evaluation.

**Grade Equivalents** - Letter grades are used for all purposes at the Law School; however, the numerical equivalent is used to determine the student's weighted average. The numerical equivalents to the letter grades are as follows:

Letter Grade	Equivalent
A+	85-100
A	80-84
A-	78-79
B+	75-77
B	70-74
B-	68-69
C+	65-67
C	60-64
D+	55-59
D	50-54
F	Below 50 (failure)
INC	Incomplete
PENDING	Awaiting Grade

The grade 'INC' is a transitional grade and will be replaced by a letter grade upon the student completing the requirements of the academic year. Subject to writing supplemental examinations, a student must attain a grade of 'D' or better in each class, and in any event an overall weighted average of 55% to complete the work of any year. Pass or Fail grades are assigned to exchange courses, supplemental examinations and non-law classes for JD credit, as well as to some Clinical Law classes. Non-law classes (except classes by students registered in the combined JD/MBA, JD/MPA, JD/MLIS, and JD/MHSA programs) are not used to determine a student's average. Honours/Pass/Fail grades are assigned to Clinical Law and the Criminal Clinic. An Honours or Pass grade in these classes is not used in determining a student's average, except in certain circumstances where the student would otherwise fail the year, and a Fail grade in these classes is assigned a numerical value and is used in determining a student's average.

The grade of "Pending" is a temporary grade used when a student is awaiting the outcome of an academic discipline process, or in the case of a transfer student in which a final grade has not yet been received.

The following grade distribution scheme for First-Year marks has been adopted by Faculty Council. Any variation from the permissible range of marks must be approved by Faculty Council:

## Permissible Grade Distribution

First-Year	Grades
A	10-20%
B	40-60%
A & B together	60-75%
C	15-25%
D	0-15%
F	0-5%

Median grade 70-72 for exam courses; for non-exam courses, although a grade distribution curve is not used, a median of 73-75 is enforced. Legal Research and Writing has a median of 75.

- Those teaching second and third year classes should take note of the first year grade curve in their evaluation and use it as a guiding principle. The larger and more traditional (i.e. lecture method, examination) the class, the more likely it is that some rough concordance with the first year curve will emerge.
- The Studies Committee should perform an overseeing function with respect to second and third year grades. Prior to the Faculty marks meeting, the Studies Committee should be provided with a breakdown of the grades awarded in each of the second and third year classes and should make appropriate enquiries concerning any obvious anomalies. In the event that the committee is not satisfied with the explanation offered by a faculty member for an apparent anomaly, the committee should direct him/her to reconsider his/her marks and the Committee may bring the matter to the attention of the Faculty marks meeting.
- A full breakdown of marks awarded in individual classes should be available to members of the faculty at the Faculty marks meeting.

## Excessive Disparity Between Sections

- A faculty member who teaches any class in which there is an examination, must provide a draft of the examination to colleagues for their comments.
- Before handing in his/her grades, a faculty member must provide to his/her colleagues the best, an average and the worst (including all failures, if any) papers for their consideration. (This also applies to those teaching major paper classes).
- The Studies Committee will have an overseeing role in the matter of grades.
- Before submitting grades to the administration, a faculty member teaching any non-sectioned class must provide a sample of his/her papers or examinations (i.e. the best, an average and the worst) to a colleague for review.

## L. Dean's List

The Dean's List recognizes superior academic performance by Dalhousie students in each year at Schulich School of Law. Please check with the Assistant Dean, Academic for details.

## M. Major Paper Classes

Each second or third year student must take at least one class (and not more than two) which has been designated as a major paper class per year. Some classes are available on the basis of evaluation by examination, or by major paper, the difference being that when the class is evaluated by examination, two credit hours are earned, and where a major paper is written, three credit hours are earned. A major paper must comprise at least 60% of the total grade in a course that is designated as a major paper course.

## N. Major Paper Guidelines

A "major paper" is a writing requirement worth not less than 60% of the final mark awarded in a class.

Major Paper Guidelines Table							
Research:		Outstanding	Thorough	Not quite thorough	Serious but Unsuccessful canvass of sources	Mere attempt to consider sources	No serious research effort
Organization/ Logical Flow	Analysis Insight-Synthesis-						
	Excellent	A	A-	B+	B	B-	F
Excellent	Very Good	A-	B+	B	B-	C+	F
Organization	Average	B+	B	B-	C+	C	F
	Weak	B	B-	C+	C	D+	F
	Poor	B-	C+	C	D+	D	F
	Excellent	A-	B+	B	B-	C+	F
	Very Good	B+	B	B-	C+	C	F
Well Organized	Average	B	B-	C+	C	D+	F
	Weak	B-	C+	C	D+	D	F
	Poor	C+	C	D+	D	F	F
	Excellent	B+	B	B-	C+	C	F
Moderate	Very Good	B	B-	C+	C	D+	F
Disorganization	Average	B-	C+	C	D+	D	F
	Weak	C+	C	D+	D	F	F
	Poor	C	D+	D	F	F	F
	Excellent	B	B-	C+	C	D+	F
Substantial	Very Good	B-	C+	C	D+	D	F
Organization	Average	C+	C	D+	D	F	F
	Weak	C	D+	D	F	F	F
	Poor	D+	D	F	F	F	F
	Excellent	B-	C+	C	D+	D	F
	Very Good	C+	C	D+	D	F	F
Incoherent	Average	C	D+	D	F	F	F
	Weak	D+	D	F	F	F	F
	Poor	D	F	F	F	F	F
Literary Style:							
Excellent:	Raise table mark by one alphabetic grade level, e.g. B to B+						
Average:	No change in table grade level as determined above						
Weak:	Reduce table mark by one alphabetic grade level, e.g. B to B-						
Originality:							
Raise table mark by one or two alphabetic grade levels e.g. B+ to A-, or A- or B+ to A.							

No method of evaluation in any class may require a major paper unless that requirement has received the approval of Faculty Council. While this constraint could be evaded by assigning papers worth only slightly less than 60%, assigning several papers, and so on, the wish of Faculty Council is that their spirit is to be respected.

### 1. Objective of Major Paper Requirement

The major paper requirement is intended to assist in the improvement of the legal research and writing skills the student already has. It is to be, in effect, an extension of the first year legal writing program. The topics upon which the written assignments are undertaken should be of a type suitable for in-depth research in a limited field of inquiry and substantial Faculty input is essential.

### 2. Performance Expectation

The aim should be writing of publishable quality. It is to be expected that most students will not achieve such a high level of quality, just as most students will be unable to achieve an A standing in other classes. Papers should exhibit at least some level of legal analysis and not consist of a more recitation of decisions and facts. Supervision should be sufficient to

make the writing requirement a real learning experience. This necessarily involves feedback to the student during the preparation of the paper and after its completion.

### 3. Curve Does Not Apply

The curve does not apply as a guideline in the marking of major papers, although a median grade range of 73-75 is enforced.

### 4. Criteria

The criteria of (a) Research; (b) Organization: Logic/Coherence; (c) Analysis-Insight-Synthesis; (d) Literary Style and (e) Originality are adopted explicitly as the ones relevant to evaluation of major papers. The definition of these criteria and the alphabetical grade equivalents and weights assigned to them as set out in the following table are adopted.

Please see Major Paper Guidelines Table.

**a) Research** involves the ability to find, select and use effectively all primary materials (case, statutes, regulations) and secondary sources (books or articles) relevant to the topic. In many classes, a comparative analysis of material from other jurisdictions (e.g. Britain and the United

States) is appropriate or even essential. Students should not rely exclusively on secondary sources, but should read the original text of major cases and statutes referred to in the literature. Research materials should include, where appropriate, non-legal sources. Empirical research by students ought to be encouraged.

The table adopts the following descriptors for research (horizontal axis):

- i) Outstanding - as defined above
- ii) Thorough- no important area of research has been missed but there are a few loose ends or other sources that ought to have been explored.
- iii) Not quite thorough - an important area of research has been missed or there are both loose ends and other sources to be explored.
- iv) Serious but Unsuccessful canvass of sources contains the failings of (iii) only more so.
- v) Mere attempt to consider sources - distinguishable from (iv) as being cursory rather than serious in considering main sources or there are clear errors in research, e.g. student fails to check for appeals of relevant decisions, and bases much of the analysis on a court of appeal case that has been reversed by the Supreme Court of Canada.
- vi) No serious research effort - self explanatory

**b) Organization: Logic/Coherence** relates to the logical and coherent presentation of the subject matter, so that it is readily intelligible to the reader.

The introduction should assist the reader by providing both a clear statement of the problem that the student has chosen to analyze, the goal she/he seeks to achieve and a brief overview of the subjects she/he intends to discuss. The conclusion should play a similar role at the end of the paper, except that it should also summarize the student's conclusions. Topics should appear in a logical sequence. Legal and factual material that provides the foundation for discussion of a particular issue should be set out before that issue is reached. The student should use headings to structure the paper and indicate when she/he is moving to a new topic or subtopic. There should also be transitional text to justify the shift to a new topic, explain its connection to issues previously discussed, and the like.

The table adopts the following descriptors for Organization (vertical axis):

- Excellent Organization
- Well organized: A few minor flaws, but generally good logical flow
- Moderate Disorganization throughout, but paper is generally intelligible
- Substantial Disorganization: paper hard to follow
- Incoherent: Disorganization is so great that paper is unintelligible

**c) Analysis-Insight-Synthesis:** These criteria relate to the evaluation of the student's ability to understand and utilize effectively the materials that she/he has found through research. They require an understanding of the subject matter that goes beyond the ability to merely recite the rationales of cases, the conclusions reached by other authorities or bare statistics.

Analysis relates to the student's detailed use of cases, statutes, and secondary sources within the paper to explore particular issues that she/he has identified. Good analysis will assist the reader to achieve a sophisticated understanding of the issues and relevant legal authorities without the need to read all the various sources that the student had identified through research. The student should provide a factual background adequate to permit the reader to understand the context in which legal problems arise. She/he should describe relevant legal material (cases/statutes) and important policy analysis (for example, Law Reform Commission materials) in sufficient detail to provide the reader with a clear view of any legal controversies that exist and reasoning that has been put forward to support the various positions. There are a wide variety of analytical weaknesses that may be displayed by students. Examples include missing a relevant issue or legal argument, identifying legal problems but not exploring available legal principles that may have a bearing on their solution, or stating the conclusions of cases significant to analysis of an issue without setting out the reasoning that the court used to justify its conclusions.

"Insight" involves an in-depth understanding of the fundamental issues. Good "Synthesis", which usually demonstrates this understanding,

reflects the ability of the student to integrate the diverse material that she/he has found into a conceptual framework that is clearly explained to the reader. Insight and synthesis would probably show up in a strong statement of thematic material at the outset, its use as an organizing device in the paper, and a serious attempt in the conclusion either to determine whether the initial hypothesis had been proven or to assess the conceptual apparatus for its explanatory power. Weak insight and synthesis may be demonstrated by a student's failure to integrate relevant authorities for some or all of the paper.

A better paper will draw inferences from the digested material as to the present state and future development of the law in the area researched, as well as formulating recommendations for legal changes that might improve the situation and serve appropriate policy goals. Good analysis without much insight or synthesis may be average depending on the complexity or the novelty of the topic or research method. For instance, good analysis of an original topic (see Originality *infra*) may be as much as can be expected and should be rewarded highly. The same quality of analysis of a topic on which there is already a body of published critical writing that provides a framework or platform for the student's paper would have to show its own insight and synthesis to rate equally highly. A paper that sets out numerous cases or articles or otherwise merely describes the results of the student's research efforts, however extensive, without attempting to extract common principles or create an analytical basis is likely to be judged as poor.

The table adopts the following descriptors for analysis-insight-synthesis (vertically within each box in the table):

- Excellent
- Very Good
- Average
- Weak
- Poor

**d) Literary Style:** This criterion relates to the linguistic style in which the paper is written. Most Dalhousie law students do a competent job with grammar and spelling and many have excellent literary style. The stylistic problems present in papers are of two sorts. Legal writing should be formal but clear and straightforward. Some students tend to be too colloquial, using slang or contractions such as "won't". Other students try too hard to be formal, producing convoluted sentences, making excessive use of the passive voice, and the like.

Because most students are competent in terms of literary style, this criterion is used to make adjustments in the grades produced by the table set out above only in extreme cases. The professor may increase or reduce the alphabetic grade result produced by the table set out above by one grade level for exceptionally strong or exceptionally weak literary style as described below:

Descriptors for literary style:

**Excellent:** Literary style is significantly above the norm for Dalhousie Law students.

Raise table mark by one alphabetic grade level, e.g. B to B+

**Average:** Literary style is consistent with that demonstrated by the majority of Dalhousie law students, i.e. some stylistic weaknesses but basically competent

No change in table grade level as determined above

**Weak:** Student's literary style falls significantly below the norm for Dalhousie Law Students and demonstrates serious, persistent weaknesses in grammar, spelling, or style  
Reduce table mark by one alphabetic grade level, e.g. B to C+

**e) Originality:** A highly prized, all-too-rare quality that cannot be easily defined, is used in the Table to raise the alphabetic grade that would have been assigned otherwise by a maximum of two grade levels. A paper may demonstrate good "analysis-synthesis" but still be lacking in originality. There are two different kinds of originality: topic originality and substantive originality.

The first sort of originality relates to the topic itself. This kind of originality exists when the student selects a topic where no research has been

previously undertaken in Canada (i.e. there are no Canadian secondary sources that deal with the issue that the student has selected). There may or may not be articles or books that have been published on the topic in foreign jurisdictions (e.g. the United States or Britain), but even when such foreign sources do exist, a significant degree of creativity and extrapolation is required on the part of a student who undertakes to write on a topic where no previous Canadian research is available to help with all or part of the topic. This kind of originality may exist in major papers that display weaknesses in other areas. Indeed, some kinds of analytical or organizational problems may be attributable precisely to the fact that the student is working in an area where no guidance is available from previous research carried out by more experienced scholars. The professor may recognize this kind of originality relating to topic by increasing the alphabetic grade produced by the table above by one level (e.g. from a B to a B+).

The second kind of originality may appear in the way the research is approached or in the understanding that the writer has gained of the topic and is able to convey to the reader, or in the form of new and convincing insights that are unique to the student author. This kind of originality, which is the hallmark of a paper of “publishable quality”, is not mere novelty although in other contexts the word may have that meaning: the new position advocated by the student must be credible, as well as novel. A major paper may demonstrate this kind of originality, even though the topic has been previously considered by other researchers in Canada. Originality of this kind will normally be associated with good “insight-synthesis-analysis”. The professor may recognize this kind of substantive originality by increasing the alphabetic grade produced by the table above by either one or two levels depending on the extent of the originality demonstrated by the paper (e.g. from a B+ to an A, or from a B+ to an A+ grade).

The cumulative effect of increases for originality is restricted to a jump of two grade levels. In other words, a professor cannot award a student an originality increase of three grade levels by accumulating an award of one grade level for topic originality, and two grade levels for substantive originality.

## 5. Guidelines for Major Paper Classes

- a. Normally the paper will not be shorter than 25 pages.
- b. Normally a paper of a general descriptive nature will not meet the standards.
- c. Normally the topic undertaken will be suitable for in-depth research with legal emphasis in a limited field of inquiry.
- d. Normally the supervisor should approve the topic and the outline or draft of the paper.
- e. Faculty members should make themselves available to meet with students to discuss the graded papers.
- f. At each stage of the supervision of major papers, both the supervising faculty member and the student should pay explicit attention to each of the criteria relevant to the evaluation of the paper.
- g. Copies of the major paper guidelines should be made available to students.

## O. Appeals Process

The following appeal regulations, passed by Faculty Council in October 1980 and amended March 1987, March, 2001 and May, 2006, are now in effect.

The Studies Committee, chaired by the Associate Dean Academic, is delegated by Faculty Council to perform an oversight role in administering the Appeal Regulations. In these regulations, reference to the Associate Dean Academic may include a person who, in the particular circumstances, has been designated by the Associate Dean Academic to act in his or her stead.

NOTE: There are several procedures in place at Schulich School of Law to ensure fairness in evaluation and consistency in grading. All exam questions are vetted by a faculty member teaching in the same area. Selected exams (including all failures) are co-read after marking is complete, but before the marks are submitted. Because of these checks, the Appeal Regulations do not provide for appeals which amount merely to seeking a second opinion. Students bear the burden of establishing the

elements of an appeal. No appeal can be based upon the fact that a grade was lowered by Faculty Council in order to comply with the Grade Distribution rules.

### A. Informal Review

A student who believes there is an error in a grade received in a class or in a component of a class should discuss the grade informally with the faculty member responsible.

A faculty member who, as a result of the informal review, acknowledges that an error in grading exists must, within five (5) working days of the informal review, inform the Studies Committee in writing of the nature of the error, and should indicate how the error should be rectified.

Upon receipt of such notification from a faculty member, the Studies Committee shall review the written explanation and shall decide whether amending the grade is appropriate in the circumstances.

### B. Formal Request for An Appeal

#### *General (Applicable to All Formal Appeals)*

1. Any student who is considering launching a formal appeal is strongly encouraged first:
  - a) to go through the informal review outlined above; and
  - b) to speak with the Associate Dean Academic or the Assistant Dean Academic, to ensure that the student has a clear understanding of the substantive and procedural requirements for a formal appeal.
2. There are two types of formal appeal available under these regulations:
  - a) Appeals based on a demonstrable error in grading (“Part I appeals”); and
  - b) Appeals relating to unfairness, impropriety or incompetence (“Part II appeals”).
3. Any formal Request for an Appeal shall be made by letter to the Associate Dean Academic
  - a) in the case of a final grade received in a winter term course or on a supplemental or special exam written during the summer by a student who is returning to Schulich School of Law the following September, not later than fifteen (15) working days following the first day of classes that September; or
  - b) in all other cases, not later than fifteen (15) working days after the final grade is made available through the University online distribution system;
4. The written Request for Appeal shall be accompanied by a cheque in the amount of \$50.00 (refundable if the appeal succeeds). The Studies Committee may waive the \$50.00 fee where it can be demonstrated that the payment would cause exceptional financial hardship.
5. Where
  - a) the Appeal Regulations stipulate a time period for a student, faculty member, or Appeal Board to take any action, and
  - b) in the opinion of the Associate Dean Academic, circumstances exist that would justify an extension of that time period and the extension could be granted without imposing an undue burden on other parties, the Associate Dean Academic may, upon written request, grant an extension.

#### *Part I Appeal: Demonstrable Error in Grading*

1. A student, having received the final grade in a class, may request a formal appeal of the grade given in any written component of the class, including the result of a special or supplemental examination, on the basis that an error has been made in grading.
2. An error in grading must be a demonstrable error, as opposed to a general sense that the exam or assignment deserved a higher grade. Example: Where a student can demonstrate prima facie that his/her answer accorded with the faculty member’s marking guide but the faculty member gave insufficient credit for it, an error in grading may be alleged.
3. A Request for an Appeal under this Part shall contain the following information:
  - a) The student’s name and exam code number;
  - b) The name of the course and of the faculty member(s) who taught and/or evaluated it;
  - c) A reasonable explanation of the nature of the error in grading which the student believes affected the mark received; and
  - d) A copy of the assignment or exam questions.

4. Where the appeal involves exam booklets or a paper or assignment not already in the possession of the office of the Associate Dean Academic, the student shall ensure that the Request for an Appeal is accompanied by the exam booklets, paper or assignment originally submitted by the student.
5. Upon receipt of a Request for an Appeal under this Part, the Studies Committee shall
  - a) where the Studies Committee is of the opinion that the student has not, prima facie, demonstrated an error in grading in accordance with section 2, notify the student that the appeal has been terminated; or
  - b) where the Studies Committee is of the opinion that the student has, prima facie, demonstrated an error in grading in accordance with section 2, permit the appeal to proceed.
6. Where the Studies Committee permits an appeal to proceed further, the Associate Dean Academic shall
  - a) notify the student involved; and
  - b) forward to the faculty member who assigned the grade in question the student's Request for an Appeal.
7. Within ten (10) working days of receiving the Request for an Appeal under paragraph 5(b), the faculty member shall
  - a) advise the Associate Dean Academic whether he or she agrees that an error in grading occurred and shall recommend to the Studies Committee that
    - (ii) the grade or mark remain unchanged,
    - (iii) the grade or mark be lowered, and by how much, or
    - (iv) the grade or mark be increased and by how much;
  - e) give the reasons for his or her recommendation; and
  - f) indicate the mode of grading used for the exam, assignment or paper in question.
8. Where in the opinion of the Associate Dean Academic it is impossible or impractical to obtain the recommendation of the faculty member referred to in subsection (1) within a time frame that would not prejudice the student, the Studies Committee may forward the appeal directly to an Appeal Board constituted in accordance with section 8.
9. The Studies Committee shall review the recommendation received from the faculty member under Section 6 and where the faculty member recommends raising the grade in the same amount requested by the student in his or her Request for an Appeal, the Studies Committee may
  - a) make the recommended change in the grade, or
  - b) forward the matter to an Appeal Board constituted in accordance with section 8.
10. Where the Studies Committee does not change the grade or forward the matter in accordance with subsection (1), the Studies Committee shall forward the faculty member's recommendation to the student making the appeal. Within five (5) working days of receiving the faculty member's recommendation, the student shall notify the Associate Dean Academic in writing as to whether or not he or she intends to continue with the appeal.
11. Where in accordance with subsection 7(2) the student notifies the Associate Dean Academic of his or her intention to continue with the appeal, the Associate Dean Academic shall appoint two faculty members, preferably with expertise in the subject, as an Appeal Board, to review the grade assigned and to determine whether an error has been made in evaluating the student's work.
12. The Associate Dean shall provide the Appeal Board with the following:
  - a) the student's Request for Appeal;
  - b) the recommendation of the faculty member provided under section 6;
  - c) the exam booklets, paper or assignment being appealed; and
  - d) copies of exams, assignments or papers from the same class that
    - (v) received a grade five (5) or more marks higher than that obtained by the student making the appeal,
    - (vi) received a grade five (5) or more marks lower than that obtained by the student making the appeal, and
    - (vii) received the highest grade in the class.

#### NOTE

- Where the exam or assignment under appeal offered choice as to questions or topics, care should be taken to ensure that as far as possible the papers chosen for comparison reflect similar choices.

- Where the student is appealing the grades received on only one or several of the questions on the exam or assignment, as far as possible, the grade variations set out in paragraph 9(d) should relate to the question or questions under appeal.
13. The members of the Appeal Board shall independently review the grade assigned to determine whether, in their opinion, an error has been made in grading the work of the student in the context of the mode of grading and the grades assigned the other students whose work is being used for comparison.
  14. The members of the Appeal Board, after completing their independent review, shall meet and determine whether:
    - a) the mark should remain unchanged;
    - b) the mark should be lowered, and by how much; or
    - c) the mark should be increased and by how much.
  15. The Appeal Board shall report its decision, with reasons, to the Associate Dean Academic within fifteen (15) working days of its appointment.
  16. Where the Appeal Board is unanimous that there was an error in grading, the mark under review shall be changed in accordance with the recommendation of the Appeal Board. Otherwise, the grade shall remain unchanged.
  17. The Associate Dean Academic shall provide a copy of the decision of the Appeal Board to the student and faculty member involved in the appeal.

#### ***Part II Appeals: Unfairness, impropriety or incompetence***

1. A student, having received the final grade in a class, may seek a formal appeal of
  - a) the grade for any unwritten component of the course, or
  - b) any other aspect of the evaluation method(s) used in the course,
  - c) on the basis that there was material unfairness or impropriety in the manner in which the evaluation was conducted or that the evaluation was not conducted by competent evaluators.
2. An appeal brought under this Part will only be successful if the student can demonstrate material unfairness, impropriety or incompetence; this Part does not provide for an appeal based solely on a difference of opinion between the student and faculty member as to the mode of evaluation or the grade assigned to the student.
3. The Request for an Appeal under this Part shall contain the following information:
  - a) the student's name and exam code number;
  - b) the name of the class and of the faculty member(s) who taught and/or evaluated it;
  - c) a full explanation of the nature of the unfairness, impropriety or incompetence being alleged; and
  - d) where relevant, a copy of the assignment or exam questions.
4. Where the appeal involves exam booklets or a paper or assignment not already in the possession of the office of the Associate Dean Academic, the student shall ensure that the Request for an Appeal is accompanied by the exam booklets, paper or assignment originally submitted by the student.
5. Upon receipt of a Request for an Appeal under this Part, the Studies Committee shall
  - a) where the Studies Committee is of the opinion that the student has not, prima facie, demonstrated material unfairness, impropriety or incompetence in accordance with section 2, notify the student that the appeal has been terminated; or
  - b) where the Studies Committee is of the opinion that the student has, prima facie, demonstrated material unfairness, impropriety or incompetence in accordance with section 2, permit the appeal to proceed.
6. Where the Studies Committee permits an appeal to proceed under this Part, the Associate Dean Academic shall
  - a) notify the student involved; and
  - b) forward to the faculty member who assigned the grade in question the student's Request for an Appeal.
7. Within ten (10) working days of receiving the Request for an Appeal under paragraph 5(b), the faculty member shall provide to the Associate Dean Academic a response to the Request for Appeal.
8. Where in the opinion of the Associate Dean Academic it is impossible or impractical to obtain the response of the faculty member referred to

in subsection (1) within a time frame that would not prejudice the student, the Studies Committee may decide the appeal.

9. The Associate Dean Academic shall forward the faculty member's response to the student making the appeal.
10. Within five (5) working days of receiving the faculty member's response under section 7, the student shall notify the Associate Dean Academic in writing as to whether or not he or she intends to continue with the appeal, and if so, whether he or she wishes an oral hearing.
11. Where an appeal is to proceed by way of oral hearing, the Associate Dean shall, within reason, attempt to set the hearing date at a time that is convenient to all parties. In no event shall the oral hearing be scheduled more than sixty (60) working days after an oral hearing is requested under section 8.
12. Where the appeal is not to proceed by way of oral hearing, the student shall, within ten (10) working days of receiving the faculty member's response under section 7, provide to the Associate Dean Academic a written reply to the faculty member's response.
13. Where an appeal is not to proceed by way of oral hearing, the Associate Dean shall forward to the Studies Committee the Request for an Appeal, the faculty member's response received under section 6 and the student's reply received under section 10, and the appeal shall be decided by the Studies Committee.
14. Once a formal appeal has been decided under this Part, the Studies Committee shall provide the student and the faculty member involved with a written decision, including the reasons for its decision.

### C. Reconsideration of a Studies Committee Decision

1. Where a student has received a decision of the Studies Committee made under these Appeal regulations, he or she may request a reconsideration of that decision where the student has new information that
  - a) was not and could not reasonably have been available to the student at the time of the appeal; and
  - b) is sufficient to persuade the Studies Committee to change the decision.
2. A request for reconsideration must be made as soon as possible after the further information becomes available.
3. Where the Studies Committee is of the opinion that the student has met the requirements set out in subsections (1) and (2), the Studies Committee shall reconsider the matter and shall communicate the new decision in writing to the student and any others who might be affected by the decision.

### D. Finality Clause

Except to the extent that the decision made under these Appeal Regulations may be appealed to the Senate Academic Appeals Committee, (a) a decision of an Appeal Board is final; and (b) subject to the section on reconsideration, any decision of the Studies Committee is final.

### E. Appeals to Senate Academic Appeals Committee

The attention of students of the Faculty of Law is directed to the Terms of Reference of the Senate Appeals Committee, as available on the Dalhousie University Senate website, <http://senate.dal.ca/Standing%20Committees/SAAC.php>

## V. Academic Programs

The degrees in law conferred by the University are the Juris Doctor (JD), the Master of Laws (LLM), and the Doctor in the Science of Law (JSD).

### A. Juris Doctor

#### 1. Full-Time Studies in Law

The JD class is designed to train students in those qualities which distinguish the educated lawyer, whether engaged in the practice of law, in government service or elsewhere. Among the qualities stressed are an understanding of the process of ensuring order in a complex and evolving society, precision of thought, an appreciation of the use of the English language in writing and speaking, thoroughness, and the avoidance of superficiality.

The full-time JD degree extends over three academic years, from September to May. A student who has failed the work of a year may, subject to the limitations of space, be readmitted, but the degree must be completed in four academic years. Students may also take a one year leave of absence during their JD as long as they successfully complete the degree requirements in four years (the "four year rule"). Student medical leaves must be approved by the Studies Committee in advance and, once approved, will not count towards the four years. Where a student establishes, to the satisfaction of the Studies Committee, that for medical or personal reasons, ability to pursue the class is significantly hampered, the Studies Committee may grant a medical withdrawal which would not count towards the four years.

The regular class requires the full time attendance of students. In the first year all subjects are prescribed; in second and third year most subjects are optional. Second and third year students must complete at least 29 credit hours, including a major paper writing requirement, each year. Permission is required before any regular law student may undertake classes in another Faculty of the University.

The policy of maintaining fairly small classes reflects the nature of teaching at the Law School. Classes are conducted by the "case method" or otherwise but with emphasis upon discussion between teacher and students, based upon assigned materials and topics that students are expected to have considered in advance. Research and written assignments are required of all students. These may involve substantial time in addition to regular class periods. The work submitted is carefully examined and then critically assessed by the teacher concerned and whenever possible a detailed criticism is provided in an oral interview.

In addition to class and writing requirements all students are required to participate in moot exercises. Third-year students may be required to attend legal aid clinics, the law courts, and special lectures.

### 2. Degree Requirements: Full-time program

#### (a) First Year Required Classes

- LAWS 1000X/Y.06: Contracts & Judicial Rule-Making
- LAWS 1001X/Y.06: Criminal Justice
- LAWS 1002.01: Orientation to Law
- LAWS 1003.05: Fundamentals of Public Law
- LAWS 1004X/Y.03: Legal Research and Writing
- LAWS 1005X/Y.06: Property in Historical Context
- LAWS 1006X/Y.06: Tort Law and Damage Compensation

#### (b) Second Year Required Classes

- LAWS 2061X/Y.05: Civil Procedure
- LAWS 2062X/Y.05: Constitutional Law
- LAWS 2201X/Y.01: Compulsory Moot
- An elective class with evaluation by major paper (i.e. a "paper" class)\*. A student must include at least one major paper class per year, and no more than two.
- Additional elective classes to make up a full year of studies of approximately 15 credits per week in each term. A student must have a minimum of 29 credits and may have a maximum of 31 credits per year; each term's work must include a minimum of 12 and a maximum of 17 credits. Please note that due to the fact the second year compulsory moot is worth 5 credits each term, second year students must take a minimum of 12.5 and a maximum of 17.5 credits each term for an overall total of 29-31 credits in second year.

#### (c) Third Year Required Classes

- LAWS 2099.02: The Legal Profession and Professional Responsibility
- Electives: As for second year, above

### 3. Part-Time Studies in Law

Schulich School of Law has instituted a part-time JD program in order to facilitate legal studies for those unable to take the full-time program. Students admitted to the part-time program may complete their degree by one of two methods:

#### (a) Full-Time First Year

Students may take their first year program on a full-time basis, and thereafter apply to be admitted to the part-time program for the remainder of their JD studies. After first year, students in the part-time program are

required to complete a minimum of 58 credits over a maximum of six academic years, with a minimum class load of 8 credits in each academic year. Part-time students must complete at least one optional class involving a major written paper in each 29-credit block over the period of part-time study.

Students who enter the program after completion of first and second years on a full-time basis are required to complete their minimum of 29 credits over a maximum of three academic years, with a minimum class load of 8 credits in each academic year.

#### **(b) Half-Time First Year**

Part-time students who choose to do first year on a half-time basis are required to complete 17 credits of the first-year program in their first year, completing Contracts and Judicial Rule-Making, Tort Law and Damage Compensation, Fundamentals of Public Law and 1 credit of Legal Writing. The remaining 15 credits of the first year program consisting of Property in its Historical Perspective, Criminal Justice: the Individual and the State, Orientation to Law, and the remaining 2 credits of Legal Writing must be completed in the second year. Thereafter, students in the part-time program are required to complete a minimum of 58 credits over a maximum of five academic years, with a minimum class load of 8 credits in each academic year. Part-time students must complete at least one optional class involving a major written paper in each 29-credit block over the period of part-time study. The Faculty encourages part-time students, wherever possible, to do first year on a full-time basis.

Please note that the regulations requiring that students successfully complete the work of second year before advancing to third year apply to part-time as well as full-time students.

### **4. Credit Hours (Second and Third Year): Full-time program**

Each student must complete a minimum of 29 and a maximum of 31 credits per year, and a minimum of 12, maximum of 17 credits each term. Please note: due to the fact the second year compulsory moot is worth 5 credits each term, second year students must take a minimum of 12.5 and a maximum of 17.5 credits each term for an overall total of 29-31 credits in second year.

### **B. Master of Laws (LLM) and JSD**

An intensive graduate program in law leading to the Master of Laws degree is offered to well-qualified candidates by the Schulich School of Law at Dalhousie University. The program is primarily intended for professional specialists and prospective law teachers. The program may consist of either a combination of class work, seminars and a thesis, or a combination of class work and seminars involving substantial written papers. In either case the program can be 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 class 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 original 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 restorative justice, family law, health law, law of the sea, maritime law, and environmental law.

An advanced graduate program in law leading to the JSD (Juris Scientiae Doctor) degree is offered to a very limited number of highly qualified candidates by the Schulich School of Law at Dalhousie 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 work. It is expected that such resources will normally be available in marine law, environmental law, international law, comparative law, health law, law and technology, and public law / jurisprudence.

Applicants for admission to the JSD program 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 JD 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.**

Applicants must be prepared to spend at least one full academic year (12 months) in continuous residence at Dalhousie after registration for the JSD program. 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 programs 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.

More detailed information on the requirements for the graduate law degrees offered at Dalhousie may be found in the calendar of the Faculty of Graduate Studies.

- LAWS 3000.03: Graduate Seminar on Legal Education and Legal Scholarship

### **C. Combined JD/MBA**

This is a four-year program which enables students to select classes leading to degrees of Juris Doctor and Master of Business Administration. The combined program is structured as follows:

#### **Year 1**

- CRMBA program starts July 2, with three classes taken during July-August.
- September to December: six more CRMBA classes.
- January to August: mandatory eight-month Corporate Residency, plus two online classes.
- Non-credit class in Personal and Professional Development, taken throughout.

#### **Year 2**

- Full First Year JD classes.

#### **Year 3**

- Civil Procedure
- Constitutional Law
- Compulsory Moot
- A major paper class
- 7-9 hours of law classes from the "Business Law" area (see below).
- Other elective classes for a total of 23-25 law credits
- 3 required half credit courses from the MBA program given a total of 6 credits
- One CRMBA elective (three credit hours)

#### **Year 4**

- The Legal Profession
- A major paper class
- Three to five hours of law classes from the "Business Law" area
- Other elective law classes for a total of 23-25 law credits
- Four elective half classes from the CRMBA program (12 credit hours)

The first and second year programs may be done in reverse order. The third and fourth year programs may be done in reverse order, with permission, except for the required law classes Civil Procedure and Constitutional Law (3rd year) and the Legal Profession (4th year).

### **Classes in the Business Law area**

- Bankruptcy & Insolvency, 2 credits
- Business and Environment, 3 credits
- Business Associations, 4 credits
- Sale of Goods, 2 credits
- Secured Transactions, 3 credits

- Taxation of Corporations, 2 credits
- Creditors Rights, 2 credits
- Insurance, 2 credits
- Corporate Transactions, 3 credits
- Corporate Finance, 3 credits
- Competition Law, 3 credits
- Information Technology Transactions, 3 credits
- International Trade Law, 3 credits
- Law of Succession, 2 credits
- Legal Accounting, 2 credits
- Oil & Gas Law, 2 credits
- Property Rights in Investment Securities, 3 credits
- Real Estate Transactions, 4 credits
- Taxation I, 4 credits
- Taxation II, 2 credits
- Taxation III, 2 credits
- Securities Regulation, 3 credits
- Regulation of Financial Institutions, 3 credits
- Additional recommended classes: Evidence, Trusts

Students intending to make application for the joint JD/MBA program should inquire directly to: crmba@dal.ca (902)494-1814 or toll-free 1-888-432-5622 (MBA) and to admissions@dal.ca (LAW).

#### D. Combined JD/MPA

This is a four-year program which enables students to select classes leading to degrees of Juris Doctor and Master of Public Administration. The combined program is structured as follows:

##### Year 1

- First year classes of the MPA program (9 half credits) required classes

##### Year 2

- First year classes of the JD program

##### Year 3

- Two half credit elective classes from the MPA program
- Civil Procedure
- Constitutional Law
- Compulsory Moot
- Plus 12-14 credit hours of classes from the JD program including a major paper class

##### Year 4

- Second year required class PUAD 6100 plus one half credit elective class from the MPA program. Students may choose to do one of the half credit elective classes from outside the MPA course offerings. This course must be approved by the MPA Graduate Co-ordinator.
- 23-25 credit hours of classes from the JD program, which must include The Legal Profession and Professional Responsibility, and a major paper class.

Candidates for the JD/MPA program must satisfy the entrance requirements of both the JD and MPA programs, and may obtain further information about the combined program by writing to the Faculty of Law and to the Coordinator of the MPA program. For admission, students must apply to both the Law School and the School of Public Administration individually. Students applying for the MPA program may submit LSAT results in lieu of GMAT results.

#### E. Combined JD/MLIS Program

Students who apply for the combined JD/MLIS program (Master of Library and Information Studies/Juris Doctor) must meet the admissions standards of both the Schulich School of Law and the School of Information Management. At the end of the four year program, they will have obtained both degrees. The combined program is structured as follows:

##### Year 1

- First year classes of the MLIS program; INFO 0590 Practicum (Spring Term)

##### Year 2

- First year classes of the JD program

##### Year 3

- 2 MLIS classes (1 required, 1 elective)
- 23-25 hours of JD classes including Civil Procedure, Constitutional Law, Compulsory Moot and a major paper course

##### Year 4

- 2 MLIS courses
- 23-25 hours of JD classes including Professional Responsibility and a major paper course

For further information about this program, contact the MLIS Program Coordinator, School of Information Management (JoAnn Watson, Joann.Watson@dal.ca) and/or the Admissions Officer, Schulich School of Law (Rose Godfrey, rose.godfrey@dal.ca)

#### F. Combined JD/MHA Program

Students applying for this program must meet the admission standards of both the Juris Doctor and the Masters of Health Administration programs. The combined program is structured as follows:

##### Year 1

- First year of MHA Program

##### Summer

- HESA 6390X/Y.06: Health Administration Residency

##### Year 2

- First year of JD Program

##### Year 3

- Students must complete the following classes in the MHA program in Years 3 and 4, HESA 6100.03, HESA 6305.03, HESA 6310.03, HESA 6340.03, HESA 6330.03, and HESA 6365.03.
- 23-25 credit hours of classes from the JD program, including Civil Procedure, Constitutional Law, a major research paper, and Health Law, LAWS 2132.03, or its equivalent at the School of Health Administration, Health Care Law: HESA 6360.03

##### Year 4

- HESA 6380.03: Senior Seminar
- HESA 6360.03: Health Care Law or Health Law from the Law School (if not completed previously)
- 23-25 credit hours of classes from the JD program, including Professional Responsibility and a major research paper.

Note: With the exception of HESA 6380, students may change the order of the MHA course requirements in years 3 and 4.

#### G. Health Law and Policy Program (HLPP)

##### Introduction

The Health Law Institute is an interdisciplinary Institute supported by and serving the Faculties of Law, Medicine, Health Professions and Dentistry.

##### Educational opportunities include the following:

Dalhousie offers one of the largest curricular collections within this field in Canada:

- LAWS 2115.03: Health Care Ethics and the Law
- LAWS 2127.02/2128.03: Mental Disability Law
- LAWS 2132.03: Health Law
- LAWS 2159.03: Health Systems Law and Policy
- LAWS 2167.03: Health Law Placement
- LAWS 2192.03: Advanced Negligence: Medical Malpractice
- LAWS 2157.14: Health Law Exchange
- LAWS 2193.03: Health Law and Policy: Current Issues
- LAWS 2069.03; 2070.04; 2071.05; 2072.06: Directed Research Paper

Students may also take a limited number of classes for credit towards their law degree in related subjects offered at the graduate level in other academic departments of the University e.g., Bioethics and Philosophy. Students with such interests should review Law school regulations for

requirements which include obtaining written consent of the Department or School involved as well as the Assistant Dean of the Law School. Students wishing assistance in the selection of classes within the area of Health Law are advised to consult the Director or faculty members of the Institute.

### **I. JD Specialization Certificate**

JD students may specialize in Health Law and Policy and the specialization will be recognized on their academic transcript. To specialize in Health Law and Policy, a student must take Health Law and three additional elective classes. These classes may be selected from the Health Law curriculum: Health Care Ethics and the Law; Mental Disability Law; Health Systems Law and Policy; Advanced Negligence: Medical Malpractice; Health Law and Policy: Current Issues; Health Law Placement or a Directed Research Paper. Other major paper courses may also serve as electives toward the specialization, but only if the paper topic is approved by the Director of the Health Law Institute. Examples of some of the courses that would be considered relevant are: Animal Law; Aboriginal Peoples; International Trade Law; Intellectual Property II; or Environmental Law II. All classes counted towards satisfaction of the Health Law and Policy Specialization requirements must be completed with no grade below C, and a weighed average in those courses of at least B (i.e., 70). Where the Health Law Placement is included as one of the four credits, a minimum grade of Pass is required but will not be factored into the calculated average.

NOTE: For the purposes of any Schulich School of Law Certificate program, only those courses pursued at Schulich School of Law during the student's JD studies which lead to successful completion of a Dalhousie University JD degree will be recognized. Students are not permitted to count a course towards more than one certificate.

Students interested in registering for the Health Law and Policy Specialization program must contact the Director of the program as early as possible and ideally at the start of second year.

### **II. LLM**

The Health Law Institute is in receipt of a training grant from the Canadian Institutes of Health Research that provides scholarship and other capacity - building funds to promote graduate studies in health law and policy. While there is no Health Law and Policy specialization annotation for LLM transcripts, all of the classes (with the exception of LAWS 2167.03: Health Law Placement and LAWS 2157.14: Health Law Exchange) are open to LLM students. In addition, LLM students may do their supervised thesis research within the Health Law and Policy field. Health Law Institute faculty members offer a breadth of experience in areas such as reproductive technologies, death and dying, research involving humans, licensing and regulation of health professionals, health reform, resource allocation, women's health, and the effects of health regulation and reform on vulnerable populations. Students interested in pursuing an LLM are encouraged to visit or call the Institute to discuss research interests.

### **III. Interdisciplinary PhD**

It is possible to pursue an interdisciplinary PhD drawing on such disciplines as philosophy, law, and medicine. Each program of study will be unique and must be negotiated with the Faculty of Graduate Studies and prospective faculty supervisors.

For further information on the Health Law Institute and the Health Law and Policy Program contact the Health Law Institute directly at:

6061 University Avenue  
Halifax, Nova Scotia  
Canada B3H 4H9  
Telephone: (902) 494-6881  
Fax: (902) 494-6879  
Email: hli@dal.ca  
Internet: <http://www.dal.ca/hli>

### **H. Law and Technology Institute**

The Law and Technology Institute was established at Schulich School of Law in 2001 to provide teaching, research, and continuing education on IT law issues to students, faculty members, and the practicing Bar. The Institute participates, with the faculties of Computer Science and

Management, in Dalhousie Master of Electronic Commerce Program, and has commenced collaborative projects with the private sector and governments on information technology issues. Its faculty members provide graduate supervision to students interested in the developing field of information technology law, and are active in law and technology organizations, such as ITCan, and the International Society for Law and Technology. The Institute hosts an Eminent Speakers Series, which brings leading IT lawyers and academics to Dalhousie to share their expertise. The Institute is home to the Canadian Journal of Law and Technology, edited by Professors Deturbide and Scassa. The CJLT, which is published three times per year, is the pre-eminent technology law review in Canada.

#### **Classes Offered**

- Law and Technology
- Internet and Media Law
- Privacy Law
- Intellectual Property Law
- Information Technology Transactions
- Patent Law
- Copyright Law
- Intellectual Property II
- Intellectual Property and Commercialization Placement

Students also have the opportunity to pursue specialized interests in fields such as health law and alternate dispute resolution, as they relate to information technology. For further information, contact the Law and Technology Institute at:

Telephone: (902) 494-1469

Fax: (902) 494-1316

Email: [lynda.corkum@dal.ca](mailto:lynda.corkum@dal.ca)

Website: <http://www.dal.ca/law>

### **I. Marine & Environmental Law Program (MELP)**

Since its establishment in 1974 as an area of specialization for Dalhousie JD students, the Marine & Environmental Law Program (MELP) has provided JD and post graduate students (LLM and Doctoral) with one of the most extensive academic course offerings in these two fields in the world.

With more than 12 full and part-time faculty members currently teaching in the Program, students have a unique opportunity to learn about public and private law practice in marine (including shipping) and environmental law taught from domestic and international perspectives. Students wishing to specialize in these fields have the option of obtaining a certificate of specialization in either Marine or Environmental Law or both, while completing the three year JD degree.

#### **Marine Law**

- LAWS 2041.03: Coastal Zone Management
- LAWS 2020.02: Fisheries Law
- LAWS 2211.02/2212.03: Law of International Trade and Shipping
- LAWS 2022.03: Law of the Sea (required for the Certificate)
- LAWS 2124.03: Marine Environmental Protection Law
- LAWS 2001.03: Maritime Law and Practice (required for the Certificate)
- LAWS 2068.03: Ocean Law and Policy
- LAWS 2079.02: Oil and Gas Law

#### **Environmental Law**

- LAWS 2104.03: Environmental Law I (required for the Certificate)
  - LAWS 2051.03: International Environmental Law (required for the Certificate)
  - LAWS 2153.03: Business and Environmental Law
  - LAWS 2041.03: Coastal Zone Management
  - LAWS 2213.02/2214.03: Energy Law
  - LAWS 2133.03: Environmental Law II: Interdisciplinary perspectives on Climate Change
  - LAWS 2250.03: Environmental Law Placement
  - LAWS 2020.02: Fisheries Law
  - LAWS 2124.03/2125.03: Marine Environmental Protection Law
  - LAWS 2079.02: Oil and Gas Law
  - LAWS 2015.03: Planning Law
  - LAWS 2219.03: Regulatory Systems in Environment and Health Law
- \*not all electives are offered each year

Other major paper courses may serve as electives toward a certificate, provided the topic is approved in writing before the paper is written, by the Associate Director of the Marine & Environmental Law Institute.

Note: For the purposes of any Schulich School of Law Certificate program, only those courses pursued at Schulich School of Law during the students' JD studies which lead to successful completion of a Dalhousie University JD will be recognized. Students are not permitted to count a course towards more than one certificate within the Law School.

Examples of some of the courses that would be considered relevant are:

- LAWS 2120.03: Aboriginal Peoples
- LAWS 2191.03: Animals and the Law
- LAWS 2115.03: Health Care Ethics & the Law
- LAWS 2159.03: Health Systems: Law and Policy
- LAWS 2203.03: Intellectual Property II
- LAWS 2056.03: International Trade Law

### MELP Specialization Certificates

JD students may specialize in Marine Law and/or Environmental Law and the specialization will be recognized on their academic transcript. Students wishing to complete the requirements of both certificates are not permitted to double count electives within the law school.

### Marine Law Specialization

To specialize in Marine Law, a student must take: (a) Maritime Law & Practice (Maritime Law I) and Law of the Sea (required courses); (b) two other elective courses: Coastal Zone Management, Fisheries Law, Law of International Trade & Shipping, Marine Environmental Protection Law, Ocean Law & Policy, Oil & Gas Law or another major paper course, provided the topic is approved in writing, before the paper is written, by the Associate Director of the Marine & Environmental Law Institute.

### Environmental Law Specialization

To specialize in Environmental Law, a student must take (a) Environmental Law I and International Environmental Law; (b) two other elective courses from the following: Business & Environmental Law, Coastal Zone Management, Energy Law, Environmental Law II: interdisciplinary Perspectives on Climate Change, Environmental Law Placement, Fisheries Law, Marine Environmental Protection Law, Oil & Gas Law, Planning Law, Regulatory Systems in Environmental and Health Laws or another major paper course, provided the topic is approved in writing, before the paper is written, by the Associate Director of the Marine & Environmental Law Institute.

### General Requirements

All classes counted toward satisfaction of the Marine Law or Environmental Law specialization must be completed with no grade below C, and a weighted average in those courses of at least B (i.e., 70)

Students interested in registering for Marine Law or Environmental Law specialization must contact the Associate Director of the Marine & Environmental Law Institute as early as possible and ideally at the start of second year.

It is the students' responsibility to ensure that they complete all the requirements of the specialization they enrol in. Only those courses pursued at Schulich School of Law during the student's JD studies which lead to successful completion of a Dalhousie University JD degree will be recognized.

On completion of all requirements, including registration for the certificate program, the specialization will be recognized on the academic transcript. Students will also receive a separate certificate attesting to the satisfactory completion of a specialization.

### J. Business Law Certificate

JD students may specialize in Business Law and the specialization will be recognized on their academic transcript. To specialize in Business Law, a student must take:

- a. Business Associations, Taxation I; Sale of Goods and Secured Transactions
- b. Classes totaling at least three credit hours chosen from the following list:

- Securities Regulation
- Taxation of Corporations

Other classes specifically designated from time to time.

- c. Additional classes chosen from the following list (at least one of which must be a major paper class or equivalent) which, together with all classes taken to satisfy requirements (a) and (b) above, total at least 23 credit hours:

- Bankruptcy and Insolvency Law
- Business and Environment
- Canadian Corporate/Securities Law Moot
- Competition Law
- Corporate Finance
- Corporate Transactions
- Current Issues in Corporate Law
- Employment Law
- Energy Law
- Information Technology Transactions
- Insurance Law
- Intellectual Property
- Intellectual Property II
- International Trade Law
- Internet and Media Law
- Labour Law I
- Labour Law - Administration of the Collective Agreement
- Law of International Trade and Shipping
- Legal Accounting
- Mergers, Acquisitions and Other Changes of Corporate Control
- Oil & Gas Law
- Pension Law
- Real Estate Transactions
- Approved DRPs
- Other major paper courses may also serve as electives towards the specialization, but only if the paper topic is approved by the Purdy Crawford Chair in Business Law who serves as the Director of the Business Law Specialization program.

Students should also check the courses listed on the Business Law web page as it sometimes includes new courses approved after the calendar deadline.

Students interested in registering for the Business Law Specialization Certificate must contact the Director of the Business Law specialization program as early as possible and ideally at the start of second year.

All classes counted toward satisfaction of the Business Law Specialization requirements must be completed with no grade below C, and a weighted average in those courses of at least B (i.e., 70).

NOTE: For the purposes of any Schulich School of Law Certificate program, only those courses pursued at Schulich School of Law during the student's JD studies which lead to successful completion of a Dalhousie University JD degree will be recognized. Students are not permitted to count a course towards more than one certificate.

## VI. Classes Offered: JD and LLM

PLEASE NOTE: Every class listed may not be offered each year. As well, teaching assignments may be subject to change. For an up-to-date listing, please consult the current law school timetable and course selection materials.

### A. First Year Classes (all compulsory)

#### Contracts and Judicial Decision-Making: LAWS 1000X/Y.06

This class has two primary objectives: the first is to provide an understanding of the process of development of the common law through judicial decisions; the second is to provide a basic knowledge of the doctrines and precepts of the law governing the making and performance of contracts. As a means of attaining the first objective, the "case method" of teaching is used to enable students to acquire a lawyer-like understanding of such concepts as "stare decisis", the use of precedent, and the technique of distinguishing. A critical evaluation of judicial law-making is undertaken through an examination of the developing

phenomenon of legislative intervention in the field of contract law. In order to fulfil the second objective, substantive rules of contract law are examined.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: For large-group classes, written examination in December (with option to count as 30% of the final mark), and a final examination. For small group classes, written examinations 60% and a combination of class assignments, oral advocacy exercise(s) and class participation worth 40%, with written exam in December (with option to count as 30% of the exam component if this improves the final examination grade).

### **Criminal Justice-The Individual and the State: LAWS 1001X/Y.06**

Relationships among the state, individuals, and communities are considered in the context of Canadian criminal law. The legal rights provisions of the Charter of Rights and Freedoms, selected topics in criminal procedure and the principles of the substantive, or general part, of criminal law will be the main focus of this class. The latter concentrates on elements of offences, justifications, excuses, non-exculpatory defenses, inchoate crimes and secondary liability for offences. Teaching is conducted by lecture and discussion of assigned materials including the Criminal Code (which is also used to illustrate methods and problems of statutory interpretation) and a volume of cases and materials.

First year students should note that there are a few places available in the intensive Deferred Course in Criminal Law which replaces the regular full year course. Students who are enrolled in this small group class do not take Criminal Law during the regular term and must be prepared to extend their academic year for about six weeks, from approximately late April until early June. Students wishing to select this option must apply to the Studies Committee and must provide cogent reasons demonstrating that they would benefit from enrolment in the course. Factors such as mature student status, parenting responsibilities, illness, disability, the need for employment during the regular term and other personal circumstances may be taken into consideration. Students are able to choose from a wide range of evaluative options in this class. Contact Professor Kaiser for further information.

NOTE: Students taking the class taught during the regular academic year must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: For large group classes, written examination in December (with option to count as 30% of final mark), and a final examination. For small group classes, the mark is composed of a combination of an oral advocacy exercise, class participation and written examinations.

### **Fundamentals of Public Law: LAWS 1003X/Y.05**

This class provides students with an understanding of the constitutional and administrative structures of Canadian law and government. An emphasis is placed on developing the skills required of lawyers whose public law work may range from appearances before administrative tribunals, to giving advice on the formulation and articulation of policy. Primary among the emphasized skills is the ability to work with and interpret constitutional, statutory and regulatory texts. A perspective on the administrative model of decision making will also be developed. As a necessary background for the development of these skills and for the general study of law, this class introduces students to the Canadian governmental and constitutional system. Students will explore the legislative process, statutory interpretation, and the administrative system using human rights legislation as a model. Further, students will develop an understanding of the analytical framework of the Canadian Charter of Rights and Freedoms, through the study of the interpretation and development of equality rights.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: Written examination in December (with option to count as 30% of the final grade), and a final examination which may have both a take-home and in-class component

### **Legal Research and Writing: LAWS 1004X/Y.03**

This class has three objectives. The first is to introduce students to the process of legal research and to provide a basic understanding of primary legal materials and secondary sources of legal information in both print and digital form.

The second is to provide students with the basic skills of legal writing and legal citation.

The third objective is to introduce students to the technique of applying legal authorities to the solution of legal problems.

The class is conducted by lectures, research assignments based on hypothetical fact situations and assigned readings.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: Library and citation assignments and two research and writing assignments.

### **Orientation to Law: LAWS 1002.01**

The objective of the class is to orient students to the study of law by introducing them to four fundamental perspectives in the law: the comparative, the historical, the philosophical and the professional. Within each perspective several Faculty members will lecture, both to convey information deemed essential and to give a sense of the variety and contingency within each perspective. Mandatory readings will be presented in advance by each faculty speaker.

EVALUATION: Pass/fail oral exam conducted by a faculty member. All students must attend the oral OTL exams as scheduled. If the oral is unsatisfactory the student will be re-examined by a three-person panel comprised of the Dean and two other faculty members. Any student who, without permission from the Studies Committee, does not attend the initial oral exam will not have recourse to the three person panel and will fail the course.

### **Property in its Historical Context: LAWS 1005X/Y.06**

The purpose of this class is two-fold: first, to provide a basic understanding of property concepts and principles in both real and personal property; second, to provide a sense of the historical development of the law of property.

This class introduces the student to the concept of property, its evolution, types and fundamental principles. It illustrates ideas such as possession and ownership by reference to the law of finders and bailment and to various transactions in which land or goods are the common denominators. It also explores the doctrines of aboriginal title and the principles of real property, including tenure, estates, future interests, matrimonial property, private and public controls on land use, the registry system and adverse possession.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: Written examination in December (with option to count as 30% of the final mark), and a final examination

### **Tort Law and Damage Compensation: LAWS 1006X/Y.06**

The major objective of this class is to provide a basic understanding of the manner in which losses from injuries to personal, proprietary and economic interests are distributed through tort law. Materials to be studied include cases, appropriate legislation and doctrinal writings related to the problems of tort law and damage compensation in a diverse society.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: For large-group classes, written examination in December (with option to count as 30% of the final mark), and a final examination. For small group classes, the mark is composed of a combination of class assignments, an oral advocacy exercise, class participation and written examinations.

## **B. Second Year Required Classes**

### **Civil Procedure: LAWS 2061X/Y.05**

Civil Procedure is a required second-year class, as this course is the major law school vehicle for teaching procedural law as an essential part of our legal system. Although the conduct of a Supreme Court action and the Nova Scotia Civil Procedure Rules serve as the backbone of the course, the basic issues of procedure are canvassed in sequence: the civil court system, commencing proceedings, pleading, motions and affidavits, territorial jurisdiction and convenient forum, standing, limitation of actions, suing the government, joinder of parties and claims, discovery, dispositions

without trial, trials, orders and enforcement, appeals, costs. The course concludes by considering improvements in access to civil justice (including class actions) and reforms to the civil justice system (including alternative dispute resolution and case management). In addition to regular classes, students will take part in "workshops," small groups of 10-12 students instructed by civil litigation practitioners. In the workshops, the students draft pleadings, documents and briefs and argue a simulated chambers motion, acting for opposing parties in a hypothetical case. By this combination of classes and workshops, students should acquire both a theoretical and practical understanding of procedure, the civil justice system and the roles of lawyers within that system.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

EVALUATION: Written examinations, drafting assignments and workshops.

### **Compulsory Moot: LAWS 2201X/Y.01**

The Second Year Compulsory Moot Programme is a full-year, mandatory course for all second year students. It is a course which teaches students written and oral advocacy and is comprised of both a written factum and an oral advocacy exercise. In the Fall Term, students are required to prepare and submit an Appeal Court Factum, which must adhere to procedural rules as set out in the Law School's Moot Court Manual. In the Winter Term, students are then required to present an oral moot based on their written submissions before a Panel of three Court of Appeal Justices. The Compulsory Moot Course is worth a total of 1 credit hour and is evaluated on a pass/fail/honor basis. Students who perform exceptionally well during their second-year moots may be nominated for the Smith Shield Mooting Competition, which is held in October of the following academic year.

### **Constitutional Law: LAWS 2062X/Y.05**

This required 2nd year class concerns itself with three main themes; the distribution of powers under the Constitution Act 1867, the Canadian Charter of Rights and Freedoms, and Aboriginal rights. This will follow from the basic introduction to and foundation for the class laid during first year by the class in Public Law. The class makes an effort to integrate division of powers, Charter and Aboriginal rights discussion to highlight both points of overlap and points of departure. Throughout the class emphasis will be placed on the roles of the constitution in our governmental structure and of the courts as its elaborator and guardian, and on constitutional litigation as a problem-solving process through which fundamental values are examined.

NOTE: This course may be offered as both a full year course and as a one-term course.

EVALUATION: Written final exam with an opportunity for students to earn partial marks through other components during the term

## **C. Third Year Required Class**

### **The Legal Profession and Professional Responsibility: LAWS 2099.02**

This required 3rd year class examines various aspects of the nature and organization of the legal profession in Canada, including its history and evolution, the legal and ethical responsibilities of lawyers and the influences of the adversary system on the pursuit of justice. In particular, the class covers specific ethical rules which affect all lawyers in their practices and also the wider public protection issues which face the organized legal profession. The class will be conducted by lectures and discussions involving the whole class (1 hour per week) and by small group discussions (1 hour per week). These will include special presentations, simulations and problem-solving projects. Serious attention will be given to dilemmas facing lawyers and the legal profession today.

EVALUATION: Option 1: Based partially on the results of a final examination and partially on small group attendance. Option 2: Based on a paper, the results of a final examination, and small group attendance.

## **D. Second and Third Year Optional Classes**

### **Aboriginal Peoples: LAWS 2120.03**

This class will examine the legal position of Aboriginal peoples within Canada. The objective of the class is to sensitize students to the unique

legal and policy issues which must be understood and addressed to effectively work in the area of Aboriginal Law. Course materials will engage jurisprudence and legislation within the broader nexus of Colonial history, aboriginal conditions and culture, and government programs and policies. Particular topics may include sources of law, unique constitutional provisions, the special position of Indian reserves, the nature of aboriginal title and rights, Indian treaties, fiduciary obligations, taxation, and self-government/self determination.

EVALUATION: Major paper, reaction papers, and class participation.

### **Administrative Law: LAWS 2000.04**

This class is an advanced study of the public law process. It studies external controls upon the exercise of statutory authority, primarily through the vehicle of judicial review. The purpose of the class is to introduce the student to the general principles of procedural and substantive judicial review as well as to develop an understanding of the workings of the administrative process and the role of the subordinate legislation.

FORMAT: 4 hours per week

EVALUATION: Final written examination with the possibility of an optional midterm exam, depending on the instructor.

### **Advanced Legal Research: LAWS 2172.03**

This class builds on the research and writing skills acquired in the first-year mandatory legal research and writing class. Canadian primary and secondary sources will be explored in depth. Students will have the opportunity to acquire the research skills necessary to become proficient in using legal materials of other jurisdictions e.g. the United States, Great Britain, the European Union and to explore and become familiar with international legal materials. Students will have the opportunity to acquire advanced research techniques when using the major electronic legal data bases (Westlawecarswell, Lexis and Quicklaw). Students will have the opportunity to become skilled in critically evaluating legal materials, to practice writing legal memoranda and other types of legal writing, and to concentrate on exhaustive legal research in a chosen area of law. There will be opportunities to explore specialized topics such as the ethical aspects of legal research, access to information, multimedia citation and other special topics at the students' request.

EVALUATION: Writing and research assignments, and class participation.

### **Advanced Negligence: Medical Malpractice: LAWS 2192.03**

This course will examine, from a theoretical perspective, issues of potential liability of hospitals, health care professionals, product suppliers, and governments for their respective roles in the provision of health services. Topics covered may include: the learned intermediary rule; non-delegable duties and vicarious liability; tort/contract overlap; the fault standard and comprehensive compensation for injury; potential government liability, especially re the blood supply and sexual sterilization; reproductive technologies and malpractice; and issues of consent, including capacity of minors and those with mental impairment to consent to treatment.

FORMAT: 2 hours per week, 3 credits

EVALUATION: Major research paper, class presentation, and class participation

### **Alternative Dispute Resolution: LAWS 2113.03**

This seminar class will provide students with an opportunity to learn about and develop conflict management skills. The class will provide students with an opportunity to consider the theory and practice of various dispute resolution techniques, such as negotiation, mediation and arbitration. The class will involve skills development exercises and discussion of topical readings on the subject of dispute resolution processes.

EVALUATION: Based on a combination of written assignments and class participation.

### **Animals and the Law: LAWS 2191.03**

This seminar examines legal issues pertaining to non-human animals. It is concerned with how such entities have been conceptualized by the law and with how they should be. Should animals be viewed as objects (property), as legal subjects (rights holders), or as something else altogether? This debate will provide the context for examining the history of animal protection legislation and current issues relating to animals. These include the constitutional authority to legislate with respect to non-

humans, animal cruelty (including such specific topics as experimentation on non-human animals, treatment of farmed animals, and hunting), endangered species legislation, standing in animal welfare /rights litigation, market-based approaches and civil disobedience by animal activists.

ENROLMENT: 16 students

FORMAT: 2 hours per week, 3 credits

EVALUATION: Major paper plus in-course assignment

### **Bader International Study Centre/Dalhousie Spring Global Law Program: LAWS 2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707: LAWS 2700.**

This joint Queen's/Dalhousie Program provides students with an intensive and integrated academic program in international law, business law, and comparative law. The program is offered at the International Study Centre at Herstmonceux Castle in East Sussex, U.K. for 8 weeks in May and June of each year. Students enroll in one of three modules: International Business Law, Comparative Law, or Public International Law. All students begin with a two-week Public International Law course and then split into separate module groups (Public and Business). The International Business Law students study International Trade and Investment and International Commercial Arbitration; the Public International Law students study International Human Rights Law and International Criminal Law. The program includes various field trips, including a trip to Brussels, The Hague, Paris and Geneva. Dalhousie students can earn nine credits for successfully completing either module. Applications are due by March each year, but seats often go quickly so applications are encouraged before the end of October. There is an information session held in the fall term at Dalhousie Law School each year, and further details of the program and course descriptions can be found on the Queen's Law website at <http://law.queensu.ca/international/SpringProgramAtTheISC.html>. Please note Dalhousie students wishing to attend this program must consult in advance with the Associate or Assistant Dean Academic about the application of BISC credits towards their degree. Grades earned at the Bader International Study Centre will not be included in a Dalhousie student's overall weighted average for any purpose, including eligibility for supplemental exams.

### **Bankruptcy and Insolvency: LAWS 2081.02**

This class will deal with various federal and provincial legislative provisions governing bankruptcy and insolvency; fraudulent conveyances; assignments and preferences; the status of receivers, private and public, at common law and by statute; the status of agents appointed pursuant to security instruments including chattel mortgage, conditional sale, assignment of book debts, and section 427 Bank Act, the status of engagements such as look-sees, and monitors; informal and formal proposals; the role of trustees, receivers and lawyers; creditors and debtors and the administration of insolvent estates; priorities within and without bankruptcy including other competing interests between classes of creditors; the distribution of the estate among creditors within and without bankruptcy; consequences of bankruptcy and the alternatives to bankruptcy; dealing with insolvent persons and corporations in the consumer and business community; ethical considerations in the delivery of legal advice and services in insolvency; new developments and proposals for reform of insolvency laws in Canada.

EVALUATION: Final examination

### **Business and Environmental Law: LAWS 2153.03**

This class looks at the interrelationship between environmental issues and business issues and how they continue to evolve. Emphasis is placed on how environmental issues, especially those relating to liability for contaminated sites and pollution, impact on, and affect, business transactions and operations. This interrelationship is explored beginning with a legislative overview and transactional issues and then moves into the interplay between government and the private sector in regulating business operations. Issues covered include due diligence, contaminated sites and environmental consultants, stigma, regulatory liability, environmental claims and damages and emerging international/cross-border obligations.

CO-REQUISITE: Business Associations or Environmental Law I

EVALUATION: Major research paper, class participation, class presentation

### **Business Associations: LAWS 2002.04**

This class provides an introduction to the law governing the conduct of business in the corporate form. The class deals with the following topics: the choice of form of business enterprise; the legal effect of incorporation; disregarding the corporate entity; the different systems of incorporation; the corporate constitution; contracts between corporations and outsiders; the control and management of the corporation, especially the relationship among promoters, directors, executive committees, officers and shareholders; the raising and maintenance of a corporation's capital; the liability of directors and officers and remedies available to shareholders. An introduction to the principles of partnership will also be included. The class is taught by discussion of selected cases, statutes and other materials which students are expected to read carefully in advance of class.

EVALUATION: Written examination that may be open or closed-book.

### **Canadian Legal History: LAWS 2123.03**

This is a survey course in the history of Canadian law from the time of the First Nations to the present. The successive reception of aboriginal law, French civil law and English common law will be discussed, as well as the later influence of U.S. law. We will explore the general characteristics of the legal regimes of British North America before and after responsible government, the impact of Confederation, and the response of the Canadian legal order to industrialization, social reform, urbanization, the two World Wars, immigration and technological change. Emphasis will be put on the development of Canadian legal institutions, the legal profession, legal thought and selected areas of substantive law. Throughout we will consider the evolution of Canadian legal culture.

EVALUATION: Major paper (80%) and class participation (20%) (3 credit hours)

### **Canadian-American Moot Court Competition (Trilateral Moot): LAWS 2108.03**

This class is a high level moot competition among Dalhousie, University of Maine and University of New Brunswick. The competition is held in November and the location is rotated among the competing schools. The problem is traditionally based on a moot case in an area of domestic law raising important legal issues in Canada and the United States. The class requires research in Canadian and American Law, the writing of a factum and preparation of the moot case, performance in moot trials and argument of the case at the host school.

The class will include exposure to appellate advocacy techniques and instruction therein together with simulations and experience before practicing lawyers. Evaluation will be by the faculty advisor and the Canadian American Moot Court Competition judges.

This class is limited to third year students. Eligibility for the class is determined by the Moot Court Committee based on performance in the second year moot off. Please note: Students may only take one competitive moot during their degree.

EVALUATION: Numerical and letter grade evaluation for moot performance. Participation in the class satisfies the major paper writing requirement, if the student wishes to count the moot as a major paper.

### **Civil Trial Practice: LAWS 2040.03**

This seminar provides an intensive introduction to civil litigation. It requires students to have knowledge and understanding of substantive law in basic common law fields, e.g., Torts, Contracts, and Remedies, and of procedural law from Civil Procedure and Evidence. The class is designed to develop the students' awareness of the procedures required to prepare a civil case for trial and to develop their skills in interviewing parties and witnesses, conducting discovery examinations, conducting direct and cross-examination at trial, evaluating evidence in the case and considering settlement. The class is conducted on a seminar method involving in-class participation by the students in the various aspects covered in the class while at the same time developing the model case for trial. Out-of-class work consists of readings which are provided, preparations for class performance and preparation of various aspects of the model case. The seminar is conducted one night per week, the model trial being held on a Saturday. Attendance at all classes is essential.

PREREQUISITE: Evidence and Civil Procedure

RESTRICTION: Open to third-year students only

EVALUATION: In-class participation and participation at the model trial.

Some portion of the final mark will be based on a written component.

Evaluation will be clearly explained at the first class

### **Clinical Class in Criminal Law: LAWS 2092.09**

The clinical class in criminal law offers an opportunity to enhance advocacy skills, get out of the classroom and experience the reality of criminal trial practice. This class has both a clinical and an academic component. Each student is assigned to a crown counsel defence lawyer or possibly a judge, and observes and participates as far as possible in the criminal law work of that person. For this period each student must spend a minimum of 16-20 hours a week with the principal. The academic component is dealt with in two weekly seminars, each of two hours, which run throughout the term. The seminars focus upon lawyering skills including interviewing, trial preparation and advocacy skills using simulation exercises as the vehicle for learning. The seminars also focus upon matters relating to criminal law, criminal procedure, evidence, criminology and legal ethics. All-day tours of facilities such as penitentiaries and crime labs may also be arranged. Written memoranda are required and students will choose from a vast array of criminal law topics arising out of the many actual criminal court trials and cases students will be involved in. This is a 9-credit course and students should adjust their class schedule accordingly.

**RESTRICTION:** Students who have completed or wish to complete Clinical Law or Criminal Trial Practice are not eligible. Open to third year students only.

**EVALUATION:** Honours/Pass/Fail. Individual feedback is given to students throughout the class. An evaluation of each student's performance in each aspect of the class is provided at the end. A student's grade is not counted in determining his/her weighted average. However, in the event of failure because of a weighted average below 55, or as with the Legal Aid Clinic, where the student is otherwise no longer academically entitled to complete their LLB degree, a numerical grade will be assigned for inclusion in the weighted average

### **Clinical Law: LAWS 2003.13**

Dalhousie Legal Aid Service (the Clinic) provides 3rd year students with an opportunity to practice lawyering skills in a community law office located in north-end Halifax. This 13 credit course can be taken over the Fall, Winter or Summer terms. Students can take one other course along with the clinic.

While studying clinical law, students will conduct themselves as lawyers in a social justice context. As such, students will be responsible to counsel clients, negotiate with other lawyers, prepare cases and conduct hearings in Provincial and Supreme Courts as well as before administrative tribunals. Students are also exposed to files using law reform and community development as related to poverty law issues. All casework is supervised by staff lawyers or community legal workers. Each student initially receives 10-15 client files and one community file.

Formal seminar and skills training sessions take place on Monday, Tuesday and Thursday afternoons. Skills training includes, interviewing and counselling, issue identification, building a theory, negotiation, direct examination, cross examination and basic trial skills. Seminars cover the topics of social assistance, residential tenancies, child protection, family and criminal law (YCJA), and law reform as well as other subject areas. Writing requirement: Students will create a Reflective Portfolio over the course of their term and will prepare a 15-20 page memo related to the work of the Clinic.

**ENROLMENT:** 16 students Fall and Winter. 12 students summer.

**NOTE:** An application process and selection criteria are applied.

Information sessions are provided at the law school in January and March. Students are always welcome to visit the clinic site. To make arrangements call (423-8105).

**PREREQUISITE:** Civil Procedure. Family and Evidence are recommended

**RESTRICTION:** Students who have completed or wish to complete the Clinical Class in Criminal Law are not eligible.

**EVALUATION:** Pass/Honours/Fail. Written feedback is provided at mid-term and final.

In the normal course a student would not be assigned any numerical grade and a student's performance would not be counted in determining a weighted average. However, in the event of a failure, or that the student is otherwise no longer entitled to complete third year or to write a supplemental because he/she does not have an average of 55, a numerical grade will be assigned and this grade will be counted in the weighted average.

### **Coastal Zone Management: LAWS 2041.03**

This class is designed to introduce students to the concepts, principles, approaches, and issues associated with integrated management of coastal

zones worldwide. This class uses a systems approach to understanding 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.

**INSTRUCTOR:** L. Fanning

**CROSS-LISTING:** ENVI 5204, Mara 5009.03

**EVALUATION:** Major paper (80%) and class participation (20%)

### **Comparative Constitutional Law: LAWS 2094.03**

This course explores constitutional rights law from a variety of jurisdictions, including Canada, the United States, South Africa, Germany, India, the European Court of Human Rights and elsewhere. The focus is primarily on competing theories and methods of constitutional adjudication, and the general problem of reconciling constitutional judicial review with democratic principles. The cases deal with topics such as expression, religious exercise, social and economic rights, reproductive rights, the death penalty and equality.

**PREREQUISITE:** Constitutional Law

**EVALUATION:** Major paper, paper presentation, reading package and class participation

### **Comparative Criminal Law: LAWS 2009.03**

The first aim of this class is to examine criminal law and the administration of criminal justice in Canada by means of comparison with analogous aspects of the legal systems of selected foreign countries. The second aim is to ponder the question of whether there are, or should be, core principles of process common to all criminal justice systems. The particular countries emphasized are the United States, France, the People's Republic of China and Islamic countries, since they represent a spectrum of models which differ in varying degrees from the Canadian legal system. They include common law, continental European, Communist and religious traditions which, when compared with Canada, can bring the most important characteristics of our own system into sharp focus. An opportunity will be given for students to explore issues of restorative justice and Canadian aboriginal justice in this comparative context. All systems examined will be viewed in the light of international human rights standards thought to be applicable to criminal justice. This course will be offered in alternating years.

**EVALUATION:** Class participation and the writing and presentation of a major term paper

### **Competition Law: LAWS 2169.03**

This class deals with Canadian competition law and policy, and in particular, the provisions of the Competition Act and the role of competition policy institutions such as the Competition Bureau and Competition Tribunal in enforcing and interpreting the Act as it applies to (i) mergers; (ii) cartels and other horizontal agreements; and (iii) distribution, pricing and marketing practices. The class also considers and encourages discussion of comparative/international competition law (or antitrust law, as it is known in the U.S.) and critical perspectives. As modern competition law is reliant upon micro-economic analysis, to some degree, some knowledge of economics is useful, but not required.

**INSTRUCTOR:** S. Bhattacharjee, Michael Osborne

**FORMAT:** 2.5 hours per week, 3 credits

**EVALUATION:** Major paper and class presentation/participation

### **Conflict of Laws: LAWS 2005.04**

This class is concerned with legal issues in private law arising out of transactions and occurrences with connections to two or more legal units (provinces or countries). Examples would be contracts made in one country but to be performed elsewhere, and torts with a cross-border element (such as goods negligently manufactured in one country which injure persons in another). The type of problems associated with such occurrences include (1) which law applies to the determination of liability in such situations, (2) which country's or province's courts have jurisdiction to entertain such disputes, and (3) the enforcement in one country or province of court judgments and arbitral awards emanating from another. The objective of the class is for students to learn to recognize conflict of laws situations, to deal with those situations by accepted methods, and to appreciate the results from a variety of points of view. The extent to which the federal nature of Canada affects such matters will be critically examined.

**CO-REQUISITE:** Constitutional Law

**EVALUATION:** Final exam and optional mid-class assignment

### **Construction Law: LAWS 2218.02**

This course provides a comprehensive introduction to the principles and practice of construction law. In the construction industry the activities of owners, architects, engineers, contractors, and their employees are regulated by a distinct body of legal principles, and this course will systematically consider the most important rules comprising this area of law. Topics addressed include the law of tendering and requests for proposals, construction contracts, including standard form agreements, regulations affecting worksite occupational health and safety, builders' liens, insurance and bonding, remedies in contract and in tort, the place of architects and engineers, and the mediation and arbitration of construction disputes.

FORMAT: 2 hours per week, 2 credits

EVALUATION: Written examination

### **Copyright Law: LAWS 2028.03**

This course focuses on advanced issues in copyright law. It will explore a range of topics in copyright law, such as the history of copyright, philosophical justifications for copyright, feminism and copyright, and copyright and human rights. Emphasis will be placed on the multi-media environment for the creation, distribution, transmission, manipulation, marketing, and licensing of copyright-protected works. Other issues which may be explored include the contours of authorship, originality and creativity. As well, the course may explore the expansion of the copyright domain in the context of legal and policy debates and the impact of new technologies as well as technology-driven regulatory and access devices on copyright jurisprudence. In appropriate instances, comparative perspectives on copyright in other jurisdictions such as the United States and the European Union could be examined.

FORMAT: 3 credits

CO-REQUISITE: Intellectual Property 2178

EVALUATION: Major paper, assignments and class participation

### **Corporate Finance: LAWS 2006.03**

This class is intended to help law students become comfortable with some of the fundamental ideas and processes underlying modern corporate finance transactions. Topics may include, among other things, structured finance, valuation methods, and financial theory, including a consideration of the efficient market hypothesis, portfolio theory, the capital asset pricing model, and option pricing theory. These topics will be examined in a variety of legal contexts, including in relation to specific kinds of transactions and financial instruments, such as securitizations, share purchases, statutory arrangements, issuances of exchangeable and convertible debt, and financial derivatives, as well as in relation to general corporate governance concerns. Some discussion of financial accounting and auditing issues, financial institutions and markets may also be included.

PREREQUISITE: Business Associations

EVALUATION: Final examination and class presentation/participation

### **Corporate Transactions: LAWS 2129.03**

The purpose of this class is to provide exposure to the legal issues involved in several types of transactions in which corporations will typically engage. Students will be introduced to several types of corporate transactions and pertinent legal considerations associated with each, will consider specific fact situations relevant to the transactions, and will negotiate and draft agreements that address the specific factual and legal issues raised. The responsibilities of the lawyer involved in these transactions will also be examined, including conflict of interest considerations. Examples of corporate transactions that might be explored include financing agreements, purchase and sale of a business, amalgamations, and franchise agreements.

PREREQUISITE: Business Associations

RESTRICTION: This class is open to third year students only. Student cannot take both Information Technology Transactions and Corporate Transactions.

EVALUATION: Assignments and Quiz (80%), Class Participation (20%).

This class does not meet the major paper requirement.

### **Corporate/Securities Law Moot: LAWS 2144.03**

The Canadian Corporate/Securities Law Moot Court Competition is an annual Moot Court competition, sponsored by the Toronto law firm of Davies, Ward, Phillips & Vineberg LLP, which focuses upon the fields of corporate and securities law in Canada. The competition is designed to

provide students having an interest in these areas of legal practice with an opportunity to meet with judges, corporate and securities regulators, academic lawyers and legal practitioners to debate legal issues of current importance to the Canadian business community.

Teams of mooters from a number of Canadian law schools will meet in late February or early March in Toronto to moot a problem. The competition requires collaborative work on a hypothetical problem in the area of corporate and securities law. It will require extensive research culminating in the preparation of a factum. It will also include a preparatory oral advocacy session and the eventual pleading of the problem before a board consisting of judges, corporate/securities regulators, academic lawyers and legal practitioners.

This competition is open to both second and third year students.

Participants will be selected on the basis of written applications; selection will be based upon a student's stated interest in participation, prior experience, oral advocacy skills and academic record. Please note students may take only one competitive moot during their degree.

PREREQUISITE: Business Associations

EVALUATION: Research, factum and oral advocacy. Participation in the competition satisfies the major paper writing requirement, if the student wishes to count the moot as a major paper.

### **Court of Appeal Placement: LAWS 2135.03**

The Judges of the Court of Appeal have agreed to have two students in the fall term and two students in the winter term serve as student researchers. Students will take part in the work of the Court of Appeal, assisting Judges with research and reviewing appeal books and factums as requested. Students will be required to spend nine hours per week on this court work. Third year students with very good academic standing will be invited to apply for this clerkship.

NOTE: this class does not fulfil the major paper requirement

EVALUATION: Based on satisfactory completion of assigned tasks including an assessment of any written work e.g. memoranda provided to the Court. Evaluation shall be on the basis of consultation between the Faculty Supervisor and the Chief Justice of Nova Scotia and/or the Chair of the Clerks Committee

### **Criminal Law Problems: LAWS 2045.03**

This course will focus on recent developments in criminal procedure, substantive criminal law and evidence. It will pursue the extent to which we have departed from traditional and orthodox views about the way in which the system is supposed to work, and whether those departures are improvements or not. There will be a number of proposed topics for discussion, but the exact content of the course will largely depend upon the choices made by students registered in it. Evaluation will be primarily by way of major paper, but 40% of the marks will be allocated to a class presentation and to participation in presentations by others.

### **Criminal Procedure: LAWS 2091.04**

Criminal Procedure concerns the provision and regulation of methods for dealing with those who are alleged to have violated the criminal law. The class provides an overview, as well as more intensive exposure to some technical areas. Topics are presented against a background of general principles, while trying to confront difficult policy questions inherent in ensuring procedural justice in a democratic society. Subjects include jurisdiction (e.g., Time and territorial limits), pre-trial procedure and practice including (search and seizure, wiretapping and bail), the trial process (e.g. the preliminary inquiry and plea bargaining) and post-trial remedies (appeals and extraordinary remedies). Consideration will be given to the impact of the Charter of Rights and Freedoms and to proposals for law reform.

EVALUATION: Final Examination, with the opportunity of submitting a short, optional paper for partial credit.

### **Criminal Trial Practice: LAWS 2046.03**

This class uses lectures and simulated court proceedings, including bail hearings, direct and cross-examinations, and trials, to develop skills of advocacy and trial preparation. Early trials are heard before Judges of the Provincial Court, and the final case is heard by a Justice of the Supreme Court. Each student assumes the role of prosecutor, defence counsel and witness on different occasions. Preparation for classes involves some research in matters of evidence and criminal procedure. Presentations are discussed at the conclusion of each proceeding for the purpose of

providing constructive feedback. Classes are held one night per week during the fall term.  
PREREQUISITE: Evidence  
RESTRICTION: Students taking this class cannot take the Clinical class in Criminal Law  
LIMIT: Twelve students  
EVALUATION: Class participation 75%, written examination 25%

### **Critical Perspectives on Law: LAWS 2198.03**

This seminar examines several contemporary critical theories of law in their interdisciplinary settings. Starting with legal realism and its links to critical legal studies, we trace the emergence in legal scholarship of some or all of the following: deconstruction, communitarianism, feminist relationalism, critical race theory, gender studies/queer theory, critical disability theory, and the return to political economy. We focus upon the challenges raised to dominant legal-theoretical conceptions of autonomy and impartiality/reasonableness, and the contested significance of narrative as a conceptual and methodological tool of legal critique.  
ENROLMENT: 16 students  
FORMAT: 2 hours a week, 3 credits  
EVALUATION: Major paper

### **Critical Race & Legal Theory I: A Survey of 'Race' & Law in Canada: LAWS 2194.03**

Using a Critical Race and Legal Theory approach to examine Canada's substantive law, this survey course introduces students to the obfuscated interconnected role of Race and Law in Canada. Students will acquire enhanced Race literacy skills as we probe the bond between Race and Law, through direct examination of legal instruments dating from the Colonial to Contemporary Periods; statutes, treaties, proclamations, decrees, directives, trial records, court decisions, petitions and other primary source "Authentic Documents" that let original actors speak for themselves. In addition, selected doctrinal writings by critical legal scholars will help equip students to understand and critically assess the on-going processes by which, throughout Canada's history, Law has both corrected and created deficits for racialized Communities that are notably, Aboriginal, African Descended and Asians.  
ENROLLMENT: Limited to 16  
INSTRUCTOR: E.M.A. Thornhill  
EVALUATION: In Class Seminar Presentation 20%; Major Research Paper 80% (in English or French)

### **Crown Law: LAWS 2189.02**

There is no other entity involved in as many civil proceedings as the crown, federally and provincially. Through its statutes, regulations and policies, the crown's impact is evident in all aspects of Canadian society. It is imperative, therefore, that legal practitioners, regardless of their areas of practice, understand the crown as a legal entity. The crown enjoys unique rights and protections under the law. This course will explore these concepts through topics such as crown immunity, remedies available against the crown, civil procedure rules only applicable to the crown, the jurisdiction of courts over the crown (including that of the Federal Court of Canada), rules of evidence exclusive to the crown, judicial review, crown agencies and crown powers in the recovery of debt. The course will focus on the federal crown and the provincial crown in Nova Scotia.  
INSTRUCTOR: M. Kathleen McManus, Counsel to the Department of Justice  
FORMAT: 2 hours per week, 2 credits  
EVALUATION: Final exam with the option of an assignment (30% of the final grade).

### **Current Issues in Corporate Law: LAWS 2216.03**

This seminar examines current and enduring issues in corporate law. The precise content of the course will vary from year to year depending on the instructor. However, topics to be covered may include, but are not limited to, theories of the firm and capital markets, limited liability, corporate governance, comparative corporate law, and the production of corporate laws.  
ENROLMENT: 16 students  
FORMAT: 2 hours per week, 3 credits  
PREREQUISITE: Business Associations  
EVALUATION: Class participation and a major paper

### **Directed Readings in Law II: LAWS 5002.03**

FORMAT: Individual Reading Course

### **Directed Research Papers: LAWS 2069, 2070, 2071, 2072: LAWS 2069.**

A third year student may undertake an original research project for credit under the direction of a faculty member. The topic must be one that falls outside the parameters of seminar classes offered in the year, and there must be a faculty member willing to supervise the paper. Students should consult faculty web profiles to ascertain faculty research interests. A student who is interested in doing a DRP should have demonstrated, in written assignments already completed in the law school, ability for independent research and writing. Third year students may undertake a Directed Research Paper (DRP) of 3, 4, 5, or 6 credit hours, under the supervision of a faculty member. For third year students a proposal for a 3 credit hour DRP must be approved by the Assistant Dean, Academic, while a proposal of 4, 5, or 6 credit hours must be approved by the Studies Committee. DRPs are intended for third year students, where approved. Second year students are granted permission to do a DRP only in exceptional circumstances and must obtain permission from the Studies Committee.

The Committee will consider the proposal and the prior performance of the student in Law School, plus any other relevant factors, in making its decision. A DRP for 3 credit hours would be of greater scope and depth than a paper submitted for a regular class, and the student's research and writing would be expected to be of very high quality. A student, with the consent of the faculty member concerned, may apply to the Studies Committee for permission to undertake a DRP for 4-6 credit hours, depending on the quality and extent of the work to be done. Four or five credit hours would be given for projects requiring research in greater depth than is required for a 3 credit hour DRP. Six credit hours may only be given for work of highest quality, of some originality, and prepared for presentation to faculty and students in seminars or workshops to be arranged. It is likely that 6 credit hours would be given only for projects extending over both terms. The number of credit hours and the term or terms in which the DRP is completed will be determined by the Studies Committee, in consultation with the faculty member and the student, when the DRP is for more than 3 credit hours.

### **Directed Research Project: LAWS 2180.02**

There is already considerable flexibility at the Law School concerning evaluation. Recognizing this, the Law School supports non-paper projects as a matter of policy, subject to some basic guidelines:

1. Major projects requiring the production of media contributions (that is to radio, television, newspapers or magazines) may be accepted for academic credit at Dalhousie Law School. It is recognized that such endeavours deserve recognition both as legitimate academic exercises and as contributions to the public service mission of students and faculty
2. These projects may satisfy a major paper or examination component, as arranged between the professor and student
3. A high level of professional involvement is expected from the time the project is conceptualized until completion
4. Students and faculty should employ the guidelines for Directed Research papers (DRPs) in planning and evaluating such projects, with appropriate changes. Proposals for Directed Research Projects must be approved by the Studies Committee.
5. Some limitations may be imposed upon the student's right to appeal a grade with which he or she is dissatisfied, given that this mode of evaluation does not fit within the usual Law School grading patterns.

The above guidelines are intended to assist faculty and students in formulating and supervising any proposals for contributions to radio, television, newspapers, or magazines. In the final analysis, although the Faculty encourages such innovative undertakings, the professor and student will be responsible to ensure that the academic standards of the Law School are maintained.

### **Education Law: LAWS 2117.03**

The purposes of the class include assessing the relation between law and government policy; breaking down the barriers between different disciplines; evaluating the impact of the Charter in a discrete setting and considering the links between law and values in Canadian society. The class will be offered in seminar form with discussion as the norm. There may be some guest lecturers and student presentations. The class will be broad in scope and useful to students who do not intend to directly pursue a career related to education, as well as those who do. Without limiting the instructor, the kinds of topics which might be covered include the following: judicializing education, jurisdiction over schools, the impact of the Charter, discipline and enforcing rules, schools as microcosms of

society; and the limits of rights discourse. The impact of the Charter equality provisions on the field of education will also be an important theme. While there will be a high profile Charter component to the class, there will also be an examination of administrative law issues, collective bargaining concerns, negligence and denominational school structures. There will be specifically assigned readings for each class and general class materials.

**EVALUATION:** This is a seminar class evaluated primarily by major paper.

### **Elder Law: LAWS 2223.03/2224.03**

This course will allow students to explore selected topics concerning the legal implications of our aging population. A wide range of topics will be covered including elder abuse, age discrimination, competency, financial management, personal care, assisted living and government financial and support programmes. The topics will incorporate consideration of relevant legislation and legal tools such as powers of attorney, living wills, trusts, wills and guardianship. Topics will be addressed either from a policy oriented perspective, or with the object of the development of practical skills, or both.

**FORMAT:** Major paper (3 credit hours) or take-home examination (2 credit hours)

**PREREQUISITE:** Any one of the Equity and Trusts, Family Law, Health Law, Law of Succession, or Taxation I

**EVALUATION:** For the 2 hour credit option: 10% class participation; 20% class presentation; and 70% take home examination and assignments. For the 3 hour credit option: 10% class participation; 20% class presentation; and 70% paper. Please note: registration procedures and waitlists are set up separately for each of the 2 credit and 3 credit options.

### **Employment Law: LAWS 2048.03**

This class will review Canadian employment law. Areas to be covered may include: constitutional jurisdiction, the primary components of the employment relationship, employment contracts, implied rights and obligations in the employment relationship, the right to terminate the employment relationship, reasonable notice of dismissal, constructive dismissal, cause for summary dismissal, fiduciary obligations, and employee obligations express and implied. Additional topics may include current employment law problems, Occupational Health & Safety legislation, Human Rights legislation and Workers Compensation legislation.

**EVALUATION:** This is a seminar class evaluated primarily by major paper.

### **Energy Law: LAWS 2213.03/2214.03**

The course offers a general introduction of global and national energy issues, including energy security, energy demand and supply, the range of energy sources available, and the social, economic and environmental consequences of the choices. Following this broad introduction, the course focuses on the production, distribution, sale and consumption of electricity. It considers a range of law and policy issues dealing with electricity, including the regulatory process, implications for environmental law, and trade law issues.

**EVALUATION:** Either by major paper (3 credits) or final exam (2 credits) as well as participation and class presentation. Please note: registration procedures and waitlists are set up separately for each of the 3 credit and 2 credit options.

### **Entertainment Law: LAWS 2096.03**

This class will explore all aspects of the law as it relates to the entertainment industry from the point of view of the practitioner. This will involve a cross-discipline study of various areas of law such as contracts, commercial, tax, securities, business associations, copyright, trademarks, and judicial remedies as they converge and apply in a unique and emerging area. Discussion will include the challenges created by modern technology delivery systems. There are no formal prerequisites; however, a background in some of the areas mentioned above will be helpful. Students will be expected to analyze the conflicts inherent in the merging of art and business and in particular the legal anomalies created by this merger.

**ENROLMENT:** Limited to 16 students

**EVALUATION:** Major paper (75%) and seminar participation (25%)

### **Environmental Law I: LAWS 2104.03**

Environmental laws in support of sustainable development are explored through nine class themes. The international law context for environmental law are reviewed including the principles of precaution, integration, polluter pays and public participation. The role of common law in preventing and redressing environmental degradation is considered. Constitutional realities and restrictions to environmental management are examined. The traditional command-control approach to environmental regulation is critiqued and alternate approaches are discussed. Environmental impact assessment law and practice is covered. The course concludes with a number of more specific themes, such as biodiversity.

**EVALUATION:** Assignments and final exam

### **Environmental Law II - Interdisciplinary Perspectives on Climate Change: LAWS 2133.03**

This course takes an in depth interdisciplinary look at one of our greatest global environmental challenges, climate change. Climate change is used as a case study to explore the role of law in addressing such challenges. Current law and policy approaches to climate change are considered at global, regional, national and sub-national levels. Within this context, students will consider the role of science and economics among other disciplines in identifying the role of law.

**RECOMMENDED** but not required: Environmental Law I or International Law.

**INSTRUCTOR:** M. Doelle

**EVALUATION:** Major paper 70%, class participation 30%

### **Environmental Law Placement: LAWS 2225.03**

This placement provides students with the opportunity to work with environmental law practitioners in Halifax during the winter term. Students will take part in the work of their host organization assisting with research and other tasks as requested, on a specific pre-selected project. Students will be required to spend nine hours a week on placement work. Placement can either be directly with the East Coast Environmental Law Association, or, on request, with another suitable host organization, including with government, with non-governmental organizations or with in-house council in the private sector. Students will be evaluated on the basis of performance in the placement including assessment of memoranda written for the placement supervisor as well as the major paper to be written on a related topic. Student will be assigned a project that is suitable as a major paper topic and are encouraged to write a major paper that is closely related to the placement project. Evaluation will be conducted by the course supervisor. The placement supervisor will be consulted with respect to the student's performance in the placement as appropriate. This course fulfils the major paper requirement.

Students will be selected by the course supervisor in coordination with the Associate Director of the Marine & Environmental Law Institute on the basis of academic standing and demonstrated interest in the field of environmental law and policy. Only students who have taken Environmental Law I will be considered.

Interested students must apply to the Associate Director of the Marine & Environmental Law Institute directly, in writing, by August 1 of the academic year in which they wish to participate in the placement program. Applications shall consist of a written statement confirming the student's experience and/or interest in environmental law, and a copy of law school grades to date.

**Enrollment:** Limited to 3 students

**NOTE:** Course Supervisor: Executive Director, East Coast Environmental Law Association

**PREREQUISITE:** Environmental Law I

**EVALUATION:** Major Paper 60% Placement feedback 40%

### **Equity and Trusts: LAWS 2033.03**

This course deals with both the law of trusts and the law of fiduciary relationships. After a brief historical survey of the development of the law of equity, the rules regarding the creation, interpretation and termination of express trusts are examined, including purpose trusts, especially charitable trusts. The law governing trustees and their duties and powers is explored. The later part of the course deals with trusts arising through operation of law, i.e. resulting and constructive trusts. The circumstances where fiduciary duties can be imposed even in the absence of a trust are examined in varying detail, depending on the instructor. Finally trust

remedies are reviewed and the special technical rules of tracing and following property are discussed. Depending on the instructor, the taxation of trusts may also be examined.

EVALUATION: May be by 100% final examination or by in class tests, assignments, take home exam and final exam, depending on the instructor.

### **Estate Planning: LAWS 2050.02**

This class deals with the financial aspects of the aging of the "Baby-boomers". It will be primarily concerned with consideration of the tax consequences of death and of efforts to reduce taxes before death. The tax position of the taxpayer in the year of death and the tax position of the estate will be examined. Some time will be given to simple estate planning techniques such as spouse rollovers, and inter-generational transfers. The tax implications of holding RRSPs and pension before and after death will be examined. Some attention will be paid to health care and mental capacity issues. The class will also discuss particular problems including those arising from the handicapped child, spendthrift heir, and the reblended family. Those who have taken an advanced tax class (or have the equivalent) may separately examine more complex taxation issues including estate freezes and the sale of a business.

INSTRUCTOR: F. Woodman

FORMAT: 2 credit hours

PREREQUISITE: Taxation I.

RECOMMENDED but not required, Law of Succession, Equity & Trusts. 35% mid-term; 30% project or paper; 35% final test

### **European Union Law: EUCE Visiting Professorship: LAWS 2215.01**

The European Union is arguably the most fully developed supranational organization in the world. This short introductory course on European Union Law is supported by a grant from the European Union to allow a visiting professor from Europe to teach at the Law School in connection with the European Union Centre of Excellence (EUCE) at Dalhousie University. Topics covered will normally include: the historical and other origins of the European Union; its legislative institutions and their powers (Commission, Council and European Parliament); its adjudicative institutions and their powers (Court of Justice of the European Union and the General Court); the relationship between European Union law and the national legal systems of member states; the mechanisms for enforcement of EU law; and the changes brought about since the entry into force of the Treaty of Lisbon. From year to year, other substantive legal topics addressed may include a selection from among: regulation of the European internal market (customs union, free movement of goods and free movement of persons and services); the EU's Economic and Monetary Union; EU competition law and intellectual property; European administrative law; European consumer law; European labour law; European environmental law; European education and social policy; or European regional development policy. This course focuses on EU competition law given its importance in Canadian-EU trade and commercial activity.

INSTRUCTOR: The EUCE Visiting Professor to the Law School for any given year.

FORMAT: Two hours per day for eight days in a two week period, normally at the beginning of term for one credit. It is understood that, for the brief period of the course, the classes may encroach on students' other regularly scheduled classes.

PREREQUISITE: None. Note: students who have already taken this course may not register for it again

EVALUATION: Evaluation will be by examination and/or short paper. Some years the course may be offered on a pass/fail basis. Full details of evaluation will be provided to students prior to registration each year.

### **Evidence: LAWS 2008.04**

As an introduction to the law of evidence, the course examines basic concepts of relevance, admissibility and weight, in criminal and civil cases. Topics covered include: burden and standard of proof, judicial notice, competence and compellability of witnesses, examination of witnesses, opinion evidence, character evidence, credibility, hearsay and hearsay exceptions, confessions, unconstitutionally-obtained evidence, and privilege. The policy considerations underlying particular rules, as well as the origins, development and constitutional significance of such rules are examined and critically assessed.

EVALUATION: Written examination

### **Family Law I: LAWS 2110.04**

After addressing introductory topics like constitutional jurisdiction, courts and marriage, this survey course addresses the traditional topics of "private" family law in the sequence in which they are usually resolved: separation and separation agreements, divorce, custody and access, child support, property division (including pensions), and spousal support. The last part of the course explores third-party custody claims, adoption, child protection and the impact of the Charter of Rights upon family law.

Throughout, the course considers both substantive and procedural aspects of family law, including alternative dispute resolution techniques. The continuing tensions between procedure and substance, rules and discretion, status and contract, rights and obligations, are identified and discussed in each topic area.

EVALUATION: Closed Book Written examination

### **Fisheries Law: LAWS 2020.02**

This seminar is designed to acquaint students with the public and private law aspects of fishing and fishery management in Canada. While the central focus is on law and the regulatory framework, questions of policy frequently arise for discussion. The class is taught by a combination of questioning, lectures and guest speakers. Problems unique to fisheries regulation and methods of fishery management will be discussed to set the context in which the law operates. International considerations, constitutional problems, fisheries legislation, aboriginal rights, the interplay between private rights and public rights, and problems of enforcement and environmental protection are central topics.

EVALUATION: Two written assignments, a presentation and class participation.

### **Gale Cup Moot Court Competition: LAWS 2107.03**

This class is a high level moot competition among all law schools in Canada, and is held in late February at Osgoode Hall in Toronto. The class requires individual and collective work on a moot case in an area of domestic law, usually criminal law. Extensive research, the writing of a factum, the preparation of argument, performance in moot trials at Dalhousie and final presentation of the case in Toronto are all involved. The class will include exposure to appellate advocacy techniques and instruction therein together with simulations before practicing lawyers. Evaluation is by the faculty advisor, although the Gale Cup judges will also likely provide comment and grading at the actual competition. Students should be aware that preparation for the Moot or the Moot itself may interfere with travel plans during Reading Week.

This class is limited to 4 third year students. Eligibility for the class is determined by the Moot Court Committee based on performance in the second year qualifying moots.

EVALUATION: Numerical and a letter grade evaluation for moot performance. Participation in the class satisfies the major paper writing requirement, if the student wishes to count the moot as a major paper. Please note: students may take only one competitive moot during their degree.

### **Gender, Sexuality and the Law: LAWS 2207.03**

This course examines the intersection of law, gender and sexuality and reviews the legal treatment of women and sexual minorities in a number of legal contexts. This class is open to all second and third year students interested in writing a major paper that explores issues of gender and/or sexuality as they relate to law. The class introduces a variety of theoretical frameworks including feminist legal theory, gender theory, and queer legal theory and explores how these frameworks pertain in legal contexts regarding issues of sexuality and violence, and the law's relationship to children and sexuality, equality for sexual minorities and the criminal regulation of sex work.

FORMAT: 2 hours per week, 3 credits

EVALUATION: Class participation, 30% (reaction essays and presentations of research to class) and major paper (70%)

### **General Jurisprudence: LAWS 2087.03**

It is not easy to answer "What is jurisprudence?", the question of most students considering enrolment in this elective class. It is probably simpler to ask "What is jurisprudence about?", for there are few parameters on its field of inquiry. Questions as diverse as "What is the basic nature of law?", "What can law achieve?", "What is the relationship between law, morality and politics?", "What is the relationship between law and social change?", "Should we obey the law?", and "Whom does it serve?" are appropriate subjects for the jurisprudence student. In trying to answer these questions, an effort is made to ensure that the class maintains some balance between

conceptualism, the students' perceptions and experience, and contemporary Canadian legal dilemmas. Students will be exposed to a survey of the major schools of jurisprudence, ranging widely from legal positivism and liberalism to feminism, critical legal studies, law and economics, (dis)ability theory, and critical race theory. Each view of the law will be analyzed carefully and students will be expected to contribute their own critical insights on the questions and purported answers of the day. A high level of participation is therefore essential. In addition to regular contributions to discussions, students will be required to make presentations. Two case books will form the basis of the class materials. Handouts will also be distributed.

### **Health Care Ethics and the Law: LAWS 2115.03**

The purpose of this class is to develop an understanding of health law and health care ethics and the relationship between law and ethics. Topics vary by the year but those covered in past years include stem cell research, state intervention in the lives of pregnant women, HIV/AIDS and the duty to disclose, intersex surgery, pluralism and multiculturalism in health care, resource allocation, and death and dying. Each issue is examined in an effort to determine what the law is and what the law ought to be.

EVALUATION: Major research paper (80%) and class presentation (20%).

### **Health Law and Policy: Current Issues: LAWS 2193.02**

This course offers an opportunity for students to engage critically with a set of lectures in health law and policy offered through the Health Law Institute seminar series. These lectures are presented by distinguished guest speakers from a variety of scholarly disciplines and professional fields related to health law and policy. Students enrolled in this course for academic credit are required to do readings in advance and to attend each monthly seminar and accompanying tutorial. They will also write a series of reaction papers as well as a minor paper 15-20 pages in length. The content of this course changes from year to year, depending on the speakers and issues selected for presentation. Recent topics have included legal developments in the patenting of plants and animals; the implications of mass torts and class actions in the Canadian health care setting; the relationship between law, medicine and disability rights; and negligence in conception, abortion and birth.

Students should review the series announcement available in mid-August for a list of dates, speakers, and topics to be covered in the upcoming year.

ENROLMENT: 16

NOTE: This course runs over two terms.

EVALUATION: Reaction papers (3-4 pages each) 30%, one minor paper (15-20 pages) 55%; seminar and tutorial attendance and participation 15%.

### **Health Law Placement: LAWS 2167.03**

This placement provides students with the opportunity to work with health law practitioners in Halifax (either at the Capital District Health Authority, the Nova Scotia Department of Health or the IWK Health Centre). Students will take part in the work of their placement supervisor assisting with research and other tasks as requested. Students will be required to spend nine hours a week on placement work.

Students will be evaluated on the basis of performance in the placement including assessment of memoranda written for the placement supervisor. Evaluation will be conducted by the faculty supervisor in consultation with the placement supervisor. This course does not fulfil the major paper requirement.

Students will be selected by the faculty supervisor on the basis of academic standing and demonstrated interest in the field of health law and policy. Only students who have taken Health Law 2132 will be eligible. Students who enroll in Health Law 2132 for the fall term are welcome to apply for winter term placement positions; however, please note: (1) these applications will only be considered if winter term positions are left open after the faculty supervisor makes his/her initial selection decisions in June; and (2) decisions will not be made until after such students complete their fall term courses.

Interested students must apply to the Director of the Health Law Institute directly, in writing, by June 20 of the academic year in which they wish to do the placement. Applications shall consist of a written statement confirming the student's experience and/or interest in health law, and a copy of law school grades to date.

NOTE: FACULTY SUPERVISOR: Health Law Institute Faculty

PLACEMENT SUPERVISOR: Vice President Performance Excellence and General Counsel, Capital District Health Authority; Senior Director,

Legislative Policy and Research, Nova Scotia Department of Health; or Risk Management and Legal Counsel, IWK Health Centre.

ENROLMENT: Normally, there will be one placement per term with each placement supervisor.

PREREQUISITE: Health Law

EVALUATION: Honours/Pass/Fail

### **Health Law: LAWS 2132.03**

This class is designed to expose students to a wide range of legal issues that arise in the field of health law. It introduces students to the health care system and relevant laws governing health care delivery. Topics covered include: licensing and regulation of health care professionals; the legal framework of Canada's health care system; consent; minors and health care; confidentiality and disclosure of health information; public health; mental disability; biomedical research involving humans; and decision-making at the end of life.

ENROLMENT: Limited to 60 students

EVALUATION: Final examination

### **Health Systems: Law and Policy: LAWS 2159.03**

Traditionally, health law scholarship has focused on the physician-patient relationship; however, increasingly, lawyers are turning their attention to larger system issues and the complex web of relationships between governments, private insurers, doctors and other health professionals, public and private hospitals, pharmaceutical companies, and patients. This course will focus on the structure and dynamics of Canada's health care system. It will locate Canada's system amongst the variety of approaches taken internationally to the financing and allocation of health insurance and health services and to the regulation of the quality of health services. Issues to be explored include what different theories of distributive justice demand in terms of access to health care, the extent of market failure in health insurance and health service markets, how to determine what services are publicly funded and means of review of these decisions, how to ensure the accountability of decision-makers, why the present system fails Aboriginal peoples, regulation of privately financed health care (in vitro services, drugs, medical equipment, home care, etc.), the shift from institutional care to care in the home, the need for reform of the medical malpractice system, managed care, and general issues of privatization, deregulation and reregulation.

INSTRUCTOR: W. Lahey

FORMAT: 2 hours per week, 3 credits

EVALUATION: Major research paper (60%), policy formulation and reflection exercise (30%), general class participation (10%).

### **Human Rights Law & Protection in Canada: LAWS 2195.03**

This Advanced Seminar offers students an in-depth exposure to the jurisdictional network of Human Rights (HR) legislation, policies, and mechanisms set up under both the common law and civil law regimes to ensure the protection of HR in Canada. Students will critically examine relevant reports, doctrinal writings and jurisprudence generated by Collective Agreement Labour Arbitrations, by HR Tribunal and Board of Inquiry Hearings, and by Supreme Court of Canada decisions, so as to identify the evolutionary trends of Canadian legislation and Case Law. The Seminar will focus both on those substantive deficiencies and procedural limitations that inhere in the current systems, and on the public response to Canadian domestic implementation and delivery of HR protection.

ENROLLMENT: Limited to 16

INSTRUCTOR: E.M.A. Thornhill

EVALUATION: Term Assignment 20%; Major Research Paper 80% (in English or French)

### **Immigration and Refugee Law: LAWS 2097.03**

This class will consider law, policy and procedure relating to migration into Canada. It will address both practice issues and the social, political and economic context and consequences of migration control. Areas covered will include: the constitutional basis for migration legislation; immigrating to Canada; obtaining protection as a refugee; procedures before immigration and refugee boards; enforcement mechanisms; and refolement. The class may also cover: the relationship between policy goals and legislation, historic and current practices of inclusion and exclusion; theories of statehood and border-control; security; human

trafficking and smuggling; and the application of international human rights instruments.

CO-REQUISITE: Administrative Law

EVALUATION: Written examination, or option of written examination and research paper

### **Information Technology Transactions: LAWS 2170.03**

This class will focus on practical and substantive issues relating to the development, negotiation, and drafting of commercial agreements involving information technology and intangible assets. Topics will include licensing, distribution, and marketing agreements, together with issues pertaining to the commercialization, financing and acquisition of intellectual property. Students are partly evaluated through role assignments in which they prepare, negotiate, and finalize technology agreements.

ENROLMENT: Limited to 16 third year students

NOTE: Students cannot take both Information Technology Transactions and Corporate Transactions.

PREREQUISITE: RECOMMENDED Commercial Law

CO-REQUISITE: Business Associations

EVALUATION: Two 40% written assignments and a 20% closed book test.

This class does not meet the major paper requirement.

### **Insurance Law: LAWS 2010.02**

This class examines the basic principles underlying the law relating to various types of insurance, e.g., fire, life, sickness and accident, motor vehicle, and liability. Topics include: (a) the nature of the insurance contract and its formation, (b) agency principles applying to insurance agents or brokers, (c) the insurable interest, in property or in liability for damage to property or persons, that a person must have to enter into a valid contract of insurance, (d) the effects of non-disclosure in applying for insurance, or omission of necessary information, and of failure to meet the special conditions made part of the contract under legislation, and (e) claims. Students must critically examine existing law, its function in modern society and its fairness to the insured person, and consider desirable reforms. Class materials include an examination of insurance cases, the Nova Scotia Insurance Act and pertinent standardized insurance contracts.

EVALUATION: Written examination

### **Intellectual Property & Commercialization Placement: LAWS 2217.03**

The course provides students with an out-of-classroom opportunity to work under supervision with individuals involved in the commercialization of intellectual property and technology transfer arrangements within and outside the university system. Students will have the opportunity to do hands-on practical assignments in intellectual property and related confidential business information from the research state throughout the intellectual property (Patent) application processes to actual commercialization initiatives. Students will be exposed to the complex chains of interactions between researcher, intellectual property administrators and investors in the commercialization of intellectual property. The weekly placement commitment of 7-10 hours is required of participating students.

FORMAT: 3 credits

PREREQUISITE: Intellectual Property

EVALUATION: Students will be evaluated, in part, on the basis of their performance in respect of the program of work described above. In addition, they are to submit a substantial piece of a gradable written work arising from their experience in the program. That work, which will be submitted to the Faculty Supervisor, is subject to standing rules on research paper and plagiarism in the Law School. It will not exceed 25 pages A4 size double spaced in 12"font, including footnotes. The Faculty Supervisor, in consultation with the ILI Placement Supervisor will review copies of the student's written work in the placement program and the Placements Supervisor's overall report on the student's performance, will assign a grade of "Honours", "Pass" or "Failure"

This class does not fulfill the major paper requirement.

### **Intellectual Property Law I: LAWS 2178.04**

This class provides students with an introduction to the legal regimes governing the protection of intellectual property. The class will cover the following specific areas of intellectual property law: patents, trademarks, and copyright law. In addition, students will be introduced to the common

law actions of passing off, international intellectual property law and industrial design.

EVALUATION: 100% examination

### **Intellectual Property Law II: LAWS 2203.03**

This is a seminar designed to enable students to discuss, research, generally explore in in-depth ways and to write papers on special topics in intellectual property rights, especially those that are of contemporary interest. Classes will be flexible and will endeavour to focus on a range of topics considered to be of contemporary relevance in regard to the intersections of intellectual property rights with, and their impact on, other areas of law and public policy both nationally and globally. In addition to sustaining a contemporary focus, the seminar will explore basic concepts that will assist students to understand current developments and transitions in the intellectual property arena. Students will be shepherded to generate and explore researchable issues in their areas of interests in order to meet their individual and collective expectations from the seminar. There is no technical background or expertise required for enrolment. Generally, students are expected to make use of the Internet and other research tools to access seminar-related materials and to advance their research interests.

CO-REQUISITE: Intellectual Property

EVALUATION: Major paper and class participation (which may include a presentation)

### **International Criminal Law: LAWS 2197.03**

This seminar explores the development and operation of International Criminal Law. The idea that individuals may be held responsible for criminal acts under international law took firm hold with the war crimes trials after WWII. From beginnings in international humanitarian law, the body of international crimes has greatly expanded along with the development from ad hoc to permanent institutions and procedures for their prosecution. This process culminated in 2002 in the establishment of the International Criminal Court (ICC).

It may be said that International Criminal Law exists at the convergence of the penal aspects of international law and the international aspects of national criminal law, and intersects with the application of human rights law in times of both peace and war. Reflecting this status, the course will consider international crimes such as genocide, war crimes and crimes against humanity, focusing in particular on the ICC. Other crimes of international concern, such as torture, terrorism, drug smuggling, corruption and other organized criminal activity will also be discussed. Focus will also be placed on the prosecution of international crimes at the national level, with emphasis on jurisdictional problems and application of human rights standards. Examination will also be made of co-operative mechanisms utilized by states to facilitate the national prosecution of trans-national criminal acts, such as extradition and mutual legal assistance. Specific topics addressed may vary from year to year depending on student and instructor interest. This course touches on some of the topics referred to in International Humanitarian Law: Law of Armed Conflict but there is very little duplication and students interested in the subject matter could benefit from taking both courses.

ENROLMENT: 16 students

FORMAT: 2 hours per week, 3 credits

PREREQUISITE: International Law is recommended

EVALUATION: In-course assignments and a major research paper

### **International Environmental Law: LAWS 2051.03**

The progression of international environmental law from "customary" co-existence to "conventional" cooperation is explored through nine topics: (1) State Responsibility and Liability for Transboundary Pollution; (2) "Soft Law" and Sustainable Development Principles: From Stockholm to Rio and Beyond; (3) The Legal Waterfront of Marine Environmental Protection; (4) The International Law of the Atmosphere: Climate Change; (5) The Conservation of Biodiversity; (6) The International Framework for Controlling Transboundary Movements of Hazardous Wastes and Toxic Chemicals; (7) The Protection and Management of International Watercourses; (8) Polar Regions and International Environmental Law; and (9) Free Trade and the Environment.

CO-REQUISITE: International Law or Environmental Law I.

EVALUATION: Major Research Paper: 80%, class presentation 20%

### **International Human Rights Law: LAWS 2074.03**

This seminar will introduce students to International Human Rights (IHR) Law as a discrete and significant area that exerts increasing impact on Domestic Law.

Employing a Critical Race yardstick, this class will examine IHR law, policy and process using "Authentic" and primary source documents, jurisprudence and the experiential evidence gleaned and provided by Non-Governmental Organizations (NGOs)—the "conscience" of the International Community.

Course content will both expose critical antecedents that inform current IHR discourse and practice, and also lay bare subtleties in the Law, at present unchallenged.

Using the prism of 'Race' (colour, national and ethnic origin) to examine the plethora of instruments and mechanisms put in place for enforcement, student should decode dormant sub-texts pleading for investigation. Such discoveries should then impel to probe deeper and better understand the centrality of Race to International IHR discourse.

ENROLMENT: Limited to 16

INSTRUCTOR: E.M.A. Thornhill

FORMAT: Once a week

EVALUATION: Seminar Present: 20%; Major Research Paper: 80% (in English or French);

### **International Humanitarian Law/Law of Armed Conflict: LAWS 2205.03**

This seminar explores the development and operation of International Humanitarian Law (also known as the Law of Armed Conflict) which is the body of public international law that regulates conduct during armed conflict. International Humanitarian Law has been an important component of international law for centuries. It is a body of preventive law which is intended to reduce net human suffering by limiting the right of parties to a conflict to use methods and means of warfare and to protect persons and property that may be affected by conflict. As states are less willing to accept restrictions on how they fight than to accept restrictions on how they treat victims of war and less willing to accept restrictions on how they treat internal opponents than to accept restrictions on how they treat the nationals of other states, the laws concerning protection of victims are more elaborate than those which affect war fighting and the laws for international conflicts are more elaborate than those which apply to non-international conflicts. There is a debate concerning the extent to which the law applies to transnational non-state actors (the Global War on Terror). The course will address how law purports to regulate conduct in extreme situations. It will also endeavour to assess how new legal approaches might be used to strengthen the law and provide enhanced protection to victims of war. Specific topics addressed may vary from year to year depending on student and instructor interest. This course touches on some of the topics referred to in International Criminal Law but there is very little duplication and students interested in the subject matter could benefit from taking both courses.

ENROLMENT: Limited to 16 students.

FORMAT: 2 hours per week, 3 credits

PREREQUISITE: International Law is recommended

EVALUATION: In-course assignments and a major paper

### **International Law: LAWS 2012.03**

Public international law is about global governance and the way the legal relations of states and the individuals who compose them are regulated. The class begins by exploring the foundations of the international legal system, the legal status of the principal participants and the methods of creating and applying international law. Processes of international dispute resolution and the interaction of international and Canadian law are also discussed. Later, the application of substantive principles of international law are considered in a couple of selected areas such as law of the sea, international criminal law, the protection of human rights and the use of force.

EVALUATION: Written examination; possibly by a combination of examination and written assignments, where numbers permit

### **International Trade Law: LAWS 2056.03**

This class examines the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA), and prepares the student to understand generally the role of international and domestic law in modern trading relations. Emphasis is placed on the issues raised by recent trade agreements, such as non-discrimination (e.g. MFN and

national treatment), trade rules and unfair trade remedies, services and intellectual property, trade and environmentalism and so forth. Special attention is given to the dispute settlement mechanism, which emphasizes a legal approach to trade relations. The class will be conducted as a seminar, based on regularly scheduled readings.

EVALUATION: Evaluation by major paper, as well as class participation and minor assignments

### **Internet and Media Law: LAWS 2168.03**

This class deals with the law that governs the dissemination of information and the regulation of information providers. In this class, "media" is defined broadly to include broadcasters, newspapers and magazines and the internet. Topics that will be addressed include: defamation; liability of service providers; privacy issues; publication bans; media regulation; copyright issues; conducting business via the internet ("e-commerce") and media ownership. The impact of the internet on the legal regulation relating to each of these topics will be explored throughout the course.

EVALUATION: Final examination (100%)

### **Introduction to Law: LAWS 2500X/Y.06**

This class is offered by the Law School to non-law students. The course is designed to introduce students to the workings of the Canadian legal system, and to the basics of several areas of law, in particular tort law (wrongs by one person against another), property, criminal law, and the law as it relates to Aboriginal peoples. The course is taught using a combination of scholarly writing and case law, and is intended to allow students to reach an understanding of how courts reason, and the principles brought to bear in reaching their decisions.

Enrolment is limited to students in their second year of undergraduate studies and beyond.

Please refer to the Dentistry, Law, Medicine, Graduate Studies Calendar for detailed information on Law programs at the undergraduate and graduate levels.

NOTE: Students taking this class must register in both X and Y in consecutive terms; credit will be given only if both are completed consecutively.

INSTRUCTOR: D. Darling, J. Shapiro

FORMAT: Lecture/discussion 3 hours

### **Jessup Moot: LAWS 2103.03**

The Jessup International Law Moot Court Competition gives law students the opportunity to argue a hypothetical case involving international law. The experience affords both training in advocacy and understanding of the international legal system. Competitions are held annually in approximately 80 countries, and winners of those competitions compete in international finals. The Canadian regional round of the competition is a national moot competition for Canadian law students and the majority of the law schools across the country usually participate. The moot problem always contains issues redolent of a topical international affair. The Jessup Moot is sponsored by the International Law Students Association, based in Washington, D.C. Philip C. Jessup, for whom the competition is named, was one of America's most respected jurists on the International Court of Justice.

Work on the competition begins in September and proceeds up to the Canadian regional round, which is held in February or March. Each team is judged on its memorials, or written arguments, and on its oral presentation. Each team must prepare a memorial for each side and must argue the case six (6) times, three times for each side. A panel of experienced judges, commonly including justices from across Canada, scores the oral presentations.

Jessup Moot team members will be expected to complete the requirements of the Canadian national competition to earn academic credit.

SELECTION: By an application process, possibly involving a mock oral argument, in Winter term of second year, for team participation in third year. Prior completion of an International Law course is strongly recommended. Please note: students may take only one competitive moot during their degree.

EVALUATION: Performance on the Jessup team. Participation in the class satisfies the major paper writing requirement, if the student wishes to count the moot as a major paper.

### **Judicial Remedies: LAWS 2013.03**

The objective of the course is to give students an understanding of the basic principles of the law applicable to remedies and how they are applied by the courts in their efforts to provide appropriate remedies in the wide variety of factual circumstances that give rise to claims. The course method will use case analysis supplemented with comments by the professor. Students will be expected to be familiar with the cases and materials assigned for each class and to be prepared to take part in the class discussions.

EVALUATION: Three hour open-book examination

### **Kawaskimhon Aboriginal Rights Moot: LAWS 2206.03**

'Kawaskimhon' means 'speaking with knowledge.' This course involves participating in a national moot competition, which is typically based on a high profile case where Aboriginal rights are at issue. Each law school's team is typically assigned to represent a party or an intervenor. The moot takes two days. Usually, on the first day, teams present oral argument based upon written factums, and on the second day, teams engage in a negotiation process. The host school determines the specific format. The moot problem is typically distributed in December, and the moot is held in early to mid-March. The class will require collective and individual work, extensive research, regular meetings, participation in negotiation and moot exercises, drafting a factum, and participating in the Kawaskimhon moot. Please note: students may take only one competitive moot during their degree.

Student selection: Participation is open to both Aboriginal and non-Aboriginal students, with preference given to 3rd year students. Potential participants are to submit written applications. Interviews may also be required. The Selection Committee, among other factors, will consider the following criteria in determining who shall participate in the Aboriginal Law Moot:

- (a) Academic achievement;
- (b) Achievement in closely related law school courses such as Aboriginal Law, Constitutional Law, Legal Research and Writing, ADR, and Public Law.
- (c) Performance in any moot exercise, requirement, course or setting;
- (d) Record of commitment to Aboriginal justice issues;
- (e) Career plans that may relate to Aboriginal justice issues;
- (f) Membership or affiliation with any Aboriginal community;
- (g) Any other feature of the applicant's background, experience or plans which closely relates to the Aboriginal Moot; and
- (h) Participation in any interview, competition, selection process at the discretion of the Selection Committee.

PREREQUISITE: Aboriginal Law

EVALUATION: Letter and number grade based upon research, written factum, and performance and participation as a member of the moot team both during preparation as well as during the moot itself.

### **Labour Arbitration Moot: LAWS 2177.02**

The Canadian Labour Arbitration Moot is open only to Second Year students enrolled in Labour Law 1 and in Administration of the Collective Agreement. Selection of two students from the pool of Second Year students who satisfy these conditions is made on the basis primarily of First Year grades, mooting experience and an interview.

CO-REQUISITE: Enrollment in Labour Law 1 and Administration of the Collective Agreement.

EVALUATION: Participation on the Canadian Labour Arbitration moot team, including quality of research, preparation, and performance at the Canadian Labour Arbitration Moot.

### **Labour Law - Administration of the Collective Agreement: LAWS 2052.02**

This course will appeal to students who have a serious interest in future practice as a labour lawyer. The objectives are: (1) understanding labour jurisprudence; and (2) advocacy skills in arbitration. Students read materials and participate in mock arbitrations as counsel (including witness examination, cross examination and argument) and as arbitrator (writing an award).

NOTE: This is a "straddle course" which starts in mid October and ends in early March.

CO-REQUISITE: Labour Law I

EVALUATION: As counsel 35%; brief of law 25%, award 30%, attendance and participation 10%

### **Labour Law I: LAWS 2014.03**

This is a survey of the institutions and legal concepts related to labour-management relations in Canada: the status of participants, union organization and certification, unfair labour practices, collective bargaining, conciliation, the collective agreement and arbitration, industrial conflict, the union duty of fair representation, internal union affairs, and the impact of the Constitution on labour relations law. An attempt is made to examine the law of labour relations as an example of responses by the legal system to an evolving social problem in the context of changing economic and technological conditions of the new globalized economy.

EVALUATION: Written examination; there may be an option to have 50% of the evaluation based on short weekly memoranda and 50% on a written examination

### **Labour Law Problems: LAWS 2066.03**

This class offers students an opportunity to examine in a seminar setting major issues of theory and practice in labour relations not examined in Labour Law I. Matters discussed still include public sector labour relations regimes, consideration in the context of the new globalized economy of the specialized regimes for regulating labour relations in the construction and film industries as alternatives to the standard industrial regime of labour relations, and the impact of supra-national labour relations regimes such as International Labour Organization standards and the "NAFTA Labour Side Agreement" (NAALC). Other issues studied may include contracting out, problems of first collective agreement negotiation, constitutions of unions and other human capital organizations, inter-union jurisdictional disputes, alternate forms of dispute resolution for both interest and rights disputes in the labour context, and problems related to the exclusive position of unions as certified bargaining agents, including a union's duty of fair representation in that situation. In addition, the potential reform of labour law to protect vulnerable workers in non-standard employment contexts (part-time employment, home employment, dependent self-employment, frequent career changes, etc.), and to enhance human capital investment in a globally competitive economy, will likely be addressed. The teaching method will involve presentation of key sessions by the instructor and possibly invited experts in the first part of the course, followed by presentation of seminar sessions by students based on their research for their major papers related to labour relations topics of their own choosing (as approved by the instructor). This class will be offered in alternating years.

FORMAT: One two-hour seminar per week for one term

PREREQUISITE: Labour Law I

EVALUATION: By Major Paper (60%) plus the class presentation and general class participation

### **Laskin Moot: LAWS 2039.03**

"The Laskin" is Canada's national bilingual constitutional and administrative law moot court competition. It takes place in mid-to-late February each year at a different host faculty in Canada. Preparation of a factum is required in advance of the moot. One team member must be capable of mooting in French but other team members need not be bilingual. The class is open to third year students, and participants are generally selected following a 'moot-off' competition conducted by the Moot Court Committee. Please note students may take only one competitive moot during their degree.

CO-REQUISITE: Administrative Law; Constitutional Law

EVALUATION: Research and factum, as well as oral advocacy.

Participation in the class satisfies the major paper writing requirement, if the student wishes to count the moot as a major paper.

### **Law and Religion: LAWS 2210.03**

This course focuses on the relationship between law and religion in a secular, democratic, multi-faith state. The course will consider such issues as freedom of religion in Canada, human rights protection against differential treatment based on religion as well as exceptions to that protection, judicial review of decision making by religious institutions, and the use of religious-based reasoning in public discourse and in law-making, as well as other specific topics that may change from year to year. FORMAT: 2 hours per week, 3 credits

EVALUATION: Major paper, as well as in-class presentations/participation/reaction papers.

### **Law and Technology: LAWS 2019.03**

This is a seminar in which students are required to discuss, conduct research, generally explore and write papers on issues relating to law and technology. Classes focus on a range of topics drawn from the intersections of law and technology, including but not limited to regulating the internet, intellectual property rights in relation to the internet, biotechnology genetic modification in plant and animal materials for food and agriculture, developments in telecommunications and the law, privacy and access to information, ethics and technology. Students are encouraged and shepherded to generate and explore researchable issues in their areas of interests in order to meet their individual and/or collective expectations from the seminar. There is no technical background or expertise required for enrollment in the seminar. Students are, however, expected to make use of the Internet and other research tools to access seminar-related materials and conduct research on a final paper. EVALUATION: Major paper, presentations and class attendance/participation.

### **Law of International Trade and Shipping: LAWS 2211.03/2212.03**

International trade is the aggregate of thousands of individual transactions. This seminar will offer students the opportunity to explore the different ways that the products moving in international trade are bought and sold, and delivered by sea. The Canadian and international law and practice governing these transactions will be studied in order to understand the rights and responsibilities of the various stakeholders, such as manufacturers/sellers, ocean carriers, cargo owners and importers/purchasers.

ENROLMENT: Limited to 16 students. Please note: Registration procedures and waitlists are set up separately for each of the 2-credit and 3-credit options.

FORMAT: 2 hrs per week, 2 or 3 credits at the student's option

EVALUATION: Either for 2 credits by a combination of in-class oral participation and several short take-home written assignments OR for 3 credits by in-class oral participation and a major research paper. This course may be counted towards a Certificate of Specialization in Marine Law or in Business Law.

### **Law of Succession: LAWS 2121.02**

The first part of the class deals with inheritance rights under the Intestate Succession Act for kin of persons dying without a valid will. Alternatives to the disposition of property by will are also explored. The second part of this class focuses on the law of wills. Topics will include the formalities of execution, the rules of construction, testamentary capacity, undue influence, and problems relating to mistake, lapse, ademption, vesting and class gifts. Limitations on freedom of testation imposed by legislation such as the Testators' Family Maintenance Act and the Matrimonial Property Act and by certain significant common law rules are reviewed.

EVALUATION: Final examination (open book)

### **Law of the Sea: LAWS 2022.03**

The adoption of the 1982 United Nations Law of the Sea Convention was the result of the world's most ambitious law reform movement in the form of the Third United Nations Conference on the Law of the Sea (UNCLOS III), which was in preparation and in session from 1969 to 1982. The result is a treaty that governs almost every conceivable aspect of ocean use, establishes a new regime for ocean jurisdictional zones and provides a global administrative and regulatory structure for the oceans. This seminar will undertake a detailed analysis of the law of the sea by examining the Convention and other materials. Included in the analysis will be an examination of navigational issues (territorial sea, international straits, archipelagoes), resource issues (exclusive economic zone, fisheries, non-living resources); maritime boundary delimitation; protection of the marine environment; transfer of marine technology; marine scientific research; dispute settlement; international ocean governance. The class will be conducted as a seminar and students are expected to make contributions based on substantial reading.

EVALUATION: Combination of major paper, class participation and presentation

### **Legal Accounting: LAWS 2023.02**

This is a basic class in the business law area and is recommended background for work in the corporate, taxation, and estate planning fields. It is not designed to produce accountants but rather to equip the lawyer to act effectively as a professional adviser to business and to be able to use

principles of accounting and the services of accountants to enhance his/her effectiveness. The class is also an example of interdisciplinary study, considering areas where the law and accounting overlap. Even students who have been exposed to accounting in their college work should benefit from the class, the latter two-thirds of which is taught as a law class with an approach not duplicated elsewhere in either business school or law school. No mathematical knowledge beyond simple arithmetic is required. The class begins with a study of elementary principles of double-entry bookkeeping and financial statement presentation, concentrating more on the underlying principles than on detailed drill in procedure. Next comes an examination of the structure and functions of the accounting profession. The remainder of the class concentrates on a consideration of generally accepted accounting principles, their interrelationship with the law, and their relevance to the resolution of certain legal problems. This includes discussion of the attitudes of the courts to accounting concepts; financial statements, their uses and limitations; inventory valuation; valuation of tangible fixed assets; public utility rate regulations; treatment and valuation of goodwill; allocation of income taxes; and measurement of revenues and expenses.

EVALUATION: Final examination

### **Legislation: LAWS 2075.03**

As one of the primary sources of law, legislation is one of the basic working tools of the lawyer. Building on the First-Year Public Law class, the Legislation class attempts to give the student a more detailed view of the role of legislation in the legal process. The class has two major focal points. One is directed towards giving the student a better appreciation of how a statute is created, including the basic underlying policy decisions upon which it is based, the statutory scheme developed to carry out the legislative process, and the problems faced by the drafters in translating general ideas into specific unambiguous language. The second major emphasis is directed towards giving the student an appreciation of the court techniques involved in judicial interpretation of statutes. The rules of interpretation can be stated very easily. To appreciate how they are used by the courts is much more difficult. Understanding gained in this class should be related to other classes and areas of the law where legislation plays an important role, e.g., Constitutional, Administrative, Taxation Law. The class may help to increase appreciation for appropriate use of language in legal work of all types. The class is conducted by discussion of assigned readings and the presentation and discussion of proposed legislation drafted by the students. Each student will prepare a major paper consisting of a draft of proposed legislation and an explanation of the draft, including such matters as the need for the legislation, the problem(s) to which it is addressed, its constitutionality, the underlying policy supporting the legislative choices and the relation of the proposed draft to the legal context (i.e., the common law and other statutes).

EVALUATION: Major research paper

### **Marine Environmental Protection: LAWS 2125.03**

Protection of the marine environment was one of the earliest and most extensive areas of development in international environmental law. The transboundary nature of the issues and dramatic public impact of marine pollution incidents have contributed to a dramatic growth in the number and scope of legal instruments aimed at regulating uses and resources of the marine environment. This legal activity has been accompanied by a growing understanding of the critical importance of the oceans to the health of global systems in general, whether as a source of food, a sink for pollutants or a regulator of climate.

The objective of this class is to provide an understanding of the development and current state of law dealing with protection of the marine environment. The examination will proceed initially from the international level, but will focus on the implementation (or non-implementation) of these principles in Canadian law. The specific topics covered in the seminar will vary from year to year depending on current issues and student research interests.

For more information on current topics, please consult the course instructor.

80% paper, 10% on presentation of paper in class and 10% on class participation.

### **Maritime Law and Practice (Maritime Law I): LAWS 2001.03**

This is an introduction to Canadian Admiralty Law and practice, including the history of admiralty; the subject matter of admiralty claims (ships, vessels, cargo, etc.); the status of admiralty claims (maritime liens, statutory rights to proceed in rem, etc.); the admiralty jurisdiction of the

Federal Court of Canada and provincial courts; collision; marine towage and pilotage; salvage, marine pollution; etc. The class complements other classes, such as Maritime Law & Policy, Ocean Law & Policy, Environmental Law, and Law of the Sea. This course is a required course for the Marine Law Specialization Certificate.

INSTRUCTOR: A. Chircop

70% 3 hour examination, 20% midterm assignment, 10% class participation.

### **Mental Disability Law: LAWS 2128.03/LAWS 2127.02**

This seminar concentrates on issues involving those who are described as having a mental health problem or an intellectual disability. The class surveys many central topics, including the history and conceptualization of mental disorder, substantive and constitutional aspects of involuntary civil commitment, the legal response to alleged incompetence, the right to treatment and to refuse treatment, misuses of power and remedies, advocacy services and the intersection of mental disability and the criminal justice system. Students are encouraged to develop their understanding of the rules and policies of the legal system and to heighten their awareness of this form of inequality and discrimination.

EVALUATION: Major paper (3 credit hours) or term assignments (2 credit hours); a class presentation and class participation are also required for each student. Please note: registration processes and waitlists are set up separately for each of the 2-credit and 3-credit options.

### **Mergers, Acquisitions and Other Changes of Corporate Control: LAWS 2182.03**

This course will consider the implications of various types of corporate control transactions, including hostile take-over bids, proxy contests, statutory arrangements, and "going private transactions"/business combinations. These subjects will be examined from a perspective that not only integrates corporate and securities law but is also informed by financial economics and public policy scholarship. Readings for the course will include cases from Canadian and other jurisdictions (especially the U.S.), statutory and other regulatory sources as well as scholarly articles.

FORMAT: 3 hours a week

PREREQUISITE: Business Associations

CO-REQUISITE: Securities Regulation

EVALUATION: Final examination, class participation and one or more assignments.

### **Nova Scotia Supreme Court (Family Division) Placement: LAWS 2175.03**

Two students will assist Judges of the Supreme Court (Family Division) each term, providing research and undertaking other tasks as directed by the supervising Judge. Students will be expected to spend nine hours per week working at the Court and upon the tasks assigned by the Court. Only third year students with very good academic standing and a demonstrated interest in family law will be accepted. This class cannot be used to fulfil the major paper requirement.

SUPERVISORS: Justice J. Williams, R. Thompson

CREDITS: 3

PREREQUISITE: Family Law

EVALUATION: Based on satisfactory completion of assigned tasks, including an assessment of written work such as memoranda provided to the Court

### **Ocean Law and Policy: LAWS 2068.03**

This seminar examines current issues in Ocean Law & Policy. The specific focus will vary each year depending on the instructor. (e.g. international fisheries; offshore oil and gas; integrated ocean management) It is recommended that students have a background in international law and/or law of the sea. The theme for the 2009/10 academic year is "Arctic Governance"

INSTRUCTOR: A. Chircop

EVALUATION: Major paper and class participation

### **Oil and Gas Law: LAWS 2079.02**

This course deals with the legal characterization of oil and gas, onshore and offshore, applicable constitutional and international law principles, basic rights transfer agreements, regulation, operator responsibilities, pipeline jurisdictional issues, aboriginal rights, rights of first refusal, environmental law, the Offshore Accords and their implementation and current regulatory issues.

EVALUATION: Written examination

### **Patent Law: LAWS 2222.03**

This class provides students with an opportunity for in-depth examination of the scheme of the Canadian patent statute and case law. It engages in intense exploration of patent law in the context of cutting edge technologies in diverse areas, including digital technology and biotechnology, especially in the pharmaceutical, health agriculture and general research contexts. In addition, the course will explore other regimes for the protection of commercially sensitive information under statute and common law such as trade secrets and other commercial business information. The course will be taught with emphasis on common law, statutory regimes and Canadian case law. In appropriate cases, comparative perspectives on other jurisdictions, especially the United States and the European Union could be explored.

CO-REQUISITE: Intellectual Property Law 2178

EVALUATION: 100% final exam

### **Pension Law: LAWS 2208.03**

Pension law is an area of increasing importance to Canadian society given an aging population, and the vast amount of assets controlled by pension funds. In legal terms it is a challenging mixture of private and public law, of trust, contract, corporate, labour and employment law on the one hand, and administrative, tax and social welfare law on the other. In policy terms pension law poses difficult questions of intergenerational equity, of the appropriate balance between private and public provision, and of how far pension investment decisions should be made to serve other social goals. The course will focus primarily on private pensions but will also consider briefly the public pension system. The first part of the course will focus on the basics of the private pension system: constitutional jurisdiction, the distinction between defined benefit and defined contribution plans, the legal nature of pensions, the Income Tax Act requirements for registered pension plans, and provincial and federal pension legislation. The content of the second part will involve consideration of selected topics which may change as new issues emerge. Examples are entitlement to surplus, the effect of employer insolvency, and pension plan mergers.

ENROLMENT: Limited to 16 students.

FORMAT: 2 hours per week, 3 credits

EVALUATION: by major paper (80%), class participation (10%) and class presentation (10%)

Equity and Trusts is recommended but not required.

### **Planning Law: LAWS 2015.03**

The class introduces students to the planning process through study of the legal tools used to regulate the use of land. While the legal aspects of the planning process will dominate, students will also be expected to appreciate the perspective which planners bring to the subject. The class is usually composed of both law and planning students.

There is consideration of the basic legal regime governing planning (including private law remedies, constitutional law and the role of the federal government, official plans, zoning by-laws, non-conforming uses, development permits and judicial review of planning decisions). Administrative law is a desirable but not necessary pre-requisite or co-requisite.

EVALUATION: Class participation, tests, and a written paper. This course does not fulfil the major paper requirement.

### **Poverty Law and Human Rights: LAWS 2076.03**

This class entails an in-depth analysis of poverty and the social welfare system in Canada, with particular emphasis on specific federal and provincial (primarily Nova Scotia) legislation. The constitutional implications of certain legislative provisions will be examined vis-a-vis the Charter, in particular ss. 7 and 15 and s. 36 of the *Constitutional Act, 1982*.

Discussion will also be had of Canada's international obligations to alleviate poverty and how these commitments are used by poverty lawyers. Participants will discuss how to interpret poverty legislation. Issues such as the right to welfare and/or an adequate annual income will be debated. We will look critically at the lawyer's role in pursuing remedies to the problems of people of low income.

ENROLMENT: 16 students

EVALUATION: By examination plus a component for class participation.

### **Practising International (Human Rights) Law in Canadian Courts: LAWS 2229.01**

Lawyers of the 21st century must have the skills to recognize and handle the variety of foreign and international laws that impinge on such trans-national activities and relationships. Towards that end, this course teaches

the legal practice of international law within the Canadian legal system and does it within the context of protecting human rights. It engages the core principles and rules on the international protection of human rights for their own sake and as the vehicle to demonstrate the role of international law within Canadian law and practice. The course will discuss sources of international human rights law and their reception in Canada, interpretive techniques for the Canadian Charter and statutes informed by Canada's human rights treaty obligations, jurisdictional powers and limits of Canadian legislatures, governments and courts under international law, and the international privileges of foreign states, governments and their officials within Canada. The course will conclude by integrating these concepts in a discussion about litigating international human rights abuses in Canadian courts.

FORMAT: 14 hours, 1 credit

PREREQUISITE: International Law

EVALUATION: By examination (essay/opinion style questions) in the last class.

Graded on a Pass/Fail basis.

### **Public Health Law: LAWS 2221.03**

Protection of the public's health has historically been one of the critical functions of the State; witness early laws regarding quarantine, sanitation, and food quality control. Both SARS and HIV have served as recent wake-up calls to remind us of the importance of regulation in the control of infectious disease outbreaks. The prevalence of obesity and diabetes prompts some to recommend state intervention in hitherto-unchecked areas of life often considered private. How is the balance to be set vis-à-vis state interference when juggling the values of individual liberty, privacy interests, protection of the public, and the promotion of health? This course examines these legal and ethical issues via the above topics as well as some of the following: compulsory testing and treatment for infectious disease; vaccination; drug and tobacco control; surveillance and research; genetics; maternity and parenting; and environmental impacts on health.

FORMAT: 3 hours per week, 3 credits

EVALUATION: Examination

### **Real Estate Transactions: LAWS 2026.04**

This class provides a comprehensive and practical introduction to real estate transactions. Legal principles underlying all aspects of the real estate transaction are examined in the context of a real estate conveyancing practice. Topics discussed include: real estate agency law; fixture; conditional contracts; risk of change; defect in the land and buildings; title problems; time is of the essence; merger on closing; deposits and part payment; land registration; possessory title; restrictive covenants; surveys, mortgages, condominiums and property development. The class is conducted by lecture and class discussion.

EVALUATION: Final examination

### **Regulatory Systems in Environment and Health: LAWS 2219.03**

This advanced level course bridges the separation of human health and environmental protection into distinct areas of legal concern. Using their distinct but overlapping regulatory systems as a comparative lens for understanding underlying theoretical and practical assumptions, the course considers current and potential interaction and integration between the two fields. Topics to be explored will vary from year to year but will include issues such as: international law and governance on health and environment; human rights and health and environment; gender and health and environment; comparative regulatory theory and practice; health and environment in relation to First Nations and other aboriginal communities; occupational safety and health; linkages between human health and pesticides, climate change and other leading environmental issues; food production and security and the role and implications of technology.

FORMAT: 3 hours per week, 3 credits

PREREQUISITE: Health Law: LAWS 2132 OR Environmental Law 1 LAWS 2104

EVALUATION: Examination and a participation component, possibly including class exercises.

### **Restorative Justice: Theory and Practice: LAWS 2188.03**

This seminar will introduce students to the theory and practice of restorative justice. Students will become familiar with the principles of restorative justice as compared with other theories of justice. Restorative

Justice practices will be examined including an exploration of the role of victims, offenders, communities and facilitators. There will be particular emphasis on emerging restorative justice conferencing techniques. A number of "restorative" process models will be considered. Restorative justice has played a role at various points in the criminal justice system, including its use for crime prevention, diversion by police, prosecutors and in sentencing and corrections. Consideration will also be given to application beyond the criminal context, for example, in the areas of tort law, family law, environmental law and in dealing with large scale historical, social and political practices.

FORMAT: 2 hours per week, 3 credits

EVALUATION: Major paper, presentations and Class participation

### **Sale of Goods: LAWS 2145.02**

This course is about commercial transactions involving the sale and supply of goods. It deals with the law relating to the sale and supply of goods and, in particular, involves a detailed study of the Sale of Goods Act.

Topics to be covered include the definition of a sale, the classification of goods, the definition of property, the consequences of property passing, the rules for determining when property passes, the performance of the contract, and remedies for breach of contract. The course will also discuss consumer protection issues and the Vienna International Sales Convention.

NOTE: Students should note that this course constitutes only one of two parts of the subject area of Commercial Transactions, as listed on the Nova Scotia Barristers' Society Recommended Courses. The other part of this subject area is taught in Commercial Law (B): Secured Transactions.

FORMAT: 2 hours per week

EVALUATION: Written examination that may be open or closed-book

### **Secured Transactions: LAWS 2204.03**

This course examines the law of commercial transactions that involve consensual arrangements to finance the supply of goods, together with other competing interests in personal property. The operation of the provincial Personal Property Security Acts will be emphasized and their relation to secured transactions under federal legislation, such as the Bank Act, will also be discussed.

FORMAT: 3 hours per week

EVALUATION: Written examination that may be open or closed-book

### **Securities Regulation: LAWS 2138.03**

This class will address the theoretical basis for and the role of securities regulation in regulating capital markets and protecting investors. It will provide students with a firm understanding of the basics of securities laws and policies and sufficient guidance to permit them to research certain complex aspects of the subject that cannot be covered in an introductory class. Specific topics which will be covered include: institutional and regulatory framework; theory of securities regulation; licensing of securities market professionals; regulation of primary market offerings; trading in the secondary markets, continuous market disclosure, including such topics as financial, insider trading and proxy solicitation regulations; regulation of market conduct, including the specifics of take-over bid and issuer bid legislation; and enforcement matters.

PREREQUISITE: Business Associations

EVALUATION: Based primarily on a problem-oriented written examination with the possibility of optional in-term work counting for a certain percentage of the total grade

### **Sopinka /McKelvey Cup Trial Advocacy Course: LAWS 2171.02**

This course is open to 16 students from second or third year selected through a trial advocacy exercise. Starting in September, students will learn the fundamentals of trial technique: exhibits introduction, objections, direct and cross examinations, legal arguments, and jury addresses. Each student will participate in a complete trial. The top four students will be selected to represent the law school in February at the McKelvey Cup, a regional competition between Dalhousie, Université de Moncton and University of New Brunswick.

The two person winning team from the McKelvey Cup will represent the region in March at the national Sopinka Cup Trial Advocacy Competition. A second team from the Maritimes will participate at the national level every fourth year. Students who participate in the Fall portion of the course receive 2 credits; students who go on to compete in the McKelvey

Cup receive 3 credits. If the team is selected for the Sopinka Cup, no extra credit will be received.

The course does not count as a major paper, and students who participate in the competitive moot portion of the course are ineligible to take part in a further competitive moot at the law school. Students taking this course cannot take Criminal Trial Practice.

ENROLMENT: Selected via trial advocacy exercise; maximum 16 students  
EXCLUSION: Students taking this course cannot take Criminal Trial Practice

EVALUATION: Class participation and performance in trial advocacy exercises

### **Supreme Court of Nova Scotia Placement: LAWS 2160.06**

The judges of the Supreme Court have agreed to have two students in each of the fall and winter terms to serve as student researchers. Students will take part in the work of the Court, assisting the judges with research and other tasks as requested, and will be required to spend 18 hours a week on this court work. Third year students with very good academic standing will be invited to apply for clerkship. This course does not fulfil the major paper requirement. In carrying out any task for the Court, students are strongly reminded that confidentiality is essential.

EVALUATION: Based on satisfactory completion of assigned tasks including assessment of any written work provided to the Court.  
Evaluation will be on the basis of consultation between the faculty supervisor and the supervising justices of the Supreme Court of Nova Scotia.

### **Taxation I: LAWS 2029.04**

This class is an introduction to the law of income taxation in Canada. It is intended to make students aware of the prevalence of taxation issues in ordinary life and in simple commercial transactions. It is also, for those who so choose, the prerequisite for more advanced courses in corporate taxation and the estate planning area. The initial part of the course addresses some basic issues in tax law—who should pay tax, the unit of taxation – family, individual or other – and what is income. The special areas of taxation of First Nations, and international taxation are briefly surveyed. Subsequent classes focus on the various types of income and the rules affecting them. The computation of employment income is addressed and the taxation of some of the common benefits bestowed on employees—cars, interest free loans, free trips – is examined. The latter part of the course covers the taxation of property and business income. As part of that exercise, students are introduced to some of the timing problems that arise in the computation of income. Over what time period, for example, is it appropriate to deduct the sometimes very substantial costs of equipment and buildings used in a business? The class also studies the type and scope of other deductions available for business income, and examines the policy reasons behind the deductions. Finally, the taxation of capital gains, including gains (and losses) on taxpayer assets such as the family home, personal property such as art, and business investments, is canvassed. The basis for discussion in class is decided cases, commentary from the text, and the applicable rules in the Income Tax Act. The acquisition of the ability to read complex legislation will be emphasized.  
EVALUATION: Problem-oriented written examination, with the possibility of optional in-term written work counting for a certain percentage of the work

### **Taxation II: LAWS 2030.02**

This course provides a detailed study of Canada's bilateral tax treaties. These treaties serve as a key part of Canada's international tax system. Their study should be of interest to students who are curious about taxation law and policy, to students with an interest in the international allocation of tax revenues between high and low income states, and to students who enjoy international law and politics.  
To provide a foundation for the study of specific treaty articles, we will review the underlying principles of international taxation and discuss approaches to tax treaty interpretation. The core of the course will involve a detailed review and evaluation of the design of the specific treaty articles, including the articles that govern business and professional income, employment income, the income earned by athletes and entertainers, real property income, and income from dividends, interest, royalties, and capital gains. The course also includes a discussion of the use of tax treaties in tax planning, the ways by which tax treaties are used as tools for tax avoidance, the mechanisms available in treaties to facilitate

compliance, enforcement, and information collection, and the consequences of tax treaties for low-income countries.

PREREQUISITE: Taxation I

EVALUATION: Written assignments and examination

### **Taxation of Corporations: LAWS 2106.03**

This course covers several topics in relation to the taxation of corporations and their shareholders under the Income Tax Act. The emphasis is on reading and understanding the statutory language as construed by the courts, as well as analyzing the policies and principles that animate the legislation. The initial part of the course addresses the taxation of corporate income, with topics including: rationales for corporate taxation, corporate residence, Canadian-controlled private corporation status, active business income, and investment income. The next part of the course deals with the taxation of shareholder distributions, including dividends and shareholder benefits. Subsequent classes focus on tax-deferred corporate reorganizations. Finally, the course surveys the tax aspects of buying and selling a corporate business. At various points in the course the rules regarding corporations are compared to those concerning partnerships and income trusts. The aim is to give students a strong foundation for future practice or research in corporate tax law.

RECOMMENDED: Business Associations is highly recommended but not required.

PREREQUISITE: Taxation I

EVALUATION: Written examination that may be open or closed-book, plus a class participation component.

### **Torts II: LAWS 2031.02**

The class will study how the courts decide tort cases to give students a realistic understanding of the judicial decision making process. Certain developing areas of tort law will be explored in detail to identify the fundamental legal rationale and concepts used to determine the imposition of tort liability. Students will deal with actual fact situations that will have to be decided by the student. The teaching method relies on class discussion and participation

EVALUATION: Class participation 25%, class presentation 20% and a written paper 55%. The written paper will comprise a written decision dealing with a factual problem which will be assigned at the beginning of term. This course does not fulfil the major paper requirement.

### **Youth and the Law: LAWS 2018.03**

This course provides an opportunity to consider current legal issues involving children and youth. Topics may include: custody, child protection, aboriginal child welfare, adoption, youth criminal justice, restorative justice in the youth justice model, and youth and media. Students are not limited to these topic areas for their papers and class presentations and are encouraged to investigate a wide range of issues relating to children and youth in law and society, including interdisciplinary perspectives.

FORMAT: 2 hours per week, 3 credit

EVALUATION: Major paper, supplemented by other assignments and class participation

## **E. Graduate Classes**

### **Graduate Seminar on Legal Education and Legal Scholarship: LAWS 3000.03**

This seminar is a required class for students in the LLM program. It is also open to JSD students. Its purpose is to explore various issues in legal education and legal research from a comparative perspective. The first part of the class is devoted to an examination of the purposes of legal education and the various ways that legal education is structured and carried out in different jurisdictions. The remainder of the class is spent examining different methodological and ideological approaches to legal research, with special emphasis on how each of the seminar participants would see his or her development as a legal scholar.

Evaluation is made in relation to a number of components including, but not limited to, a research assignment, a book review, class participation, a series of reaction papers and a "methodological prospectus" or "review essay" focusing on the student's area of research interest. The class begins in September and is completed by the end of February.

# Faculty of Medicine

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## Faculty of Medicine

### Office of the Dean of Medicine

Location: Rm C-205, Clinical Research Centre  
849 University Avenue  
Halifax, NS B3H 4H7  
Telephone (902) 494-6592  
Fax: (902) 494-7119

### Admissions and Student Affairs Office

Location: Room C-132, Lower Level, Clinical Research Centre  
Telephone: (902) 494-1874  
Fax: (902) 494-6369

## Academic and Administrative Staff

### Dean

Marrie, T., MD

### Associate Deans

Delva, D., MD, Undergraduate Medical Education  
Gardner, M., MD, FRCP (c), FACC, Post-graduate Medical Education  
Gorsky, D., MBA, Operations & Policy  
Johnston, G.C., PhD (York), Research  
LeBlanc, C., MD, Continuing Medical Education  
Steeves, J., MD, Dalhousie Medicine New Brunswick

### Assistant Deans

Anderson, D., MD Research (Clinical Trials)  
Brisseau, G., MD, Postgraduate Medical Education  
Brownstone, R., MD (Manitoba), Research (Clinical Departments)  
McMaster, C., PhD (Manitoba), Graduate & Postdoctoral Studies  
Reiman, A., MD, Research (Dalhousie Medicine New Brunswick)  
Sutton, E., MD (Dal), Admission  
Teehan, M., MD, Student Affairs

### Academic Director

Sinha, G., Director, Student Advisor Program

### Administrative Directors/Staff

Gaudet, C., BA, APR, Communications  
Graham, S.D., BComm (SMU), Admissions and Student Affairs  
Holmes, B., BSc (Acadia), MEd (Dal), Learning Resource Centre  
MacNeil, C., CMA, Finance  
Malloy, M., MEd (MSVU) Undergraduate Medical Education  
Paterson, G.I., BSc (UBC), MSc (Dal), ISP, Medical Informatics  
Power, L., BSc (Dal), BEd (MSVU), MEd (MSVU), Human Resources  
Ross, C., Research Coordinator  
Silver Smith, C., Postgraduate Medical Education  
Weeden, A., Cert. BA (UNBSJ), BA (Dal), Governance & Planning

### Dalhousie Medical Research Foundation

Edwards, A., Executive Director  
Teixeira, D., Administrative Assistant

### Faculty Council

Clarke, J.  
Cowley, E.  
Dornan, J.  
Harris, A. (Chair)

Hyndman, J.  
Kablar, B.  
Lin, T.J.  
Nolan, M.  
Quraishi, A.  
Pasumarthi, K.  
Reid, L.  
Ridgway, N.  
Stadnyk, A.

Ex officio: President, Dean, Associate and Assistant Deans, Faculty Secretary, President of Medical Students' Society, President of PARI-MP, and Graduate Student Society Representative.

## I. General Information

Dalhousie Medical School was organized in 1868, but medical teaching was carried out by the independent Halifax Medical College from 1875 to 1911, when the Faculty of Medicine was re-established by the University.

The Faculty provides a complete medical training leading to the degree of Doctor of Medicine (MD). Nationally accredited postgraduate training in family medicine and specialty training is provided in University-affiliated hospitals in Nova Scotia, Prince Edward Island and New Brunswick. Continuing Medical Education is provided to the practitioners of the three Maritime Provinces.

The Faculty is fully accredited by the Liaison Committee on Medical Education and the Committee on Accreditation of Canadian Medical Schools.

The Medical School has strong research programs in basic biomedical sciences, clinical sciences, population health and medical education.

## A. Mission Statement

Serving the Maritimes, the Faculty of Medicine, Dalhousie University, develops highly competent, caring and socially responsible physicians and researchers through programs of the highest academic quality, within a diverse clinical and research-rich environment.

## B. Faculty

The Faculty of Medicine has approximately 1,885 faculty members, based in Nova Scotia, New Brunswick and Prince Edward Island. Faculty meetings are held regularly throughout the year to determine policy on academic matters.

## C. Faculty Council

Faculty Council meets frequently throughout the year, advising Faculty and Deans on academic matters. Faculty Council is responsible for hearing student appeals and for administering the departmental survey process and the selection of candidates for important Faculty administrative positions.

## D. Standing Committees of Faculty

There are 14 standing committees of Faculty (Faculty Council, Curriculum Committee, Faculty of Medicine Library Committee, Medical Research Committee, Scholarships and Awards Committee, Admissions Committee, Student Financial Aid Committee, Preclinical Tenure and Promotions Committee, Clinical Tenure/CAPR and Promotions Committee, Nominating Committee, T.J. Murray Visiting Scholar in Humanities Committee, Dr. Gerald & Gale Archibald Award for Medical Humanities, Professionalism Committee, and Combined Undergraduate Student Progress & Promotions Committee. These committees report annually to Faculty.

## E. Degree

The Degree conferred by the University is Doctor of Medicine (MD). The class extends over four years.

## F. Academic Year

The academic year for the first two years of the medical class begins late August and extends to the end of May. The final two years of Medicine

begin with a month long unit "Introduction to Clerkship." Students will then complete their clerkship as a two phase clerkship continuum.

## G. Graduate Studies

In association with the Faculty of Graduate Studies, classes are given that lead to degrees of MSc or PhD. Qualified students may register concurrently for the MD and graduate degrees (MSc or PhD) in the Faculty of Medicine. Currently available programs include: Anatomy, Biochemistry, Microbiology, Pharmacology, and Physiology and Biophysics (for further information please refer to the Faculty of Graduate Studies Calendar).

## H. Research Opportunities

Research in the Faculty of Medicine is supported mainly by research grants and awards to individual faculty members from national granting agencies including the Canadian Institute of Health Research, National Cancer Institute of Canada, Nova Scotia and New Brunswick Heart Foundations. Substantial additional assistance is made available through endowments to the University from the estates of the Hon. J.C. Tory and Gladys Marie Osman and the Dalhousie Medical Research Foundation. Undergraduates registered in the MD Program are encouraged to participate in ongoing research projects within the Faculty of Medicine. Two major programs are available to medical students with an interest in biomedical and health research.

## I. BSc (Medicine)

The BSc (Med) Program is currently under review. New applications are not being considered at this time.

## J. Summer Research Program

The Summer Research Studentship Program is designed to provide a number of qualified undergraduate medical students with an opportunity to become involved in biomedical research in the Faculty of Medicine over a twelve week period in the summer - introducing them to basic and clinical research initiatives in the hope that as physicians these young doctors will choose to incorporate a research component into their clinical practice.

A number of studentships are allocated annually to the Faculty of Medicine from the Canadian Institutes of Health Research and the Mach Gaensslen Foundation. The Faculty also receives funding through eight named university endowments:

- Murray Fraser - Family Medicine
- James S. Hammerling - Otolaryngology
- George Loh - Pathology
- Murray MacNeil - Undesignated
- George Mattar - Top ranked application
- Osman - Undesignated
- Beth Rafuse - Obstetrics or Neurosciences
- Webster - Immunology or Genetics

A variety of studentships are also available from the Dalhousie Medical Research Foundation (DMRF) as follows:

- Leo Alexander Studentship - Cardiovascular Research
- Dr. W. Alan Curry Studentship - Anatomy or Surgery Research
- Morris Kohler Studentship - Neuroscience Research
- Bergmann-Porter Studentship - General Biomedical Research
- Burpee Studentship - Lupus Research
- Watson Studentship - Rheumatoid & Osteo Arthritis

In addition to the above named studentships, the Dalhousie Medical Research Foundation also offers up to six annual research studentships earmarked for those medical students enrolled in the Music in Medicine Program.

Individuals interested in applying for any of the available summer research studentships should contact the Research Office, Faculty of Medicine, Room C-203, CRC Building, 494-1887. (<http://www.research.medicine.dal.ca> and see Academic Research Programs)

## K. Faculty Regulations

1. Medical students are required to adhere to the general University Regulations. Clinical clerks and residents are subject to the rules and regulations of the hospital department to which they are assigned concerning hours of duty, holidays, etc. Patient care responsibilities override University and statutory holidays.
2. Medical students must observe the regulations of the hospitals relative to undergraduate and post-graduate students, and any violation of such regulations will be dealt with as if a University regulation were violated.
3. All University regulations respecting fees apply to the Faculty of Medicine. In addition, students who have not paid their annual university tuition fees in full by the end of January will be suspended from the Faculty. If the fees are not paid by February 15, the registration of the student for the session will be canceled. (In this connection it should be noted that the Awards Office and the Office of the Dean of Medicine always give consideration to the provision of bursaries and loans for those in genuine financial need but application for such aid must be anticipated by the student.)

## L. Dalhousie Medical Alumni Association - Scholarships, Bursaries & Studentship Program

The Dalhousie Medical Alumni Association provides scholarships to medical students in their first year of medical school. For the past two years the DMAA has successfully supported 3 scholarships to medical students. These scholarships are administered through the entrance awards process. Bursaries are administered through the medical school financial aid committee.

## M. Dalhousie Medical Alumni Association

Serving the medical school for half a century is a network of more than 6,800 medical alumni, both MD's and Post Graduate Medical specialists with a long-standing tradition of putting students first. The DMAA Board of Directors comprised of Medical Alumni, meet every quarter to address opportunities available at the medical school to enhance the learning experiences of medical students.

The scope of service and support provides diversified resources in which we are very proud to showcase. Some of these include: scholarships, bursaries and studentships, found Chair in Medical Education, funding to the Dalhousie Medical Student Society. The DMAA is proud to support numerous traditions of support including: Gold & Silver D's, Silver Shovel Awards, Resident Teaching Award, Students in Residents Awards, Convocation support, Orientation Students Luncheon, Mentorship Program, support to DMSS for projects. The DMAA publishes Voxmedal magazine twice annually with circulation to 6,800 MD's, PGM's and medical students around the globe.

The Medical Alumni Office is located near the entrance to the Kellogg Library and is staffed by Executive Director, Joanne Webber - E-mail: [j.webber@dal.ca](mailto:j.webber@dal.ca). For further information, please call (902) 494-4816. Please visit our website at: <http://alumni.medinine.dal.ca>

## N. Sir Charles Tupper Medical Building

The Sir Charles Tupper Medical Building was completed in the summer of 1967. This 15-storey structure, the chief Centennial Project of the Government of Nova Scotia, is named after Sir Charles Tupper (1818-1892), one of the founders of the Faculty of Medicine, a Father of Confederation, and the only physician to have been Prime Minister of Canada.

The Tupper Building houses the W.K. Kellogg Health Sciences Library which occupies part of the first and all of the second floors of the Tupper Building. The library has a collection of approximately 158,000 volumes and yearly receives 2,400 current serials. The collection also includes over 2,900 audio visual programs.

The Kellogg Library was made possible by the generous gift, in 1965, of \$420,000 from the W.K. Kellogg Foundation of Battle Creek, Michigan. Other benefactors include the Medical Society of Nova Scotia, which makes an annual contribution to maintain the Cogswell Collection, and the Provincial Medical Board of Nova Scotia which provides an annual

grant in honour of the late Dr. John George MacDougall who was, for many years, President of the Board and a member of the staff of the Faculty of Medicine.

The Tupper Building also houses the following: teaching, research and administrative facilities of the Departments of Anatomy and Neurobiology, Biochemistry and Molecular Biology, Physiology and Biophysics, Pharmacology, Microbiology and Immunology, and Pathology; space for the undergraduate and graduate teaching of science students; study, recreational and dining areas for medical graduate and undergraduate students; the Animal Care Centre; the Dalhousie Medical Alumni Association Office; the Dalhousie Medical Research Foundation; and, MedIT.

## O. Clinical Research Centre

The Centre (formerly Dalhousie Public Health Clinic), which was constructed in 1923 following a gift from the Rockefeller Foundation, was originally built to house the outpatient services of the clinical departments. The Centre is now physically connected to the Tupper Building and, together with a block of space connecting the two buildings (the Link), houses the Atlantic Research Centre (ARC), and the administrative units of the Dean's Office, and the Department of Bioethics.

## P. Family Medicine Centres

These centres are modern ambulatory clinical facilities housing the administrative, research, clinical and educational resources of the Department of Family Medicine. The first of these opened in 1975. The facilities are now located on the 4th and 8th floors of the Abbie Lane Building, QE II Health Science Centre. The second centre, established in 1995, is the New Brunswick Region 3 Family Medicine Teaching Unit, Fredericton, NB. In 1998, a third centre was established at the Cape Breton Healthcare Complex and a fourth in 1999 at the Regional Health Authority in Moncton, N.B. In 2009, a fifth centre will be established at the Queen Elizabeth Hospital in Charlottetown, P.E.I.

## Q. Affiliated Hospitals

The majority of clinical departments are located in one of the affiliated teaching hospitals. The major teaching hospitals include the QEII Health Sciences Centre, the Nova Scotia Hospital, the IWK Health Centre, and the Saint John Regional Hospital. Other affiliated and associated institutions in Nova Scotia include Canadian Forces Health Services Centre, Cumberland Regional Health Care Centre, Annapolis Community Health Centre, St. Martha's Regional Hospital, Victoria County Memorial Hospital, Western Kings Memorial Hospital, Sacred Heart Hospital, Dartmouth General Hospital, East Coast Forensic Hospital, Glace Bay Healthcare Facility, Inverness Consolidated Memorial Hospital, Valley Regional Hospital, Queen's General Hospital, Cobequid Community Health Centre, Soldiers Memorial Hospital, Twin Oaks Memorial Hospital, Buchanan Memorial Community Health Centre, Aberdeen Hospital, Northside General Hospital, Saint Mary's Memorial Hospital, Cape Breton Regional Hospital, Colchester Regional Hospital, Hants Community Hospital, and Yarmouth Regional Hospital.

Other affiliated and associated institutions in New Brunswick include Oromocto Public Hospital, Carlton Memorial Hospital, St. Joseph's Hospital, Sackville Memorial Hospital, Moncton Hospital, and Miramichi Regional Hospital.

Affiliated and associated institutions in Prince Edward Island include Western Hospital, Queen Elizabeth Hospital, and Prince County Hospital.

Other facilities include a learning resource centre (opened in 1998) located at 5599 Fenwick Street, Halifax.

## R. Dalhousie Medical Students' Society

All medical students are members of this Society, which exists to promote the welfare and general interests of the medical undergraduates, including social and sports activities, relations with the Faculty and with the Students' Union of the University. The Society presents honours and awards to outstanding medical students.

The president and vice-president of the Medical Students' Society, the presidents of the four undergraduate classes and the president of the

Residents Association of Nova Scotia are members of Faculty. The Presidents of the Medical Students' Society and Residents Association of Nova Scotia are ex-officio members of Faculty Council. Medical students are members of the following Faculty committees: Medical Education, Student Financial Aid, Admissions and Library. Regular monthly meetings are held by the Dean with the class presidents and educational representatives as well as the president of the Medical Students' Society.

The Society also represents students at professional bodies for physicians at each Maritime Province and nationally via the Canadian Federation of Medical Students.

## S. Medical Undergraduate Student Advisor Program

This is a confidential support program established by the students and is separate from the Dean's office. Whether it is a personal or academic problem, academic decision making, career choice making, financial strife or the need to have an objective opinion, the students can get help from the student advisor. All communications are strictly confidential.

Some of the services involved include: academic and personal counseling and referrals, financial direction, career choice advising, elective choice advising, aid during residency interview time and help in finding access to medical services in the area. There are a number of lunch hour and evening events associated with the program. Early contact is recommended before problem gets critical. Students looking for advice should contact the student advisor:

Dr. Gita Sinha  
Department of Anatomy & Neurobiology  
Room 14-D2, 14th Floor  
Sir Charles Tupper Building  
Office 494-7059 / cell 497-8100 / home 835-8218  
Email: Gsinha@dal.ca

## T. Global Health Office

Dalhousie Faculty Of Medicine  
Location: C-241 5849 University Avenue  
Halifax, NS B3H 4H7 Canada  
Tel: (902) 494-1965  
Fax: (902) 494-2799  
Email: gho@dal.ca  
Website: <http://gho.medicine.dal.ca>  
Shawna O'Hearn, Director

The Global Health Office is recognized regionally, nationally and internationally for interprofessional opportunities that prepare health care professionals for lifelong learning in global health.

There are many ways for students, residents and faculty to engage with our office. We coordinate pre-departure training, global health electives, summer global health experiences in Tanzania and Thailand and a global health course. We also lead global health events including films, journal club, speaker series and conferences. We present annual awards to a student, a resident and a faculty member who demonstrate leadership in global health. .

## II. Admissions

(<http://www.medicine.dal.ca/admissions>)

### A. Admission to First Year

#### 1. Application and Selection

Successful candidates are selected by the Admissions Committee of the Faculty of Medicine, whose decision is final.

The application for admission is to be made only on the regular application form of the Faculty of Medicine which may be obtained from the website: (<http://www.medicine.dal.ca/admissions>) after July 1st. The completed application must be submitted to the Registrar's Office, Dalhousie University, not later than the deadline which will be posted on the main website on or before July 1st of each annual application cycle, in order to be considered for entry to the class beginning the following September. Applications not submitted as complete by midnight on the set

deadline will be cancelled and deleted from the system. All applications must be accompanied by a \$70.00 processing fee, which is not refundable and is not applicable to tuition fees.

### **A completed application consists of 2 steps:**

Step 1 - The online application available beginning July 1 each year at [dalonline.dal.ca](http://dalonline.dal.ca)

This step is due on or before August 15th each year. Step 1 must be complete and "SUBMITTED" before you can proceed to Step 2.

Step 2 of your application is the completion of the Supplemental information form and the 1500 word Essay. Following completion of Step 1, within 4 business days you will receive an automated email with sign in credentials and a link to direct you to a log in page for Step 2.

Completion of this step is due on or before September 1 each year.

You must also submit:  
Official University transcripts  
MCAT results

## **2. Place of Residency/Applicant Pools**

Admission to the MD program is determined based on four applicant pools: one for each Maritime Province (New Brunswick, Nova Scotia and Prince Edward Island) and a fourth for those with non-Maritime status. Applicants are encouraged to give detailed and complete information on their residency status at the time of application. Attendance at a university in the Maritime Provinces does not necessarily constitute having residence in the Maritime Provinces. For more details regarding residency, see [admissions.medicine.dal.ca](http://admissions.medicine.dal.ca)

Effective September 2010, Dalhousie University Faculty of Medicine began offering the MD program in Saint John, New Brunswick for 30 successful New Brunswick applicants. In Halifax, 63 seats are reserved for Nova Scotia residents, 6 for Prince Edward Island, and 9 for non-maritime applicants.

Supernumerary (additional and restricted) seats may be added by the Faculty of Medicine.

Applicants who will have been, or will be, in the work force for 24 consecutive months and were not a full time student at the time of commencement of studies in the Faculty of Medicine will normally be presumed to be resident of the place where such employment occurred.

All applicants are expected to claim the same place of residency on all applications to Canadian medical schools. Failure to do so may lead to rejection of the application. The decision of the Admissions Committee regarding the residency status of each applicant will be final and is not subject to appeal.

## **3. Selection Objectives**

The Faculty is seeking applicants who have a good record of achievement in both academic and non-academic activities. Applicants with a broad academic background have an enhanced chance of admission as humanities and social sciences cultivate desirable personal qualities for students and physicians. This includes sound basic training in the sciences in order that they can understand the complexities of modern scientific medicine. The greatest possible proficiency in communication and self-expression, both orally and written, is a necessity to the future medical practitioner. In addition, in order to have acquired the required degree of intellectual maturity, the prospective medical student should have more than basic training in at least one field of learning, whether it be in the humanities, social sciences, life sciences or physical sciences.

## **4. Selection Factors**

Sources of information and factors considered by the Admissions Committee include (a) academic requirements including grade point average and Medical College Admissions Test (b) ability as judged by information provided by the applicant in response to questions on the application form, (c) interviews, (d) place of residence and (e) confidential assessment by referees or others named as contacts by the applicant in their submission's supplemental information form.

## **5. Academic Requirements**

The Admissions Committee recognizes that appropriate preparation for the study of medicine can be acquired through many varied educational backgrounds. The major objective is that premedical education encompass broad study in the physical, life and social sciences and the humanities. The minimum requirement for entry, however, is a baccalaureate degree in any discipline. Classes in the social sciences and humanities will be helpful in understanding human behavior in health and illness. Ability to communicate effectively, both orally and in writing, is essential. The committee believes that attracting students with a rich variety of educational backgrounds is the interest of all students. Such preparation supports the training of outstanding physicians.

All applicants must meet the following minimum academic requirements:

**Maritime applicants:** A minimum GPA of 3.3 (on a 4.0 scale) based on a full course load of 5 full classes in each year of the two most recent years of study prior to submitting an application. An Applicant's best 3 years out of 4 years of full time study could also be considered, if the degree program has been completed. The MCAT is also required with component scores of 8 and above (may contain a score of 7 in ONE of the sections) with a minimum total of 24. While we would ordinarily expect a candidate to have 2 consecutive years in which 5 full classes were carried while achieving a minimum GPA of 3.3, the Admissions Committee would accept application from candidates who have demonstrated compelling reasons for not having met these stated course work requirements or who have unusual qualifications. These decisions would be made at the discretion of the Committee.

**Non Maritime Applicants:** A minimum GPA of 3.7 (on a 4.0 scale) based on a full class load of 5 full classes in each year of the two most recent years of study prior to submitting an application. An applicant's best 3 years out of 4 year of full time study could also be considered, if the degree program has been completed. The MCAT is also required with component scores of 10 and above (may contain a score of 9 in ONE of the sections) with a minimum total of 30.

## **6. Academic Ability**

Although there are no absolute prerequisite classes, candidates are encouraged to have taken two or three science classes at a challenging level. This will not only prepare the applicant to successfully write the Medical College Admission Test, but will provide a good foundation for studies in the medical program. Accordingly, a demonstrated capacity to carry a full program of demanding advanced level classes is a necessary asset for a medical student. The ability to obtain consistently better than average grades in such a program is the best indication of that capacity. An academic record which shows failed or repeated classes, classes passed with low grades or supplementary examinations, particularly in the two years prior to anticipated entry into medical school, makes the prospect of admission unlikely. Nonetheless, the Admissions Committee can, and does, make significant use of non-academic factors (see para. 8) in deciding which applicants will be admitted.

## **7. Medical College Admission Test**

The Medical College Admission Test (MCAT) is an absolute requirement for admission to the Faculty of Medicine. Applications from candidates who have not met the minimum requirements are not considered. It is the responsibility of the applicant to arrange to write the Test prior to the deadline date for submission of application. This test cannot be any more than five years old.

Students should note that the scientific information to answer questions on the MCAT should be obtainable in first or second year undergraduate classes. Performance in the verbal reasoning test and writing sample test will be enhanced by a broad undergraduate education including the humanities.

Information about the MCAT, including applying to write the exam online, can be obtained by visiting their website at: <http://www.aamc.org/mcat>

## 8. Non-Academic Factors

Any outstanding achievement or breadth in terms of life experience is given consideration. Such achievement would be drawn to the attention of the Committee by the applicant's personal essay and in the Supplementary Information Form. These play a very important part in the evaluations of the Admissions Committee. The attributes of emotional stability, intellectual curiosity, social values, initiative, leadership, reliability, personal maturity, motivation and communicative skills, etc., are considered for each candidate.

## 9. Interviews

All Maritime applicants who meet the minimum academic requirements are invited for an interview. Non Maritime applicants will be ranked using academics and supporting supplemental documents and the top applicants are invited for an interview. A processing fee of \$75.00 will be charged to all applicants receiving an interview. Dalhousie uses the MMI (Multiple Mini Interview) System. Applicants invited for an interview will move between interview stations in a 10 station circuit and be observed by a single rater in each station. The interviewer weekend dates are posted on the Admissions main web page in the fall of each year. The Admissions office is unable to re-schedule interview dates and time due to the nature of the MMI.

## 10. Immunization Requirements

Dalhousie University Faculty of Medicine has mandatory immunization requirements for all medical students. Health Care Professionals have an obligation to protect patients and themselves from infections that can be transmitted within health care practice settings. Immunization is an important tool in preventing the transmission of infections and assists in safeguarding the health of the student during their education and beyond. Students accepted to the program will be sent complete documentation regarding health status policies and immunization requirements where applicable. Documentation of immunization and tuberculin status will be required.

## 11. Criminal Record Check

All applicants offered admission will likely be requested to submit a criminal record check, including vulnerable sector screening to the Faculty of Medicine by August 15 of the year of entry, as well as in subsequent years of study. Results will be shared, including sharing a copy of the documentation, with: (i) the College of Physicians and Surgeons of Nova Scotia, New Brunswick and Prince Edward Island and (ii) other medical and/or educational institutions as required. In the event that an applicant is found to be ineligible for an educational license, the offer of admission will be revoked.

## 12. Notification

Candidates will be informed of the status of their application (e.g. accept, reject or wait list) by mid March. Those candidates who are wait-listed can expect to hear anytime between the first of April to registration in late August to Registration day.

## 13. Deferrals

Although applicants who are offered a place in the incoming class may request a deferral of admission for one year, the Admissions Committee only rarely grants these requests.

Students who are enrolled in a graduate studies program will be required to complete the program before entering medicine. It is anticipated that such students will apply during their last year since deferrals are rarely granted.

## 14. Acceptance Fee

On notice of acceptance into the Faculty of Medicine, applicants must be prepared to sign a formal agreement of acceptance and to deposit with the Student Accounts Office the sum of \$1000 before a specified date. This sum is credited toward tuition fees if the student registers but is not refunded if the student withdraws, or declines an offer of admission.

## III. Curriculum Leading to MD Degree

The curriculum of the Faculty of Medicine is under continuous review, to respond to changes in patterns of health and disease treatment, the health

care system, and in methods of effective teaching and learning. The Dalhousie University Faculty of Medicine's undergraduate program was awarded accreditation with probation for a period of up to two years, effective October 15, 2009 by the Liaison Committee on Medical Education, the American based certifier of Medical Schools in Canada and the United States. The undergraduate medical education curriculum is currently under review. For current information, visit our website: <http://www.medicine.dal.ca>

## A. Objectives of the Undergraduate Program

### 1. Basic Assumptions

Graduates of Dalhousie Medical School are caring, resourceful physicians, able to work with patients, families, and colleagues to provide excellent care in many different contexts and in complex and uncertain situations. They are able to work as agents of creative change in healthcare institutions and communities.

### 2. Educational Goals for the Medical Student

Our graduates will integrate their knowledge, skills and attitudes for competence in four principal and interdependent areas of achievement: as professionals, as community contributors, as life-long learners, and as skilled clinicians.

#### Professional:

As professionals, our graduates are able to join and enhance the medical profession, through their commitment to excellence in patient care, high ethical standards, and accountability to society for the responsibilities entrusted to them.

#### Community Contributor:

As community contributors, our graduates understand a community's health needs and respond to promote health. They contribute constructively to communities of practice and the institutions and healthcare systems to which they belong.

#### Lifelong Learner:

As lifelong learners, our graduates engage in self-assessment and reflective practice to integrate clinical experience, and scientific evidence for the improvement of patient care, safety, and outcomes.

#### Skilled Clinician:

As skilled clinicians, our graduates are able to apply scientific understanding, clinical skills, professional attitudes, and reflective practice in their provision of safe, patient-centered care, in collaboration with patients, families, colleagues, and communities.

## B. Policy Statement on Interprofessional Health Education

Students in the Faculties of Dentistry, Health Professions and Medicine are required to participate in interprofessional health education activities. These activities, together with specific program requirements, are currently evolving and in transition and are integrated into the curricula of individual programs. Participation is mandatory. The objective of interprofessional education include developing:

- knowledge and understanding of, and respect for, the expertise, roles and values of other health and human service professionals
- understanding the concept and practice of patient/client/family-centred care.
- effective communication, teamwork and leadership skills applied in interprofessional contexts.
- positive attitudes related to the value of collaboration and teamwork in health and human service contexts.
- an understanding, from a multi-disciplinary perspective, of the Canadian health and social systems, the legal and regulatory foundation of professional practice, how health and human service institutions are organized and operate, and how different health and human service professions contribute to the systems and institutions.

## C. The Four Year Program

### 1. Pre-clerkship Years (Years 1 and 2)

Beginning in late August/early September with duration of 34 weeks, the pre-clerkship program is designed around patient-centered clinical cases. Students work in groups of 7-8 with a faculty tutor, meeting for approximately six hours weekly. Laboratory experience and a small number of lectures (3-5 weekly) are included. An important component of learning is participation in the small group tutorials. Students are expected to participate, and evaluation will reflect this expectation. Self-directed study is an integral part of the curriculum. Introduction to patients and clinical medicine occurs early in Year 1 with volunteer patients and in Year 2 includes more advanced clinical findings with 'real' or simulated patients. There is also opportunity for students to work clinically during electives.

#### Year 1

Unit 1: Foundations I (6-weeks)  
Unit 2: Host Defense (9-weeks)  
Unit 3: Metabolism & Homeostasis (10-weeks)  
Unit 4: Human Development (8-weeks)  
Unit 5: Rural Week (1-week)  
Unit 6: Clinical Skills I (29-weeks)  
Unit 7: Professional Competencies I (33-weeks)  
Unit 8: Electives (25-weeks)  
Unit 9: Health Mentors (29-weeks)

The units run consecutively as follows:

Units 1-5 run consecutively throughout the year

Units 6-9 run longitudinally

#### Year 2

Unit 1: Foundations II (3-weeks)  
Unit 2: Neuroscience (10-weeks)  
Unit 3: Metabolism II (13-weeks)  
Unit 4: Musculoskeletal and Dermatology (5-weeks)  
Unit 5: Integration (4-weeks)  
Unit 6: Clinical Skills II (37-weeks) \*Clinical Skills II begins at the end of Year 1 (4-weeks)  
Unit 7: Professional Competencies II (33-weeks)  
Unit 8: Electives (25-weeks)

The units run consecutively as follows:

Units 1-5 run consecutively throughout the year

Units 6-8 run longitudinally

### 2. Clinical Years (Years 3 and 4)

The clinical years are a continuum of 76 weeks' clinical experience. Year 3 begins in September and runs for 52 weeks. Core rotations in the clerkship years are completed throughout the Maritime Provinces. Med 4 is 24 weeks long and will complete the clerkship experience. Med 4 Electives are approved for placements locally, nationally and internationally.

Clerkship includes the following units:

#### Year 3

- Introduction to the Clerkship (2-weeks)
- Emergency Medicine (3-weeks)
- Family Medicine (6-weeks)
- Internal Medicine (12-weeks)
- Obstetrics and Gynecology (6-weeks)
- Pediatrics (6-weeks)
- Psychiatry (6-weeks)
- Surgical (9-weeks)

#### Year 4

- Electives (12-weeks)
- Non-Tertiary/Community Based (3-weeks)
- Interdisciplinary (3-weeks)
- Critical Review and Mastery with ACLS (3-weeks)
- Care of the Elderly (3-weeks)

## D. Classes Offered

The units in the 2011-2012 curricula are listed alphabetically. Each unit is described briefly. Unit Heads and Clerkship Directors are subject to change.

### Care of the Elderly

**Clerkship Director: Dr. J. Gordon**

Each student will complete 3 weeks in the Care of the Elderly unit.

Although some rotations are located in the Capital Health region in Nova Scotia, the majority of students will be assigned to other sites in Nova Scotia, New Brunswick and Prince Edward Island.

### Clinical Skills (Years 1 and 2)

**Unit Head: Dr. C. Dipchand**

The Clinical Skills Unit gives students the tools they will require in clinical electives and, later, in Clinical Clerkship. In this Unit, students will learn Communication skills to take a thorough history and perform a physical examination of a patient. One of the major goals is to ensure that the material being taught in the Clinical Skills Unit is closely linked to what the students are learning in their other blocks at the time. This integration may facilitate not only skills training, but also a greater understanding of the didactic content which students are being taught.

### Critical Review and Mastery (CRAM) with ACLS

**Clerkship Director: Dr. R. Langley**

This unit is scheduled as the last 3 weeks in fourth year. It is intended to help students prepare for their Medical Council of Canada Part 1 exams and their first year in residency. A focus will be on the basic science and clinical correlations of common clinical presentations. An Advanced Cardiac Life Support (ACLS) course is required for all PGY1 programs and will be offered to all 4th year students.

### Electives (Years 1 and 2)

**Unit Head: Dr. M. Rashid**

The Elective, which comprises 10% of the year's curriculum, provides an opportunity for students to pursue topics related to medicine which are of specific interest to them, and which are not considered part of the core curriculum. It is designed to complement the program, and allows the student to plan, develop, and execute a personal project. This is expected to involve the cultivation of a Socratic type of relationship between the student and a member of the faculty (the individual acting as preceptor) over a longer time period than other contacts during the year, and may extend over several years. Such projects may take many different forms, though in first year the emphasis will be laying a firm foundation for later work by acquiring fundamental skills in concisely defining a problem, searching the literature effectively to assess current knowledge, collecting reliable data where applicable, and reporting the whole process, with an analysis of results, and presentation of conclusions and speculations where appropriate, in a clear and lucid paper. At the end of the Elective, students will submit a written report for evaluation. Unique and out-of-the-ordinary projects are encouraged! While the Elective may turn out to be a demanding task, it is often an enjoyable and gratifying experience.

### Electives (Clerkship)

**Clerkship Director: Dr. W. Watson**

The objective of the program is to provide flexibility and opportunities in order to: gain experience in aspects of medicine not offered in the regular curriculum; study particular areas of the curriculum in greater depth; and explore career opportunities. The clinical elective period consists of two weeks in Phase 1 of Clerkship (Med 3) and 18 weeks in Phase 2 (Med 4). Students will be expected to identify objectives centered on the CanMeds competencies.

Students will complete two three-week rotations with a focus on non-tertiary/community based, and interdisciplinary rotations. The goal of the non-tertiary/community based rotation is for students to learn about the differences in healthcare delivery in a smaller community versus tertiary care setting. Additionally, students are expected to broaden their clinical skills through their application in non-acute care settings, and community settings. The goal of the interdisciplinary rotation is to learn about the interdisciplinary management of patient care. Students must work with an interdisciplinary team and participate in decision-making and medical

education of patients and their families. The rotation should have a focus on outpatient ambulatory care and further their knowledge, skills and attitudes related to interdisciplinary teamwork.

## **Emergency Medicine**

**Clerkship Director - Dr. S. Field**

All clerks are required to complete a 3-week core rotation in Emergency Medicine. Clerks can choose to complete a rotation in Halifax, Dartmouth, Saint John, Kentville and Sydney. All students will be required to attend weekly mandatory teaching seminars and departmental grand rounds.

## **Family Medicine**

**Clerkship Director: Dr. K. Horrey**

During this unit clerks will complete six weeks in Family Medicine. Of the 6-weeks in Family Medicine clerks have the choice to complete either two, 3-week rotations or one, 6-week rotation. Family Medicine rotations are completed throughout the Maritimes, with a limited number of rotations within the Halifax Metro area.

## **Foundations of Medicine I**

**Unit Heads: Dr. D. Byers and Dr. K. MacPherson**

The principal goal of the Foundations unit is to prepare students for successful completion of the systems based units of the curriculum, including foundations in biomedical, epidemiological, social and human sciences. The two major components consist of a review of cell and molecular biology (weeks 1-3) and an introduction to evidence based practice (weeks 4-6). The cell and molecular biology component will highlight medically-important concepts in genomes and gene expression, proteins and enzymes, cell structure and dynamics, and concepts in signal transduction. Cancer will be introduced in this context as a longitudinal disease theme.

The evidence based practice component will focus on finding, appraising and using evidence from the medical literature. The unit will also include an introduction to the basic biomedical science disciplines (e.g. anatomy, histology, pathology and pharmacology), a full day experience of shadowing a physician in his/her practice, and presentations by clinical and biomedical researchers.

## **Foundations of Medicine II**

**Unit Head: Dr. A. Abbass**

At the completion of this unit the student will be able to describe the anatomy of the head and neck as a bridge to neuroanatomy; will know the pathophysiology of atherosclerosis as well as the clinical manifestations of atherosclerosis throughout the body and understand the burden, manifestations, physical effects, detection methods and ways to address emotional dysregulation. This unit will also explore the causes, effects and approaches to bias in the physician.

## **Host Defense (Hematology, Infection, Immunity & Inflammation)**

**Unit Head: Dr. T. Lee**

The Hematology, Immunology, Infection and Inflammation Unit is designed to engender an appreciation in the minds of medical students of the components of blood that are involved in fighting pathogens, the types of pathogens that affect the population locally and globally, the basics of infection and infectious disease, the structure function and development of the immune system, immune deviation and immunopathology, development and function of blood cells, normal hemostasis, and diseases of the blood systems including anemias and haemoglobinopathies, bleeding and clotting disorders and hematological neoplasms.

## **Human Development (Genetics, Embryology, Genitourinary, Human Sexuality)**

**Unit Head: Dr. D. Skidmore**

The Human Development Block will be an integrated review of all aspects of human reproduction, encompassing sexuality, the genitourinary system, embryology, genetics, labor and birth. Clinical cases will be used to illuminate and reinforce the acquisition of basic concepts of anatomy, physiology and pathology and demonstrate their linkage to high level themes of professionalism, patient centeredness and community

responsibility. The course will aim to provide a solid foundation for further development of these content areas in Med II,

## **Integration**

**Unit Head: Dr. J. Gordon**

By the end of the Integration Unit, the student will be able to use a patient-centered approach to take into account the whole person (culture and context, illness experience, feelings and expectations) with respect to diagnosis and management while synthesizing relevant information from history, physical examination and investigations to develop an appropriate care plan. This includes incorporating evidence-based practice and clinical practice guidelines into the assessment, education and care of patients using a patient centered approach, and recognizing the limitations of clinical evidence.

## **Internal Medicine**

**Clerkship Director: Dr. N. Finkle**

This 12 week unit will incorporate objectives of internal medicine and the medical sub-specialties. Clerks will complete a 4 week rotation on a medical teaching unit (MTU), and 8 weeks on selective medical rotations. Of these 8 weeks, students will be given choice from a selected menu for one month and can choose to complete one 4 week rotation at an out of town location provided that the pre-set criteria have been met.

## **Introduction to the Clerkship**

**Clerkship Director: Dr. J. McIntyre**

This unit is designed to: refresh basic clinical and procedural skills learned in Med 1 and Med 2, introduce clerks to the hospital based clinical clerkship behaviours, procedures and processes, and provide opportunities to learn and practice clinical problem solving in various settings. Students must successfully complete this unit to enter the clerkship rotations.

## **Metabolism & Homeostasis (Gastroenterology, Endocrinology, Nutrition & Oral Medicine)**

**Unit Head: Dr. G. Williams**

The Metabolism & Homeostasis unit will introduce two new modules to the undergraduate curriculum - oral medicine (approximately 1 week) and nutrition (which will run longitudinally through the 10 weeks). There is a close integration of basic and clinical science built around cases, with supporting labs and lectures. There will also be lots of clinical backup so basic scientists, and clinicians who may not be expert in these areas, should be able to function very comfortably in tutorials.

## **Metabolism II**

**Unit Heads: Dr. D. Morrison**

This unit will present the major diseases of the cardiovascular, renal and respiratory systems. All three components of the unit will include pediatric and adult conditions. Cases will deal with the pathophysiology and clinical presentation of the major types of cardiovascular, renal and respiratory disease with appropriate coverage of physiology. Lectures and laboratory sessions will cover normal human physiology, anatomy and histology as well as the pathophysiology and principles of management of diseases affecting these three systems.

## **Musculoskeletal & Dermatology**

**Unit Head: To Be Confirmed**

This block addresses patient mobility and function in the performance of work, recreation and activities of daily living. It will focus on the unique elements of the clinical assessment required by the skilled-clinician for effective diagnosis and management of musculoskeletal and dermatologic conditions. S/he will learn the collaborative competencies of an effective team based professional while working with, from and about other health care providers in assessing the patient's environment for most effective management. Through application of skills of life-long learning concerning the impact of musculoskeletal and dermatologic conditions on the health care system and knowledge of effective preventive measures, the student will learn how they can positively affect patient outcomes for significant benefit to the community.

## Neurosciences

**Unit Head: Dr. I. Grant**

The Neurosciences Unit focuses on the structure and function of the nervous system. In addition to basic anatomical and physiological content, this unit includes material relevant to the Clinical Neurosciences, focusing on the nervous system as it relates to neurological disorders and psychiatric conditions. This course will also include the special senses of vision and cochlear/ vestibular dysfunction as they relate to clinical neurosciences.

## Obstetrics and Gynecology

**Clerkship Director - Dr. L. McLeod**

The Obstetrics and Gynecology rotation will have 6 - 8 clerks located at the IWK Health Center and 5-6 clerks will be at other sites. These include Kentville, Saint John and Charlottetown. All locations will be structured to provide a broad view of reproductive health as it pertains to women, covering the full spectrum from birth to climacteric. The aim of the rotation is to provide opportunity for good clinical exposure.

## Pediatrics

**Clerkship Director - Dr. S. Shea**

The 6-week rotation in Pediatrics will have students located at the IWK Health Center, Saint John, Charlottetown, and Summerside. Regular tutorials are held at noon and all are conducted from the IWK and connected to Charlottetown and Summerside by audio-conferencing. Selected tutorials also include the students in Saint John by videoconference. A community project or clinical case and an adolescent interview are included in this rotation. Students will be expected to present their projects and submit a write-up of the adolescent interview. All students will have in-patient experience and follow their own patients from admission to discharge. The ambulatory portion of the rotation includes the Emergency Room, General Pediatrics and, where applicable, subspecialty clinics.

## Psychiatry

**Clerkship Director - Dr. C. Murphy**

During the Psychiatry Unit, clerks will be exposed to a variety of psychiatric disorders. Clerks will complete a 6-week rotation, which may include inpatient, outpatient, community, short stay, and consultation liaison psychiatry. Rotations will be completed in the Halifax Metro Area as well as other sites throughout the Maritimes, including Saint John, Fredericton and Sydney.

## Professional Competencies

**Units Heads: Dr. L. Reid and Dr. G. Kephart**

The Professional Competencies Unit is a new two-year longitudinal Unit with a weekly two-hour tutorial followed by a one-hour large group session. This unit gives students the opportunity to integrate their biomedical and clinical learning with the context of patient care from professional, community, and life-long learner perspectives. Content includes public health and infectious disease management in the community, end of life decision-making and other ethical challenges, patient safety and other system and quality improvement approaches, social accountability and global health, physician wellness and career paths, and the Health Mentors program. Key concepts come from population health, epidemiology, ethics, law, informatics, health policy and the humanities. The Unit will be highly applied and case-based and closely integrated with the block unit through shared cases and topics.

## Rural Week

**Unit Head: Dr. P. Smith**

The last week of Med 1 will have students spending one week observing a rural physician in practice. During this week, the students will reflect on the unique characteristics of a rural lifestyle and clinical practice. The purpose of this unit is to identify characteristics of clinical practice in a rural setting as well as health care delivery and resource access/utilization in a rural setting and determinants of health unique to the community in which the student is located and reflect how health care delivery addresses or does not address these needs. Students will also focus on physician wellness and lifestyle in a rural setting and identify the physicians' role in a rural setting including leadership responsibilities.

## Surgical

**Clerkship Director: Dr. C. Coles**

The 9 weeks of the Surgical Unit are intended to provide the clerk with the broad principles of surgery and the basics in the individual surgical specialties as a foundation for postgraduate training. The clinical rotations are organized into 3 segments of 3-weeks each. All rotations are in Halifax, primarily at the QEII, but with some experiences at the IWK Health Centre.

All clerks will complete a mandatory 3-week General Surgery rotation. There are two 3-week selective rotations that can be chosen from the following nine specialties: Cardiac, Neurosurgery, Otolaryngology, Pediatric General Surgery, Plastic Surgery, Orthopedics, Thoracic Surgery, Vascular Surgery and Urology. Clerks will be scheduled for call duty, as these are important surgical experiences.

## E. The Flexible Scheduling Option

Normally a flexible schedule implies a student may take 3 years to complete Years 1/2 or Years 3/4. This means that the workload of students in this program may vary depending on the year. Evaluations are held in concert with students in the regular program. Students must understand that the sequence of the curriculum might not be ideal. Students must apply to the Associate Dean of Undergraduate Medical Education (UGME).

## IV. Undergraduate Medical Education (UGME)

The purpose of the UGME Office is to assist students and faculty functioning in the Faculty of Medicine by:

1. Coordinating all undergraduate medical classes and educational experiences;
2. Assisting students who require information regarding curriculum, evaluation, elective experiences, or other matters which arise; and
3. Organizing and administering all external and internal examinations and evaluations of undergraduate medical students.

## A. Unit and Year Outlines

Students will be provided with an overall outline of the academic year at the beginning of the year. Class outlines will be placed on file in the Undergraduate Medical Education (UGME) Office.

## B. Evaluation

Evaluation is conducted in the Faculty of Medicine for two purposes:

1. To enable both student and Faculty to evaluate progress, which determines where satisfactory progress has been achieved, and also to discover where difficulties lie so that remedial action can be taken;
2. To certify to the public and its licensing authorities that a graduate of this Faculty of Medicine is a dependable and competent physician.

To meet the above objectives, several types of evaluations are held throughout the four undergraduate years. Learning examinations are held occasionally throughout the year to enable each student to evaluate areas already learned in order to use time more efficiently in preparation for final exams. Grading examinations ordinarily take place at regular intervals, usually at the end of a unit. Evaluation of clinical skills is also conducted at regular intervals.

At the beginning of each year, Promotion and Evaluation Regulations are distributed to all medical students. These regulations are approved by Faculty Council on an annual basis. The regulations address all aspects of professional education and deal with fitness to study medicine.

## Academic Accommodation for Students with Learning Disabilities

Please refer to the section on Procedures Regarding Students with Learning Disabilities under University Regulations.

## C. Grading

All student performance will be recorded as "Pass" or "Fail" on the official transcript. Numerical or letter grades do not appear on the transcript.

## D. Ongoing Evaluation

In addition to knowledge and clinical skills, students will be evaluated on both attitudinal attributes and skills. This evaluation is ongoing, and contributes to performance assessment in all classes.

## E. Graduation

A student must have completed and passed all components of the curriculum and must be considered fit for the study and practice of medicine before convocation. For students in their final year who have been unable to do so due to outstanding remedial work or the need to complete work missed due to illness, graduation at the Fall convocation may be possible.

## F. Application Procedure for the Qualifying Examination

Apply directly to the Medical Council of Canada (MCC). The Registrar's Office of MCC will process the applicant's credentials and issue an admission letter and an ID card. Application kits will be available through the Medical Council of Canada.

## G. Licensing

Students are reminded that they must conform to the regulations prescribed by the Medical Board or College of Physicians and Surgeons of the province in which they wish to practice. Contact the licensing authority in each Province for specific regulations. The names and addresses of the Registrars of the Medical Licensing Authorities of the Atlantic provinces and the Medical Council of Canada are as follows:

Nova Scotia: Dr. C.D. Little, Registrar, College of Physicians and Surgeons of Nova Scotia, Suite 300, 1559 Brunswick St., Halifax, NS B3J 2G1

New Brunswick: Dr. E. Schollenberg, Registrar, College of Physicians and Surgeons of New Brunswick, 1 Hampton Road, Suite 300, Rothesay, N.B. E2E 5K8

Prince Edward Island: Dr. C. Moyse, Registrar, College of Physicians and Surgeons of Prince Edward Island, Polyclinic Professional Centre, 199 Grafton Street, Charlottetown, P.E.I. C1A 1L2

Newfoundland and Labrador: Dr. R.W. Young, Registrar, Suite 603, 139 Water St., St. John's, NL A1C 1B2

Medical Council of Canada: The Registrar, 100-2283 St. Laurent Blvd., P.O. Box 8234, Ottawa, ON K1G 3H7

## V. Postgraduate Medical Education

A separate calendar is produced for Postgraduate Medical Education. It is available online at: <http://postgraduate.medicine.dal.ca>

## VI. Division of Medical Education

### Acting Head

Sargeant, J.

### Professors

Croskerry, P.  
Delva, D.  
Frager, G.  
Frank, B.W.  
Gardner, M.  
Hayes, V.  
Maudsley, R.  
Muir, J.  
Sarquent, J.  
Sutton, E.  
Zitner, D.

### Professors Emeriti

Gray, J.  
Mann, K.  
Murray, T.J.  
Stewart, R.

## Associate Professors

Allen, M.  
Blake, K.  
Cameron, S.  
Crooks, B.  
Evans, J.  
Geldenhuys, L.  
Gordon, J.  
LeBlanc, C.  
Mobbs, I.  
Morgunov, N.  
Rashid, M.  
Smith, P.  
Taylor, B.  
Taylor, L.  
Watson, M.L.

## Assistant Professors

Abdolell, M.  
Andrews, C.  
Bergin, F.  
Fedak, T.  
Fleming, M.  
Gold, E.  
Harrop, V.  
Hazelton, L.  
Hurley, K.  
Kiceniuk, D.  
Matte, M.  
Morris, D.  
Murphy, C.  
Murphy-Kaulbeck, L.  
Paterson, G.  
Reid, L.  
Steeves, J.  
Stewart, W.  
Versnel, J.  
Walsh, S.

## Lecturers

Ferguson-Losier, N.  
Ginn, J.  
Holmes, D.B.  
Mensink, N.  
Spence Wach, S.  
Taylor, T.  
Watson, A.

The Division of Medical Education was established in 1994 and offers innovative medical education programs and fosters educational scholarship. It serves the continuum of undergraduate, postgraduate and continuing medical education.

Services offered locally, nationally and internationally include:

- Case Development for Problem/Case Based Learning
- Communication Skills
- Cultural Competence
- Curriculum Development and Evaluation
- Distributed Learning
- Educational/Instructional Methodology
- Faculty Development
- Health and Medical Education Research
- Humanities in Medical Education
- Informatics
- Inter-Professional Teaching, Learning and Assessment
- Mentoring Programs
- Needs Assessment
- Research Capacity Building
- Tutor Preparation and Training for Problem/Case Based Learning

For further information on the Division of Medical Education and its programs, please visit the Division's website:  
<http://www.medicine.dal.ca/DME>

## VII. Continuing Medical Education

### Associate Dean

LeBlanc, C.

Location: Clinical Research Centre, C-106  
5849 University Avenue  
Halifax, NS B3H 4H7

Telephone: (902) 494-2061

Fax: (902) 494-1479

Web Page: <http://www.medicine.dal.ca>

Continuing Medical Education programs have been presented by the Faculty since 1922 with the introduction of the annual Dalhousie Refresher Course. This Refresher is still offered, along with another annual three-day Refresher, held in February since 1974. A variety of other types of programs are now offered by the Office of Continuing Medical Education, with contributions from many Faculty members. Subject matter is predominantly clinically oriented, and ranges from research to applied therapeutics. In addition to the Refreshers and other Halifax-based short courses, a regular series of visiting teacher programs is offered in community hospitals throughout Nova Scotia. Community physicians are also served by two distance education initiatives: the provision of programs via interactive videoconference and the development of online interactive learning modules. An academic detailing program provides one-on-one educational sessions in physicians' offices. The Management Program for Clinical Leaders is designed for physician managers in health care organizations who wish to increase their effectiveness as partners in the management of health care resources. A variety of other programs are provided, with an increasing emphasis on small-group, problem-based learning activities. A quarterly lecture series, "Distinguished Leaders in Medicine" is organized by Continuing Medical Education on behalf of the Faculty of Medicine to provide joint faculty and student learning opportunities.

Consultative services in Continuing Medical Education are available to medical organizations. Research on effective teaching and learning methods, program planning and evaluation is actively pursued. Particular emphasis is placed on developing methods that encourage physicians to take an active part in designing, conducting and evaluating their own continuing education.

## Anesthesiology

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Location: QEII - Health Sciences Centre  
Victoria General Site, Tenth Floor  
Halifax, Nova Scotia  
Telephone: (902) 473-2331

### Professor Emeritus

Moffitt, E.A.

### Professor and Chair of Department

Interim Chair: Shukla, R.C.

### Professors

Cerny, V.  
Clark, A.J.  
Coonan, T.J.  
Devitt, H.  
Finley, G.A.  
Hall, R.I.  
Henzler, D.  
Hung, O.R.  
Law, J.A.  
Lehmann, C.  
Lynch, M.  
Morris, I.R.  
Muir, J.  
Ross, J.  
Schmidt, M.  
Shukla, R.C.  
Stewart, R.D.

### Associate Professors

Beauprie, I.  
Beed, S.D.  
Bergstrom, D.  
Bolledula, K.P.  
Chambers, C.  
Chisholm, K.C.  
Clark, A.  
Covert, R.  
Davies, C.  
Gallacher, W.  
Hackman, T.  
Henderson, J.  
Johnson, L. (Cross-Appts)  
Kent, B.  
Khorovets, A.  
Launcelott, G.O.  
MacQuarrie, K.  
McKeen, D.  
Ngan, J.E.S.  
Soder, C.M.  
Szerb, J.  
Vakharia, N.  
Whatley, G.

### Assistant Professors

Allen, C.T.B.  
Bird, S.  
Cheng, R.  
Chisholm, J.  
Chorney, J.  
Cloutier, J.  
Davies, E.

Dickieson, A.  
 DiQuinzio, C.  
 Dobson, G.  
 Drapeau, D.  
 Drysdale, S.  
 Eichhorn, V.  
 George, R.  
 Girouard, M.  
 Glenn, J.J.  
 Godkin, T.A.  
 Gray, A.  
 Greshner, M.  
 Hughes, D.R.  
 Jarvie, A.  
 Johnson, K.  
 Kanellakos, G.  
 Keith, I.C.  
 Kolysheer, P.  
 Kwapisz, M.  
 Litz, S.  
 Livingston, P.  
 Lorenz, K.  
 Macaulay, B.  
 MacDougall, P.  
 MacManus, B.J.  
 Mariotti, C.  
 McMullen, S.  
 Milne, A.  
 Milne, D.  
 Morrison, D.L.  
 Nunn, R.  
 Price, B.  
 Prychitko, J.  
 Rapchuk, I.  
 Roper, F.  
 Sadowski, Z.  
 Scheffler, M.  
 Schelew, B.L.  
 Scovil, J.E.  
 Shields, C.  
 Stevens, S.  
 Stone, C.  
 Vlaten, A.  
 Wawrzyszyn, B.  
 Williams, J.  
 Witter, T.  
 Yazer, H.  
 Zhou, J.

## Lecturers

Al-Howary, A.  
 Aucoin, S.  
 Audain, C.  
 Berger, C.  
 Buckenham, S.  
 Chedore, T.  
 Chisholm, J.  
 Chisholm, R.  
 Cohen, D.  
 Crompton, J.  
 Degrace, R.  
 Duguay, K.  
 Hamilton, B.  
 Hans, J.  
 Hansen, L.  
 Hawkes, C.  
 Kelland, A.  
 Lee, S.  
 Lloyd, G.  
 Mallais, R.  
 MacNeil, R.  
 McLean, R.

Murdoch, J.  
 Ng, A.  
 Nice, A.  
 Nickolet, S.  
 Noel, V.  
 Norman, B.  
 Norris, J.  
 Opitz, S..  
 Orrell, S.  
 Rafiq, A.  
 Redmond, M.  
 Retallick, R.  
 Seidmann, T.  
 Simms, M.  
 Sjaus, A.  
 Sommer, M.  
 Thompson, G.  
 Wilson, S.

The Department of Anesthesia provides general, regional and local anesthesia for all types of general surgery, neurosurgery, cardiovascular surgery, urology, gynecology, plastic and orthopedic surgery, and obstetric and pediatric anesthesia in the operating and case rooms of the hospitals affiliated with Dalhousie University. It has intensive care responsibilities and consultative services in most hospitals. The department at the Queen Elizabeth II Health Sciences Centre is jointly responsible with the Departments of Surgery and Medicine for intensive care activities. The Department at the IWK Health Centre is responsible for ICU activities at the Children's site. Additionally, the department operates pain clinics at the QEII Health Sciences Centre, IWK Health Centre, Hants Community Hospital and the Saint John Regional Hospital.

Its faculty is well equipped to teach all aspects of medicine related to anesthesia and acute care medicine and illustrate the application of the basic sciences of physiology, pharmacology and anatomy to anesthesia. The department is actively involved in the undergraduate medical education program through the Case Based Learning (CBL) tutorials, communication skills, airway management, electives, and lectures.

## Electives

### First and second year

One half day per week may be taken as an elective in anesthesia acquiring specific skills or investigating a particular topic, furthering their knowledge of perioperative medicine and gaining skills in airway management, ventilation and I.V. access.

### Third year

Students may choose to complete a two-week elective experience to further their knowledge in anesthesia techniques. These rotations may be completed at any of our teaching sites within the Maritimes.

### Fourth year

Students may chose 2-3 weeks anesthesia as an elective to further practice the basic skills associated with airway control and ventilation. These rotations can be completed in various areas of anesthesia, including Pediatric Anesthesia, Pain Management, and Obstetrical Anesthesia. Various elective options are available at our teaching sites throughout the Maritimes.

## Residency Training

An integrated university residency training program is available in the department. This consists of a five-year program meeting requirements of the Royal College of Physicians and Surgeons of Canada. Participating hospitals are QEII HSC, IWK Health Centre, The Moncton Hospital and the Saint John Regional Hospital. The program in anesthesia is designed to provide a well-rounded experience covering all core areas but also providing time for specialization in areas of individual interest. The first year is a general medical activity including rotations in anesthesia, general medicine, general surgery, obstetrics, pediatrics, and emergency. Two electives of one month each are included.

The second year of training is a year of introduction to general anesthesia including rotations in anesthesia for General Surgery and Urology, Orthopedic and Plastic Surgery, Otolaryngology and Airway Management, Oromaxillofacial Surgery and Gynecology. Introductory rotations in ICU, Cardiothoracic Anesthesia, Pediatric Anesthesia and Obstetric Anesthesia complete the year.

Years three to five are a continuum including the Royal College's requirements of six months internal medicine, six months ICU and the required rotations in Pediatric Anesthesia, Obstetric Anesthesia, and Chronic Pain. Three months are undertaken in community based anesthesia in Saint John Regional Hospital. In addition, subspecialty rotations are provided in Thoracic Anesthesia, Neuro Anesthesia, Cardiac and Vascular Anesthesia, and Acute Pain. There is a six-month period of elective time which may be spent pursuing clinical specialties or engaged in a research project. Many of the faculty members are actively involved in research and resident participation is mandatory.

A formal academic program of Grand Rounds, Journal Club, Research Club, Problem Rounds, and resident educational seminars function throughout the academic year.

All anesthesia residents must take during their second year the AKT (Anesthesia Knowledge Test). This examination, the cost of which is met by the department, provides valuable feedback concerning strength or weakness in clinical knowledge.

ATLS is provided to all residents by the Department.

### Continuing Professional Development

The Department of Anesthesia's Continuing Professional Development program is designed to provide education opportunities for members of the department, our community partners and the broader anesthesia community. Opportunities provided through the Office of Education are of the highest quality, are timely in their development and are available to all members of the department and its community at large. Regular activities within the department include grand rounds, subspecialty and critical appraisal journal clubs, workshops and seminars. As well, physicians and allied health professionals from other departments partake in many of our continuing professional development activities.

### Fellowships

These are offered in specialized anesthesia areas including women's and obstetrics, airway, cardiac anesthesia, regional anesthesia and acute pain, chronic pain and global health.

## Anatomy and Neurobiology

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Location: 13th Floor, Tupper Building  
Telephone: (902) 494-6850  
Fax: (902) 494-1212

### Dr. D.G.J. Campbell Professor and Head of Department

Leslie, R.A.

### Professors

Baldrige, W.H.  
Bance, M. (major appointment, Division of Otolaryngology)  
Brownstone, R.M. (major appointment, Division of Neurosurgery)  
Clarke, D. (major appointment, Division of Neurosurgery)  
Currie, R.W.  
Darvesh, S. (major appointment, Medicine)  
Mendez, I. (major appointment, Division of Neurosurgery)  
Morris, S. (major appointment, Division of Neurosurgery)  
Neumann, P.E.  
Rafuse, V.  
Rutherford, J.G. (post-retirement appointment)  
Semba, K.  
Wassersug, R.J.

### Adjunct Professors

Franz-Odendaal, T. (adjunct appointment, Department of Biology, MSVU)  
Tasker, R.A.R. (adjunct appointment, Department of Biomedical Sciences, UPEI)

### Associate Professors

Allen, G.V.  
Kablar, B.  
Perrot, T.S. (major appointment, Psychology)  
Schmidt, M. (major appointment, Department of Radiology)  
Sinha, G.  
Smith, F.

### Assistant Professors

Awatramani, G.  
Hajek, T. (major appointment, Psychiatry)  
Iulianella, A.  
Marsh, D.R.  
Zhang, Y.

## A. Course of Study

### First Year Medicine

The Department of Anatomy & Neurobiology is involved in 3 units in the first year of Medicine. Students are introduced to human gross anatomy and histology during Foundations I and study the anatomy of the abdomen and pelvis during the Metabolism I (GONE) and Human Development Units, respectively. Students learn basic concepts through case-based tutorials with additional content provided during laboratory sessions, self-directed learning activities and a limited number of lectures.

### Second-Year Medicine

The study of anatomy continues in the second year of medicine, beginning with head & neck gross anatomy as a prelude to the subsequent study of neuroanatomy.

Neuroanatomy is taught as an integral part of the Neuroscience: Central Nervous System and Special Senses Block, which is scheduled during the fall term of the second year. Neuroanatomical principles of organization and integration in the central nervous system are employed to analyze and

explain the pathological processes described in the cases around which the block is built. The basic neuroanatomy from which these principles are derived is presented in a series of lectures and laboratory sessions that are arranged to complement the cases. Neuroanatomical topics are included in the written examination at the end of the block; as well, there is a practical examination of the material taught in the laboratory. In order to obtain an integrated understanding of the operation of the central nervous system in health and disease, neurophysiological, neuropharmacological, neurological, and psychiatric topics are also presented in conjunction with the neuroanatomy considered in this block.

Later in year 2, the anatomy of the thorax and musculoskeletal system is taught as part of the Metabolism II and Msk/Derm Units, respectively.

## **B. Electives for Medical Students**

The department participates in the elective program.

**First Year Students:** The Department offers a variety of essay topics covering areas of recent research interest, which enable students to become familiar with topical research in medicine. The facilities of the Kellogg Health Sciences Library are available to students for this purpose.

The Department also offers opportunity for short research projects under the direction of faculty members for medical students wishing to undertake basic or pre-clinical research or integrate basic anatomy with clinical projects.

**Second and Third Year Students:** The Department offers research projects under the direction of faculty members. The Department also offers electives in Head & Neck Anatomy and Neuroanatomy. An elective in Musculoskeletal Anatomy can be offered in conjunction with the faculty of the Division of Orthopedic Surgery.

## **C. Clinical Gross Anatomy Review for Residents**

These anatomy review sessions are designed to re-familiarize the residents with gross anatomy that is relevant to the area they are specializing in and are essential for their residency training.

The sessions have a strong laboratory focus, using prosections, case studies and quizzes. Clinicians and anatomists take turns to demonstrate an area with various highlights of the gross anatomical structures and their relationships during the surgical procedures.

## **D. Graduate Studies**

Students wishing to take classes leading to a MSc or PhD degree in Anatomy & Neurobiology should consult the calendar of the Faculty of Graduate Studies and the departmental website: <http://anatomy.medicine.dal.ca/>. The goals of the graduate program are to provide in-depth research training in a particular aspect of anatomy, neurobiology or a related field, and to introduce the student to methods of teaching anatomy.

## **E. Classes**

### **Dentistry Students**

**Gross Anatomy/Neuroanatomy** - The course is taught by the Department of Anatomy and Neurobiology in the Faculty of Medicine and designed specifically for and restricted to first year dental students.

**Gross Anatomy** - It deals with detailed gross anatomy of the thorax, head and neck with minor emphasis on abdomen and upper limb. Lecture, laboratories with dissection, prosections, x-rays and clinical case presentations are used with special attention given to oral and dental structures.

**Neuroanatomy** - Dental students are provided with a comprehensive overview of the functional morphology of the human nervous system. The gross anatomy of the spinal cord, spinal nerves, brain and cranial nerves are described. This is followed by details of the spinal cord, brainstem, cerebellum, diencephalon and cerebral hemispheres and the systems of which they are comprised. Material is presented in lectures and laboratory sessions.

## **Health Professions Students**

Lecture based instruction in introductory gross anatomy, microanatomy and neuroanatomy offered to meet the needs of students in nursing and special health education (1010.03), and recreation, physical and health education, kinesiology and dental hygiene (1020.03). A problem-based learning class in Human Anatomy is offered to Pharmacy students (1040.03). A lecture and laboratory class in head and neck anatomy (DEHY 2852.03) is also offered to Dental Hygiene students. In addition, more advanced lecture and laboratory classes in Functional Human Anatomy (5217.06), Human Histology (2160.03) and Human Neuroanatomy (5100/NESC 3440) are offered to Physiotherapy and Occupational Therapy students.

The following classes are open with a limited enrolment to Arts and Science students:

- Human Neuroanatomy 5100.03/Biology 3440.03/Neuroscience 3440.03
- Introduction to Human Histology 2160.03/Biology 3430.03
- Comparative Vertebrate Histology/Biology 3421.03
- Basic Human Anatomy 1010.03/1020.03
- Functional Human Anatomy 5217.06

# Biochemistry & Molecular Biology

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Location: 9th Floor, Tupper Building  
Telephone: (902) 494-6436

## The Carnegie and Rockefeller Professor and Head of Department

Byers, D.M.

### Professors Emeriti

Doolittle, W.F., AB (Harv), PhD (Stan)  
Gray, M.W., BSc, PhD (ALTA)  
Helleiner, C.W., BA, PhD (Toronto)

### Professors

Bearne, S. (cross appointment in Chemistry)  
Byers, D.M. (cross appointment in Pediatrics)  
Dobson, M.  
Doolittle, W.F. (post-retirement)  
Duncan, R. (major appointment in Microbiology)  
Gray, M.W. (post-retirement)  
Liu, P.X.-Q.  
McLeod, R.  
McMaster, C. (major appointment in Pediatrics)  
Ridgway, N. (joint appointment with Pediatrics)  
Ro, H.-S.  
Roger, A.  
Singer, R.A.  
Too, C. (cross appointment in Obstetrics & Gynecology)  
Waisman, D. (cross appointment in Pathology)  
Wallace, C.J.A.

### Associate Professors

Archibald, J.M.  
Blouin, C. (joint appointment with Computer Science)  
Marignani, P.  
Rosen, K.V. (joint appointment with Pediatrics)

### Assistant Professors

Dellaire, G. (major appointment in Pathology)  
Karten, B.  
Rainey, J. (cross appointment in Chemistry)  
Riddell, D.C. (major appointment in Pathology)  
Slamovits, C.  
Van der Spoel, A. (major appointment in Pediatrics)

### Adjunct Professors

Ewart, K.V., NRC, Institute for Marine Biosciences  
Karakach, T., BSc (Kenya), MSc, PhD (Dal), Research Officer NRC,  
Institute for Marine Biosciences  
Syvitski, R., BSc, MSc (Thunder Bay), PhD (UBC), Research Officer NRC,  
Institute for Marine Biosciences

### Instructor

Briggs, P.

## A. Course of Study

### First-Year Medicine

Biochemistry and molecular biology provide the foundation on which genetics, physiology, pharmacology and much of pathology rests. Medical practitioners require a firm grasp of basic principles in biochemistry, cell and molecular biology, not only to understand basic

medical science and inform clinical decision making, but also as a knowledge framework for assimilating and communicating new discoveries throughout their careers. Advances in this area are coming at an astounding pace, with an ever-increasing impact on medical practice; examples include decoding the human genome, determining the structure and mechanisms of disease-related proteins and enzymes, elucidating the pathways of cell communication and development, and discovering new technologies for diagnosis and therapy.

An introduction to the principles of cell and molecular biology is a major component of the Foundations Unit at the beginning of first-year undergraduate medicine. Current concepts in genomics, gene expression, protein structure and function, enzyme mechanism and regulation, signal transduction and cell fate are covered through lectures, cases, and resources for self-directed learning. Important concepts and knowledge in metabolic biochemistry are also integrated into later units, such as Metabolism & Homeostasis.

## B. Electives

The Department offers two types of elective programs to limited numbers of medical students: (1) small research projects under the direction of Faculty members and (2) investigations in some depth of student's choice, utilizing the resources of the Kellogg Health Sciences Library. Students wishing to take an elective in Biochemistry and Molecular Biology should consult the Department so that a suitable program may be selected.

## C. Classes

### Classes for Dentistry Students

Biochemistry for first-year Dental students DENT 1112.01.

### Classes for Science Students

Details of the following classes will be found in the Calendar of the College of Arts and Science.

- BIOC 2300.03: Introductory Biochemistry
- BIOC 2610.03: Introductory Biochemistry Lab
- BIOC 3200.03: Biological Chemistry
- BIOC 3300.03: Intermediary Metabolism
- BIOC 3400.03: Nucleic Acid Biochemistry and Molecular Biology
- BIOC 4001.03: Special Topics in Biochemistry
- BIOC 4010.03: Bioinformatics
- BIOC 4027.03: Molecular Mechanisms of Cancer
- BIOC 4302.03: Biochemistry of Lipids
- BIOC 4305.03: Mechanisms of Signal Transduction
- BIOC 4403.03: Genes and Genomes
- BIOC 4404.03: Gene Expression
- BIOC 4501.03: Medical Biotechnology I
- BIOC 4604.03: Research Project I
- BIOC 4605.03: Research Project II
- BIOC 4700.03: Proteins
- BIOC 4701.03: Enzymes
- BIOC 4702.03: Biophysical Characterization of Macromolecules
- BIOC 4804.03: Introduction to Pharmacology I
- BIOC 4805.03: Introduction to Pharmacology II
- BIOC 4811.03: Biochemistry of Clinical Disorders I
- BIOC 4812.03: Biochemistry of Clinical Disorders II
- BIOC 4835.03: Human Genetics

### Classes for Health Professions Students

- BIOC 1040.06: Biological Chemistry and Metabolism for students of Pharmacy.
- BIOC 1420.03: Introduction to Biochemistry for Bachelor of Nursing Students.

## D. Graduate Studies

The Department offers suitably qualified students an opportunity to study for the degree of Master of Science and Doctor of Philosophy. A complete description of these programs, as well as of graduate classes, is in the Graduate Studies Calendar.

# Bioethics

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Location: Dalhousie University  
5849 University Avenue  
Clinical Research Centre, Room C305  
Halifax, NS B3H 4H7  
Telephone: (902) 494-3801

## Acting Department Head

Simpson, C.

## Professors

Baylis, F., BA (McGill), MA, PhD (Western). (Cross appointment with the Department of Philosophy and Obstetrics & Gynaecology) Canada Research Chair in Bioethics and Philosophy. Interests: novel (in genetics and in neuroscience) technologies, research involving humans, women's health and feminist ethics.

Graham, J., MA (University of Waterloo), MA (University of Victoria), PhD (Université de Montréal) (Cross appointed with Sociology & Social Anthropology). Canada Research Chair in Bioethics. Interest: medical anthropology and science studies, regulation of pharmaceuticals, biologics and genetic therapies, integrative approaches to anthropology and Epidemiology, methodologies to assess diagnostic and therapeutics practices, dementia diagnostics and normal aging.

## Professor Emeritus

Kenny, N.P., OC, BA (Mount Saint Vincent University), MD (Dalhousie University), FRCPC, LL.D. (Hon) (Mount Saint Vincent University), LL.Div. (Hon) (Atlantic School of Theology), S.Litt.D. (Hon) (Regis College, Toronto School of Theology), LL.D. (Hon) (Saint Francis Xavier University). Interests: physician ethics, ethics and health policy, and pediatric ethics.

## Associate Professors

Fernandez, C., BSc (University of Western Ontario), MD (McMaster University Medical School). Associate Professor of pediatric hematology/oncology at the IWK Health Centre and Dalhousie University with a cross-appointment in the Department of Bioethics. Interests: Bioethics in pediatric research including return of research results to research participants, complementary and alternative cancer therapies, Wilms tumor.

Kirby, J, M.D. (Dalhousie), M.A. (Dalhousie). Interests: clinical/organizational ethics, meso-level health care policy, mental health ethics and social/disability justice.

Magee, J.F., MHSc (University of British Columbia), FRCPC, MRCP, MD (Trinity College, Dublin, Ireland). Associate Professor of pathology/pediatrics at the IWK Health Centre and Dalhousie University with a cross-appointment in the Department of Bioethics.

Simpson, C., BA, MA (McMaster), PhD (Dalhousie). Interest: The role of hope in health care, ethics education and capacity building, rural bioethics and organizational ethics and mandate.

## Assistant Professors

Herder, M., BSc (Memorial University of Newfoundland), LLB, LL.M. (Dalhousie), JSM (Stanford Law School). Interest: Intellectual property; patent law; science and technology policy; university-industry technology transfer; biotechnology.

Reid, L., BA (Winnipeg), AM and PhD (Illinois). Interests: research ethics, interdisciplinary models of ethics education, medicine and social responsibility, ethics and the neurosciences, history and conceptualization of somatic education, experience, epistemology, and social construction of chronic pain.

Warren, M.D., BA (University of Alberta), PhD (University of Toronto). Interest: social determinants of health, disability rights, organizational

and policy ethics, feminist bioethics, the intersection of clinical and academic bioethics, and genetic and reproductive technology.

## Adjunct Professor

Christie, T., BA, MA (University of New Brunswick), PhD (University of Ottawa), MHSc (University of British Columbia).

## I. Mission

The Department of Bioethics in the Faculty of Medicine at Dalhousie University engages in critical analysis of moral and social issues, and promotes ethical practices and policies in all spheres of health. We pursue this goal through three integrated areas of activity:

- Scholarly work that contributes to, and advances, the interdisciplinary field of bioethics
- Ethics education and capacity building within the Faculty of Medicine, Dalhousie University, healthcare institutions and communities
- Collaborative engagement with healthcare institutions, governments and communities to provide ethics support that is attentive to diversity, inclusiveness and social justice

## A. Med I and II

Initial orientation to the ethics of clinical practice is provided in the Med I orientation. Particular attention to ethical issues encountered as a medical student is the focus of core sessions early in Med I. The identification of ethical issues embedded in the COPs cases is a key goal in Med I and Med II.

## B. Clerkship

Ethics is an integral component of the core Introduction to Clerkship. The focus of these sessions is obligations and duties in the physician-patient relationships.

## C. Postgraduate Education

Regular specialty-specific sessions in ethics are provided in the core lecture series in most specialties. Integration of ethical analysis is facilitated by participation of faculty in formal academic programs such as Grand Rounds, Journal Club and inter-disciplinary seminars.

## D. Electives

A wide range of medical students and resident elective projects are supervised by departmental faculty.

## II. Graduate Courses

### BIOT 5000.03: Advanced Topics in Bioethics.

The seminar involves critical examination of the bioethics literature. The application of various methodologies utilized in contemporary bioethical analysis will be highlighted. It will be of interest to graduate students in medicine, health professions, health law, and philosophy whose thesis topic involves a substantial bioethical component.

INSTRUCTOR(S): Faculty

FORMAT: Seminar, Reading Course

PREREQUISITE: Instructor Permission

### BIOT 5001.03: Research Ethics.

This seminar involves critical examination of the research ethics literature, with particular attention to a range of topics including: informed consent; research involving specific groups/communities; risks/limits to allowable risks; emergency room research; and placebo controls. It will be of interest to graduate students in medicine, health professions, health law, and philosophy.

INSTRUCTOR(S): Faculty

FORMAT: Seminar

PREREQUISITE: Permission of the instructor

### BIOT 5002.03: Health Care Ethics and the Law.

The purpose of this class is to develop an understanding of health law and health care ethics and of the relationship between law and ethics. Topics covered in the past years include: informed choice; death and dying; genetics; reproduction; HIV and AIDS; resource allocation; and health

research. Each issue is examined in an effort to determine what the law is and what the law ought to be.

CROSS-LISTING: LAW 2115.03

### **BIOT 5101.03: Directed Readings in Bioethics I.**

This is an advanced level directed reading course designed for graduate students. Instructors and topics can vary.

PREREQUISITE: Permission of the instructor

### **BIOT 5102.03: Directed Readings in Bioethics II.**

This is an advanced level directed reading course designed for graduate students. Instructors and topics can vary.

INSTRUCTOR(S): Permission of the instructor

### **BIOT 5801.03: Topics in Health Care Ethics.**

In this class, we will explore some of the current debates among different theoretical perspectives about the proper theoretical groundwork for bioethics and the methodologies associated with these diverse theories. We shall pay particular attention to canonical work in the field, such as the

principles approach of Beauchamp and Childress, while examining feminist and other alternatives. We shall consider the ways different theories identify, frame, and reason about ethical questions that arise in the realm of health and health care.

FORMAT: Seminar

CROSS-LISTING: PHIL 5801.03

### **BIOT 6046.3: Qualitative Health Research: Determining Evidence.**

This advanced course in community research introduces students to social theory and qualitative methodologies and techniques. The articulation of appropriate methods to address theoretical, epistemological and practical issues is emphasized. Students will develop a theoretically sound rationale for their proposed research and gain experience in data collection, fieldwork, and analysis.

NOTE: This class will replace CH&E 6045 which is no longer offered.

INSTRUCTOR(S): J. Graham

FORMAT: Seminar

PREREQUISITE: Graduate student status and permission of instructor

## **Biomedical Engineering**

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Location:	Room 5197 Dentistry Building 5981 University Avenue Halifax, NS B3H 1W2
Telephone:	(902) 494-3427
Fax:	(902) 494-6621
Email:	BME@Dal.ca
Website:	<a href="http://bme.medicine.dal.ca/">http://bme.medicine.dal.ca/</a>

### **Director**

Maksym, G.

### **Professors**

Bance, M., MB, ChB (Manchester, England), MSc (Toronto), FRCS (C) (Canada). Middle ear mechanics, measuring minute vibrations of middle ear structures, hearing reconstruction mechanics, design of prosthesis for hearing reconstruction, transfer function of normal and diseased middle ears, finite element modelling of middle ear (in conjunction with Dr. Robert Funnel at McGill University). Primary appointment in Division of Otolaryngology, Faculty of Medicine.

Clements, J.C., PhD (Toronto). Optimal control theory applied to electrocardiography, electrophysiological imaging, reaction-diffusion modeling in synaptic transmission at neuromuscular junctions. Primary appointment in Mathematics & Statistics.

Fine, A., PhD (Univ. of Pennsylvania) VetMD (Univ. of Pennsylvania). Synaptic function and plasticity in the brain. Brain networks underlying sensation and memory. Advanced optical methods for imaging neural structure and function. Primary appointment in Physiology and Biophysics.

French, A., PhD (Essex). Information encoding and processing by sensory neurons, mechanotransduction, nonlinear systems analysis and ion channel biophysics. Primary appointment in Physiology and Biophysics.

Gregson, P., PEng, PhD (TUNS). Image processing; computer vision; computer-assisted pathology detection, localization and quantification in diagnostic imaging. Primary appointment in Electrical and Computer Engineering.

Kirby, L., MD (Dal). The design, safety and performance of assistive technology for people with physical disabilities. In particular, wheelchairs, walking aids and artificial limbs. Primary appointment in Division of Physical Medicine and Rehabilitation, Faculty of Medicine.

Kozey, C., PhD (Dalhousie). Classification of neuromuscular control patterns associated with normal movement and movement in the presence of pathology and/pain. These studies involve the use of electromyography, and other sensors to measure muscle function and motion parameters. Primary appointment in the School of Physiotherapy.

Lee, J. M., PhD (Western). Bioprosthetic heart valves and vascular grafts, intravascular stents, biopolymers, tissue mechanics, developmental changes in cardiovascular system. Primary appointment in Applied Oral Sciences.

Schmidt, M., MD. (Ludwig-Maximilians University, Munich) Postoperative neurocognitive and organ dysfunction in elderly; neuro- and organ protection in the field of anesthesia; device development (prototyping, clinical and animal studies) and commercialization. Primary appointment in Anesthesiology.

Stanish, W.D., M.D. (Dalhousie University), FRCS (Canada). BST-cargel: in situ chondroinduction for cartilage repair. Gait patterns in individuals suffering with moderate osteoarthritis of the knee, but with non-surgical interventions. Psychological predictors of prolonged pain & disability following total knee arthroplasty. Primary appointment in Division of Orthopaedic Surgery, Faculty of Surgery, Dalhousie University.

Weaver, D.F., MD (Queen's), PhD (Queen's). Computer-aided design and development of new chemical entities as potential drugs for people with neurologic diseases. In particular, epilepsy, Alzheimer's and general anaesthesia. Primary appointment as Tier 1 Canada Research Chair in Dept of Medicine (Division of Neurology), cross-appointment to Dept of Chemistry.

## Associate Professors

Dunbar, M., PhD (Lund) MD (Dalhousie). Joint biomechanics and kinematics. Development of Radiostereometric Analysis and Gait Analysis for Prediction of hip and knee arthroplasty failure. Development of Gait Laboratory surrogates for clinical assessment of orthopaedic patients. Primary appointment in Surgery, Division of Orthopaedics.

Filiaggi, M., PhD (Toronto) Biomaterials for orthopaedic and dental applications; synthesis of bioceramic scaffolds and coatings; bone regeneration and replacement. Primary appointment in Applied Oral Sciences.

Ghanem, A., PhD (Cornell). Cell biomaterial interactions, biodegradable biopolymers for tissue engineering and drug delivery, cell culture models for in vitro toxicology. Primary appointment in Chemical Engineering.

Gratzer, P., PhD (Toronto). Tissue engineering. Developing scaffolds for tissue regeneration (e.g. blood vessels, ligaments) using naturally derived materials (collagen and elastin). Primary appointment in School of Biomedical Engineering.

Gu, J., PhD (Alberta). Medical robotic devices and applications; artificial eye implant control; rehabilitation assistive device design and applications; sensor fusion in mobile robot. Primary appointment in Electrical & Computer Engineering.

Horne, G., MD (London), PhD (Calgary). Septal mechanics in heart failure. Non-invasive functional myocardial imaging (echocardiography, MRI, scintigraphy), somatic cell gene therapy for myocardial repair. Primary appointment in Medicine.

Maksym, G., PhD (McGill). Magnetic bead micromanipulation for stimulation and measurement of the cytoskeletal mechanics of the cell; structure-function of airway smooth muscle cells in asthma. Primary appointment in School of Biomedical Engineering.

Price, R.B., PhD (Malmo, Sweden), DDS (Dalhousie). Photopolymerization of dental resins, hardness testing, cytotoxicity of dental resins, light emitting diode (LED) dental curing lights, optical testing of dental curing lights, mechanical testing of dental materials. Primary Appointment in Dentistry.

Russell, K.A., MSc (Toronto), Diploma Orthodontics (Toronto), DDS (Dalhousie). (I) 3-D assessment of cleft lip and palate repair: facial morphometric studies and evaluation of bonegrafting and orthodontic results (II) material properties of orthodontic wire/bracket systems and elatomers. Primary Appointment in Dentistry.

Wells, S.M. PhD (Toronto). Structural-mechanical relations in biopolymers such as elastin and collagen are examined in order to determine the underlying mechanism(s) of elasticity of these materials-and thereby to understand the functioning of the arteries, ligaments, skin etc. which they make up. As well, research examines the structural remodeling of these structures during development and maturation: from fetal to adult life. Primary appointment in Physics and Atmospheric Science, Faculty of Science.

## Assistant Professors

Astephen, J.L., PhD (Dalhousie). Modeling and description of joint dynamics, neuromuscular function and orthopedic biomechanics, with particular application to the study of knee osteoarthritis gait patterns and other musculoskeletal disorders. Pattern recognition and statistical modeling of complex biomechanical data. Three dimensional motion capture analysis, electromyography, Radiostereometric Analysis and finite element methods. Primary appointment in Biomedical Engineering.

Brown, J.A., Ph.D. (Queen's University), High-resolution ultrasound imaging, micro-transducer design and fabrication, miniaturized piezoelectric hearing prosthesis. Primary appointment in Biomedical Engineering.

El-Hawary, R., B.Eng, M.D., M.Sc., F.R.C.S.(C). Pediatric orthopaedic and pediatric spine surgery. Roentgen stereophotogrammetric Analysis (RSA) model of pediatric spine and scoliosis, design of early onset scoliosis implants, gait analysis. Primary appointment in Division of Orthopaedic Surgery, Faculty of Surgery, Dalhousie University.

Ellsmere, J., SM (MIT), MD (Dalhousie). Image guided surgery, surgical navigation systems, medical device development, laparoscopic and endoscopic ultrasonography, gastrointestinal surgery. Therapeutic endoscopy, minimally invasive surgery. Primary appointment in Surgery, Division of General Surgery.

Glazebrook, M., PhD, MD (Dalhousie University). Reconstructive foot and ankle surgery; sports medicine, including tendon mechanics and overuse. Primary appointment in the Department of Surgery, Division of Orthopedics.

Milne, A.D., MD (Dalhousie), MSc (Dalhousie) Research ranges from basic laboratory testing to clinical outcome studies. Specific areas of interest include: Anesthesia Airway Equipment Design, Device Testing and Quality Control, Clinical Anesthesia Database/Outcome Studies, and Drug Stability. In addition to Anesthesia related work I also have interests in Orthopedics/Plastic Surgery; specifically Biomechanics/Biomaterials, 3-D kinematics and surface geometry digitization.

Graduate students are welcome to shadow me in the operating room to get a better understanding of biomedical device implementation and real world usage. Primary appointment in Dept. of Anesthesiology Kozey, J., PhD (TUNS). Occupational biomechanics and workstation design with emphasis on accessibility, reach and anthropometry. The projects require the use of a variety of human motion analysis techniques. Primary appointment in Health and Human Performance.

## Adjunct Professors

The following researchers are also eligible to supervise graduate students in the School of Biomedical Engineering:

Beyea, S.D., PhD (UNB) Nuclear magnetic resonance imaging physics.

Technique development for high field functional neuroimaging. NMR studies of degradable biomaterials and implantable devices. Primary appointment at the Institute for Biodiagnostics (Atlantic) - National Research Council Canada.

Bowen, C.V., Ph.D (Western). Magnetic resonance imaging physics and engineering. Research activities in cellular and molecular imaging with development of methods for mapping cellular migration patterns and molecular processes using iron-oxide contrast agents. Applications in cellular therapy for regenerative medicine and immunology research. Also involved in the development of functional MRI techniques for mapping brain activity. Primary appointment at the Institute for Biodiagnostics (Atlantic) - NRC.

DeMont, E., PhD (UBC). Structure and function of natural biomaterials, muscle function in locomotion. Primary appointment in Biology, St. Francis Xavier University.

Labow, R., PhD (University of Michigan). The main focus of her research is understanding the mechanisms of cell-material interaction. Primary appointment in Department of Surgery, University of Ottawa Heart Institute.

Landry, S.C., PhD (Dalhousie), BEng (Dalhousie), BScH (Acadia). Biomechanics and neuromuscular function of the lower limb:

Investigations into understanding the higher prevalence of knee osteoarthritis (OA) and non-contact anterior cruciate ligament (ACL) in the female population. Progression and non-invasive treatments of knee OA. Primary appointment in Kinesiology Acadia University.

McDuffee, L., D.V.M. (Colorado State University), Ph.D. (University of California, Davis) Diplomate, ACVS (American College of Veterinary Surgeons). Orthopaedic research including: (i) investigation of fracture biomechanics, fracture stabilization techniques, and bone healing; (ii) development of new orthopaedic implants; (iii) bone healing investigations involving osteoblasts from osteogenic tissue. Emphasis on the equine species. Primary appointment in the Atlantic Veterinary College, University of Prince Edward Island.

Roscoe, S., PhD (McGill). Prostheses and medical implant devices. Electrochemical techniques to examine the adsorption and interfacial behaviour of proteins. Primary appointment in Chemistry, Acadia University.

## I. Introduction

The School of Biomedical Engineering is a collaborative effort of the Faculty of Medicine and the Faculty of Engineering.

The interdisciplinary research within the School of Biomedical Engineering at Dalhousie University is concentrated in three thrust areas: (i) Biomaterials and Tissue Engineering, (ii) Biosignals and Physiological Modelling, and (iii) Human Dynamics and Rehabilitation Engineering. Other significant research efforts in biomedical engineering at Dalhousie include work in kinesiology and gait, instrumentation, cardiac, orthopaedic and cellular mechanics, auditory and vestibular function, robotics, and rational drug design.

The program offers both a Master of Applied Science (MSc) degree and a Doctor of Philosophy (PhD) degree in Biomedical Engineering.

The program also offers a BioMedic: An NSERC CREATED Training program in Biomedical Technology, Innovation and Commercialization. The training program includes courses in partnership with Dalhousie's Business School on the Business of Medical Technology and Technology Needs in the Clinical Settings, and work placements at local and international medical device companies. Upon successful completion of the Training Program trainees receive a Dalhousie University certificate in Biomedical Device Innovation and Entrepreneurship in addition to the MSc or PhD being undertaken. See website for details.

## II. Admission

Candidates must satisfy the general requirements for admission to the Faculty of Graduate Studies. In addition to the Faculty of Graduate Studies requirements, the School of Biomedical Engineering has the following requirements for the MSc. and PhD programs. Students must maintain a 3.70 or A- GPA to be considered for admission.

### MSc Program

Students will be accepted into the MSc program from:

1. BEng or BSc from an accredited undergraduate engineering program
2. 4-year BSc in the physical sciences (e.g. Mathematics, Physics, Chemistry, etc.) with research experience\*\*
3. 4-year BSc in the biological sciences (e.g. Physiology, Biophysics, Biochemistry, Microbiology, Immunology, etc.) with research experience\*\*
4. MD, DVM, DDS, or equivalent

In cases (3) and (4) above, additional undergraduate coursework may be required prior to entry into the program. This will depend on the nature of the research thesis to be undertaken and the requirements will be developed in consultation with the school; however, a minimum of 2nd year undergraduate calculus (equivalent to Dalhousie University's MATH 2001.03 and MATH 2002.03) plus linear algebra and/or statistics, and one year of physics and chemistry will normally be required. \*\*Qualifications for research experience include: a research thesis, senior research project, or equivalent work experience determined in consultation with the School of Biomedical Engineering.

A minimum mid-B average during the student's undergraduate coursework (with a minimum average of A- over the last two years) will be required, plus demonstrated ability to communicate and write in English (consistent with the entry requirements of the Faculty of Graduate Studies, e.g. TOEFL > 600).

GRE Aptitude and Advanced scores in one of the sciences are recommended for all applicants whose undergraduate work has been completed outside Canada.

### PhD Program

Students will be accepted into the PhD program from a Masters degree from an accredited program. Transfer from the MSc program will only be considered for exceptional students who have completed at least 5 half-credit classes and passed a PhD Transfer Examination.

### Financial Support

A minimum stipend of \$17,300 is available for MSc graduates and \$19,000 for PhD graduates. Normally, students who are accepted are

supported financially either by external sources or Dalhousie scholarships. Additional financing is available for students with external scholarships. Applications should be made early, preferably by April 1 at the latest.

Funding for the NSERC CREATE: BioMedic program is in the form of an NSERC CREATE award of a minimum of \$17,300 per year for MSc candidates and minimum of \$21,000 per year for PhD candidates, with Top-up and partner funding for outstanding students - stipends can exceed \$35,000.

## III. Degree Requirements

### MSc Program

1. At least a total of six half-credit classes (three full credits) to be chosen in consultation with a school advisor. It is expected that a minimum of four of these classes will be taken from the suite of 5000-level classes offered by the School of Biomedical Engineering. In addition, students whose preparation in a particular area is deficient may be required to complete appropriate classes.
2. Attendance and participation in the BME seminar program.
3. A research thesis representing original work by the student will be carried out under the supervision (or co-supervision) of a faculty member of the School of Biomedical Engineering who is also a member of the Faculty of Graduate Studies. This thesis will normally be 75-100 pages in length exclusive of figures, tables, references, etc. Where the student's principal research supervisor is not appointed in the School of BME, a co-supervisor from within the school will be named on the advice of the school's Graduate Studies Coordinator in order to ensure that the thesis contains sufficient Biomedical Engineering content. The student must also undertake a satisfactory oral defense of the research thesis.

### PhD Program

#### Supervisory Committees

Each student will have a supervisory committee consisting of their thesis supervisor plus two faculty members appointed to the Faculty of Graduate Studies, of whom one must be a member of the School of Biomedical Engineering, and one will ordinarily not be a member of the School of Biomedical Engineering. The supervising committee will meet at least twice a year (including September following admission) or when called by any member of this committee or the student.

## IV. Class Descriptions

### BMNG 5010.03: Introductory Physiology for Biomedical Engineering.

A survey of the physiology of human organ systems including the nervous, cardiovascular, respiratory, renal, gastrointestinal and endocrine systems. Some emphasis will be placed on engineering principles, including biomechanics, bioelectricity, dynamic systems and control theory, where appropriate.

### BMNG 5020.03: Cell Biology for Biomedical Engineering.

This course provides an introduction to eukaryotic cell structure and function for engineering and physical science students who do not have a strong biological background. Topics include: cell structure, organelles, DNA, RNA, transcription and translation, protein production and processing, secretion, cytoskeleton, molecular motors, extracellular matrix, membrane transport, cell-cell communication, and cell division. Some emphasis will be placed on excitable cells, synaptic communication and muscle contraction.

### BMNG 5030.03: Pathobiology for Biomedical Engineering.

This class deals with basic pathological processes and general mechanisms of disease that are relevant to Biomedical Engineering. These topics include: (1) cell injury and adaption, (2) inflammation, repair and wound healing, (3) fluid and hemodynamic alterations, (4) diseases of immunity, (5) neoplasia, (6) nutritional and environmental pathology, and (7)

arteriosclerosis. Each of these topics will be covered through guided readings followed by discussion in small group sessions. Although focusing primarily on disease processes, the course will also include sessions on the structure of bone, skin and blood vessels, as a basic understanding of these tissues is fundamental to many areas of BME research. The final session will deal with the appropriate use of animal models to study human disease processes. Enrolment is limited to 6 students; permission of instructor is required.

### **BMNG 5040.03: Introduction to Biomedical Engineering.**

Biomedical Engineering includes both: (i) design of devices, instrumentation, or processes for clinical use, and (ii) the application of engineering science and technology to the solution of problems in biological systems. This class will explore both these avenues with an emphasis on the distinctions between scientific and engineering approaches to research and development. Topics include: the history of biomedical engineering, problem solving in the real world, defining design objectives, problem formulation and specification, experimental design and instrumentation, approaches to equipment design, statistical principles for measurement and quality control, optimization principles, economic considerations and impact of technology on medicine, safety and regulatory concerns, ethical concerns in animal and human experimentation, and grant application writing. Wherever possible, actual case studies will be used as examples wherein the above principles have (or have not) been successfully applied.

### **BMNG 5050.03: Introduction to Biomedical Technologies in Clinical Settings.**

This class is part of the NSERC CREATE training program in biomedical Biomedical Technology Innovation and Commercialization. It focuses specifically on clinical exposure and appreciation of the challenges of device development for clinical use. Areas of exposure are in clinical ethics, principles of human physiology and pathophysiology, biomedical device certification, technology challenges in challenging environments such as the operating room and clinic and sterilization issues. Students will be directly exposed to clinical procedures and procedures during the course. Enrolment is limited.

FORMAT: Combination of lectures, seminars, clinical "labs" and patient exposure

### **BMNG 5110.03: Biocompatibility and Biomaterials Design.**

This class deals with the scientific basis of biocompatibility (host and materials responses in biomaterials) and its application to intelligent design of biomaterials for implantable systems. The class will be divided into thirds: (i) cellular, tissue-level, and systemic responses to implanted devices, including thrombosis, wound-healing, cytotoxicity, and immunological responses; (ii) materials degradation including corrosion, dissolution, swelling/leaching, surface chemistry, etc.; (iii) case studies of materials and device design including: heart valves, total hip prostheses, dental restorative materials, total artificial heart, burn dressings and hemodialysis systems. The class will be evaluated by three literature criticism sessions, a research paper and coupled class presentation, one mid-term test and a final exam.

### **BMNG 5120.03: Biomechanics in Physiology and Surgical Implant Design.**

This class deals with: (i) solid and fluid mechanical analysis of biological tissues and organs, and (ii) use of mechanical engineering techniques in the design of implantable medical devices, e.g. heart valves, vascular grafts, ligament replacements, total artificial heart, and total hip or knee replacements. Topics to be covered include cell structure and mechano-electrical function, blood flow, arterial mechanics, bone structure and mechanics, mechanics and tribology of artificial joints, muscle mechanics, pulmonary functions, fundamentals of gait and mobility aids. Guest lecturers from clinical sciences will help to develop the practical context of biomechanical engineering problems.

EXCLUSION: MECH 4650.03

### **BMNG 5130.03: Biomechanics of Human Gait.**

An overview of the research in biomechanics of human motion with particular focus on gait analysis. Topics include measuring and analysis techniques, biomechanical modelling, and data analysis techniques.

Applications include the study of normal, able-bodied gait, and the evaluation of gait pattern changes associated with osteoarthritis, and total knee replacement.

### **BMNG 5140.03: Principles of Biomolecular & Drug Molecule Design.**

An introductory course in biomolecular design, drug design and medicinal chemistry. Students are taught how to identify and formulate the design problem and they are provided with the conceptual and factual tools necessary to tackle the design problem and to design a new chemical entity as a putative therapeutic.

INSTRUCTOR(S): D. Weaver

CROSS-LISTING: CHEM 5601.03

### **BMNG 5150.03: Introduction to Tissue Engineering.**

Tissue engineering is a recent and fast-growing field which encompasses and unites biology, chemistry, medical sciences and engineering to design and fabricate systems to replace tissues and organs. Topics will include tissue engineering scaffolds, cell incorporation (selection and culture), in vivo versus in vitro constructs, and applications of tissue engineering.

### **BMNG 5160.03: Bioengineering in Orthopaedics and Dentistry.**

Orthopaedics and dentistry dominate the medical device market, providing some conspicuous examples of successful biomaterials engineering. This course will explore a number of biological and engineering considerations that arise in the design and development of implants for skeletal tissue replacement or regeneration, with an emphasis on bone/implant interactions.

### **BMNG 5210.03: Biomedical Instrumentation, Data Acquisition and Analysis.**

This hands-on course is an introduction to computer-based acquisition and analysis of physiological signals as relevant to Biomedical Engineering. In an integrated series of lectures and laboratory projects, students will use A/D, D/A, and serial techniques to acquire real and simulated data from a variety of sensors (e.g. electrocardiograms, muscle activity, pressure, flow and images) and to control actuators. Issues such as sampling, aliasing, filtering and image analysis will be examined. Course & lab times may be changed to suit student schedules. Enrolment limited to 14 students.

### **BMNG 5230.03: Biomedical Signal Analysis and Modelling.**

This course is directed at the student interested in the analysis of physiological signals and modeling of physiological systems using mathematical methods. It is ideally paired with Biomedical instrumentation which in the spring term covers data acquisition and transducer instrumentation through programming in Labview. In this course the focus will be on analysis of physiological signals using Engineering signal analysis approaches.

### **BMNG 5250.03: Bioelectricity: A Quantitative Approach.**

An introductory electrophysiology class, following a quantitative approach based on the general principles established in physics and engineering. The core material covers nonlinear membrane properties of excitable cells that produce action potentials, propagation of action potentials in one-, two-, and three-dimensional excitable media, the response of excitable media to artificial stimuli, and the electromagnetic field that the active bioelectric sources produce in the surrounding extracellular space. Applications to the study of neural and cardiac electrophysiology will be discussed in detail.

### **BMNG 5260.03: Diagnostic Imaging and Radiation Biology.**

This class will discuss the basics of current medical imaging modalities including the mathematical foundations of image processing, and image reconstruction from projections; imaging with ionizing radiation covering aspects of radiation physics and detectors, X-ray CT, SPECT and PET; magnetic resonance imaging methods and techniques; and ultrasound imaging including propagation, scattering and image formation. Students will be working with real images from real, currently-used equipment

provided by the Computer Vision and Image Processing Lab, Department of Electrical & Computer Engineering, Dalhousie, and through the internet.

### **BMNG 5310.03: Business of Medical Technology I.**

Students work in interdisciplinary teams to trial-develop a biomedical concept from idea to commercial product in this course and in the following course BMNG 5311.03. Topics covered include innovation and design Methodology and industry practice, industrial design and creativity in design, intellectual property fundamentals and industry practices, medical technology development processes. Teams combine students from biomedical engineering, medical residents and MBA programs. Enrolment is limited.

FORMAT: Lecture, seminar and group project

### **BMNG 5320.03: Entrepreneurship and the Business of Medical Technology II.**

Students work in interdisciplinary teams to trial-develop a biomedical concept from idea to commercial product. Topics include opportunity identification, professional standards, communication, professional standards, medical device commercialization strategies, medical regulatory concerns (FDA/CSA/EU) and the road to translation and market insertion. Students work in teams combining engineering, clinical and management expertise. Enrolment is limited.

INSTRUCTOR(S): D. Roach, G. Maksym, P. Gregson,

FORMAT: Lecture, Seminar and Group Project

PREREQUISITE: BMNG 5310.03

### **BMNG 5410.20/5420.03/5430.03: Directed Readings in Biomedical Engineering.**

This class is designed for students wishing to gain knowledge in a specific area in which no graduate level classes are offered. Class format is variable and may include seminars, lectures, and the study of papers and/or book chapters as part of a directed research or design project. Students are required to present the work (not less than 90 hours per semester), in a written report which will be evaluated. Normally, a student can take only one directed reading class as part of their degree program.

### **BMNG 9000.00: MASc Thesis.**

### **BMNG 9530.00: PhD in Biomedical Engineering.**

FORMAT: Thesis

## **Community Health and Epidemiology**

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Location: Centre for Clinical Research  
5790 University Avenue  
Halifax, Nova Scotia B3H 1V7  
Telephone: (902) 494-3860  
Fax: (902) 494-1597  
Email: che@dal.ca  
Website: <http://che.medicine.dal.ca>

### **Department Head**

Levy, A.

### **Professors**

Anderson, D (major appointment in Department of Medicine)

Brown, M.G. (post-retirement)

Burge, F. (major appointment in Department of Family Medicine)

Cox, J. (major appointment in Department of Medicine)

Dodds, L. (major appointment in Obstetrics and Gynecology)

Dunbar, M. (major appointment Department of Surgery)

Gahagan, J., (major appointment in School of Health and Human Performance)

Johnston, G. (major appointment in School of Health Services Administration)

Johnston, L. (major appointment in Department of Medicine)

Kirkland, S. (cross appointment in Department of Medicine)

Langille, D.B.

Langley, J. (major appointment in Pediatrics)

Murray, T.J. (post-retirement)

Parker, L. (major appointment Director of Population Cancer Research Program)

Sketris, I. (major appointment in College of Pharmacy)

Stewart, S. (major appointment in Psychology)

Tallon, J. (major appointment Director of NS Trauma Program & QEII Trauma Program)

Townsend, E. (post retirement)

VanZanten, S. (major appointment in Division of Gastroenterology)

### **Associate Professors**

Allen, V. (major appointment in Department of Obstetrics and Gynaecology)

Flowerdew, G.

Guernsey, J.R. (cross appointment in School for Resource and Environmental Studies)

Kephart, G.

Kozousek, V. (major appointment in Ophthalmology)

LeBlanc, J. (major appointment in Pediatrics)

MacKinnon, N. (major appointment in College of Pharmacy)

Mitnitski, A. (major appointment in Department of Medicine)

Sargeant, J. (major appointment in Continuing Medical Education)

Tomblin-Murphy, G. (major appointment in School of Nursing)

Travers, A., (major appointment in Department of Emergency Medicine)

Weerasinghe, S.

Yanchar, N., (Div. Pediatric General Surgery, IWK)

### **Assistant Professors**

Andreou, P.

Asada, Y.

Asbridge, M.

Baskett, R. (major appointment in Department of Cardiovascular Surgery)

Braunstein-Moody, J., Senior Director, Public Health Renewal, N.S. Dept of Health Promotion and Protection

Castleden, H., (major appointment School Resource & Environmental Studies)  
 Hayden, J.  
 Johnson, P. (major appointment in Surgery)  
 MacPherson, K.  
 Marshall, E. (major appointment in Department of Family Medicine)  
 Payne, J. (major appointment in Department of Diagnostic Radiology)  
 Porter, G. (major appointment in Department of Surgery)  
 Rainham, D. (major appointment Elizabeth May Chair in Sustainability & Environmental Health)  
 Simms, C. (major appointment in Health Services Administration)  
 Steenbeek, A. (major appointment in School of Nursing)  
 Ungurain, M. (major appointment Associate Dean, Policy and Planning, Faculty of Health Professions)

### Adjunct Faculty

Al Azem, A. (Assistant Professor)  
 Badenhorst, C. (Assistant Professor) Medical Officer of Health, Cape Breton area  
 Braunstein, J. (Lecturer) Senior Director, Public Health, NS Dept. of Health  
 Campbell, J. (Assistant Professor) Director, Adult Mental Health Services, Annapolis Valley District Health Authority  
 Davidson, K. (Assistant Professor) Ctr. for Behavioural Cardiovascular Health, Columbia University, Medical Centre, New York  
 Dummer, T. (Lecturer)  
 Fleming, D. (Associate Professor) Canada Research Chair in X-Ray Fluorescence Medical Physics, Mount Allison University  
 Gould, R., (Assistant Professor) MOH Annapolis Valley, South Shore, South West Health Authorities  
 Graham, S. (Assistant Professor) NS DOH  
 Haigh, D. (Assistant Professor) Lifemark Health Services  
 Hatchett, J. (Assistant Professor) Interdisciplinary Research, IWK  
 Hicks, V. (Assistant Professor) Health Economics Consulting Services  
 Kisely, S. (Professor) University of Queensland  
 MacLean, D. (Professor) Faculty Health Science, Simon Fraser University  
 Maddalena, V. (Assistant Professor) Division of Community Health & Humanities, Memorial University  
 Maher, R. (Associate Professor) Centre of Geographical Sciences, Lawrence town, NS  
 McGowan, V. (Associate Professor), Offender Programs and Reintegration Branch, Correctional Services Canada  
 Mitchell, T. (Assistant Professor) Department of Psychology, Wilfrid Laurier University  
 Mykhalovskiy, E. (Associate Professor) Department of Sociology, York University  
 Ritchie, K. (Assistant Professor) Consulting Scientist, IWK  
 Sarwal, S. (Assistant Professor) NS MOH DOH Promotion and Protection  
 Strang, R. (Assistant Professor), Chief Medical Officer of Health, Dept of Health Promotion and Protection  
 Twohig, P. (Assistant Professor) Canada Research Chair, Gorsebrook Research Institute for Atlantic Canada, St. Mary's University  
 VanLeeuwen, J. (Associate Professor) Department of Health Management Atlantic Veterinary College, UPEI  
 Veugelers, P. (Professor) School of Public Health Sciences, University of Alberta  
 Watson-Creed, G. (Professor) Regional Medical Officer of Health, Dept of Health Promotion and Protection  
 White, F. (Professor) Pacific Health & Development Sciences, British Columbia

### Lecturers

Campbell, L. Program Co-ordinator/Analyst, Health Outcomes Research Unit, CDHA  
 Dummer, T. (major appointment in the Canadian Centre for Vaccinology, IWK Health Centre)

### A. Educational Objectives

The department is formally engaged in the education of undergraduate medical students and residents and in the provision of graduate teaching through the MSc Community Health and Epidemiology and the PhD interdisciplinary studies. CH&E faculty members are involved in

development of the new Master of Public Health degree. These programs are designed to meet the following objectives:

1. have an in-depth understanding of epidemiologic principles and research methods.
2. critically evaluate research evidence.
3. collaborate and contribute to the design and implementation of health care research.
4. undertake ethical and sound research as an independent investigator.
5. play leadership roles in translating results into policy, guidelines and health care decision-making.
6. teach and promote epidemiologic principles and research methods.

### B. First and Second Year Medicine

The Department participates in the undergraduate education program by active involvement of Faculty members, as Unit Heads and as tutors as well as by providing student electives and through individual consultations with students.

### C. MSc Program in Community Health and Epidemiology (CH&E)

This MSc program emphasizes knowledge, analytical skills and formal evaluative methods with application to disease prevention, health promotion and assessment of community health service and system needs. Typically, MSc CH&E students have completed undergraduate training in a health profession or related scientific discipline, and often have worked in the health sector. Admission standards are those of Dalhousie University's Faculty of Graduate Studies. An honours baccalaureate degree from a recognized university is usually required. Enrollment is limited. Some part time students are accepted. Applicants must meet Faculty of Graduate Studies English Language Competency, as well as Quantitative Skills requirements.

### Graduate Courses Offered

#### CH&E 5000.03: Community Health Principles.

This is an introductory class in Community Health Principles for graduate-level students in the health fields. Community health focuses on the health of populations or groups. The class will cover a broad range of community health issues, and will focus on strategies to improve the health of a population with emphasis on health protection, disease prevention, and health promotion. The student will apply community health principles and acquire in-depth knowledge of specific health topic areas through group and individual projects.  
 INSTRUCTOR(S): D. Langille/K. MacPherson

#### CH&E 5010.03: Epidemiology Principles.

This introductory class is intended for graduate-level students with no background or formal training in epidemiology. This class introduces students to the basic principles and methods of epidemiology, with various examples from the literature in communicable and non-communicable diseases. Topics include measures of health and risk, epidemiological study designs and considerations regarding issues of measurement and precision that include assessments of internal and external validity, standardization, confounding, bias, interaction and causality. The class includes presentations in selected special topics in epidemiology.  
 INSTRUCTOR(S): M. Asbridge / K. MacPherson

#### CH&E 5019.03: Principles of Biostatistics.

An introduction to statistics for medical and public health research. The class will provide an understanding of the basic principles underlying research design, data analysis and interpretation of results. Students will become proficient in the use of SAS to generate meaningful statistical information including the comparison of means and proportions and investigation of relationships between variables using least squares regression. This course also has a lab component.  
 INSTRUCTOR(S): G. Flowerdew, P. Andreou  
 PREREQUISITE: Departmental SAS Tutorial Workshop

### **CH&E 5020.03: Biostatistical Modelling.**

Primary objective of this course is to gain mastery over the most frequently used statistical modeling techniques used in the clinical and population health data analysis using statistical software package SAS. Students will learn multiple regression and multivariate statistical techniques for different types of outcome measures such as continuous, dichotomous, polytomous and ordinal through modeling for associations with exposure(s) and confounders.

INSTRUCTOR(S): S. Weerasinghe

PREREQUISITE: CH&E 5019

### **CH&E 5030.03: Research Methods in Community Health and Epidemiology.**

This class explores the logic and principles of research design, measurement, and data collection. It focuses on the critical evaluation of research articles, research design, research proposal writing. The class covers a range of methodological issues and methods, including experimental and quasi-experimental designs, survey research and sampling, measurement, and qualitative methods.

INSTRUCTOR(S): G. Kephart

### **CH&E 5040.03: Introduction to Health Services Research and Policy.**

This class introduces students to basic concepts and tools in health services research important for critical evaluation of health services systems and policy. The course overviews the evolution and delivery, organization, and financing of the Canadian health services system, explores theoretical frameworks to evaluate health services systems, and examines strategies for knowledge translation. The topics covered include: health-related quality of life measures, quality of health care, needs for health care, economic evaluation of health services, resource allocation, equity in health care and health outcomes, primary care reform, and public vs. private health care financing.

INSTRUCTOR(S): Y. Asada

### **CH&E 6001.03: Environmental and Occupational Health.**

Principles and concepts underlying environments and human health comprise the major focus of this course. The nature of a variety of agents, including chemical, physical, biological, ergonomic and radiation hazards, how these agents are dispersed and transformed in the environment, the pathways of human exposure to these agents, and characterization of the health effects resulting from exposure are reviewed. The course will also discuss human environments as a determinant of health and will consider dimensions of places, spaces and health as factors in the human environment. Two field trips are planned 1) Pockwok water treatment plant 2) Montague Historic Gold Mine. There will also be a laboratory teaching class (at the NRC-IMB) covering personal exposure to volatile organic compounds in the environment.

INSTRUCTOR(S): J. Guernsey / M. Gibson

CROSS-LISTING: ENVI 5010.03

### **CH&E 6010.03: Community Health Practicum.**

INSTRUCTOR(S): K. MacPherson

### **CH&E 6020.03: Advanced Epidemiology.**

This advanced class focuses on the design, conduct, analysis, and interpretation of epidemiologic studies. Both experimental (community intervention trials) and non-experimental, or observational (cohort, case-control), studies may be covered. Topics for general discussion will include study designs, subject selection, measurement issues pertaining to ascertainment of exposure and outcome, design issues such as stratification and matching, methodological issues such as confounding, effect modification, misclassification, and sources of bias. Data analysis will emphasize the practical application of statistical concepts; measuring associations and effect size, multivariate modelling, logistic regression, poison regression, and survival analysis (time permitting), and the combining of individual study results using meta-analysis.

INSTRUCTOR(S): S. Kirkland/A. Levy

PREREQUISITE: CH&E 5010

### **CH&E 6024.03: Methods in Clinical Trials.**

This course is developed for students in the graduate program of Community Health and Epidemiology who have a particular interest in randomized controlled trials (RCT's). Participants will be introduced to the practical issues in designing a controlled clinical trial by developing a clinical trial protocol throughout the class. Several designs for RCT's and Cancer clinical trials will be examined. The course will review the methods of how to analyze continuous and categorical data as well as censored data and perform interim analysis. The course will cover topics on sample size determination, Meta-Analysis and Bayesian methodology. Evaluation is based on the written protocol and statistical analysis on a simulated data set based on the written protocol.

INSTRUCTOR(S): P. Andreou

PREREQUISITE: CH&E 5020

### **CH&E 6030.03: An Introduction to Clinical Epidemiology.**

This class is intended for students with an interest in carrying out research that is directly relevant to clinical practice. This course will introduce students to the field of clinical epidemiology, including common types of clinical epidemiology research questions: incidence, prevalence & etiology, screening & diagnosis, effect of interventions, and prognosis.

This course will introduce four types of research study designs used in clinical and epidemiologic research: 1. experimental studies, 2. non-experimental designs, 3. systematic reviews, and 4. qualitative & mixed methods research, and will discuss assessing the risk of, and minimizing, potential biases in clinical research. Special topics will include clinical measurement and knowledge translation.

INSTRUCTOR(S): B. O'Brien

### **CH&E 6042.03: Determinants of Health in Human Populations.**

This class will focus on health from a population and societal perspective, with an emphasis on the determinants and distribution of health in human populations. Students will be introduced to basic demographic tools and concepts useful for studying the health of populations, including the determinants of mortality/morbidity decline and change, the medicalization of health, and the changing institutional structure of health care delivery. Separate treatment will be given to health in developed countries, highlighting differences in the distribution, determinants, and consequences of health in the two settings. Population-based approaches to health policy will be explored.

INSTRUCTOR(S): M. Asbridge

### **CH&E 6045.03: Qualitative Methods in Health Research.**

This advanced class in community research introduces students to social theory and qualitative methodologies and techniques. The articulation of appropriate methods to address theoretical, epistemological and practical issues is emphasized. Students will develop a theoretically sound rationale for their proposed research and gain experience in data collection, fieldwork, and analysis.

INSTRUCTOR(S): TBA

### **CH&E 6049.03: An Introduction to Systematic Review and Meta-analysis in Health Care.**

In the current era of Evidence Based Medicine Systematic Reviews or Meta-analysis are becoming increasingly important. This is especially true for the evaluation of efficacy of treatment but it is also gaining more importance in the evaluation of diagnostic tests, causation, natural history of disease and economic evaluations. In the class, the student will learn the ins and outs of systematic reviews and meta-analysis. Specific topics include guidelines on how to read and interpret published systematic reviews, framing of the research question for a systematic review, identification and selection of studies, development of in and exclusion criteria, importance of validation of the extracted information, combining results in either a qualitative or quantitative fashion, statistical techniques used to conduct a formal meta-analysis and interpretation of results.

INSTRUCTOR(S): J. Hayden

PREREQUISITE: CH&E 5019

### **CH&E 6051.03: Theoretical, Policy and Methodological Issues in Rural Health.**

The purpose of this course is to introduce students to rural health concepts and principles. The scope will range from dimensions of population health to issues of rural health care delivery. Upstream factors that influence health of rural populations, policy considerations, and other theoretical dimensions will be addressed.

INSTRUCTOR(S): J. Guernsey

FORMAT: Seminar

### **CH&E 6052.03: Epidemiology of Infectious Diseases.**

Interrelated topics, crucial to understanding infectious diseases epidemiology and how epidemiology can inform our understanding of infectious diseases and its management at the individual level will be covered. These include basic microbiology, the chain of infection, disease pathogenesis, spectrum of illness associated with infectious agents, diagnostic tools, patterns of infection and disease in populations, outbreak recognition and management, infection prevention and control. The course will explore such current issues as emergence of new infections, bioterrorism, and health care associated infections.

INSTRUCTOR(S): L. Johnston

FORMAT: Lecture and discussion

PREREQUISITE: CH&E 5000 and CH&E 5010

### **CH&E 6060.03: Directed Readings/Studies I.**

### **CH&E 6062.03: Directed Readings/Studies II.**

### **CH&E 9000.00: Master's Thesis.**

## **Diagnostic Radiology**

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Location: QEII Health Sciences Centre  
Victoria General Site, Third Floor  
Halifax, Nova Scotia  
Telephone: (902) 473-5452

### **Professor Emeritus**

Fraser, D.B.

### **Head of Department**

Barnes, D.

### **Professors**

Daniels, C.  
Fraser, J.D.  
Lebrun, P.  
Lo, C.  
Miller, R.M.  
Mitchell, M.J.

### **Associate Professors**

Burrell, S.  
D'arcy, R.  
Ferguson, D.  
Iles, S.  
Johnson, A.J.  
Jones, G.R.M.  
Matte, G.  
Mawko, G.  
Murphy, G.  
O'Brien, K.  
Ross, A.  
Schmidt, M.  
Vandorpe, R.

### **Assistant Professors**

Abdolell, M.  
Abraham, R.  
Anderson, I.  
Barry, M.  
Beyea, S.  
Borgaonkar, J.  
Bowen, C.  
Brown, P.  
Brydie, A.  
Caines, J.S.  
Delaney, S.  
Dobson, R.  
Flemming, B.K.  
Gordon, D.  
Gundogan, M.  
Iles, D.  
Keough, V.  
Khan, M.N.  
Kydd, D..  
Maloney, W.J.  
McPhee, D.  
Payne, J.  
Pittman, C.  
Pringle, C.  
Recoveur, D.  
Rowe, J.  
Schaller, G.  
Schmit, P.

Shankar, J.  
Thomas, C. (cross appointment Med Oncology)  
Thompson, D.  
Versnick, E.  
Whelan, J.F.  
Yeadon, D.E.

## Lecturers

Acton, D.  
Allen, J.  
Archer, B.  
Barton, W.F.  
Berry, R.  
Boyd, G.  
Burke, J.  
Butler, G.  
Butt, R.  
Cheverie, D.  
Clarke, G.  
Clarke, J.  
Colter, K.  
Curtis, H.  
Ellis, R.  
Heelan, J.  
Ingham, A.  
Joy, G.  
King, H.  
MacSween, M.  
Maiani, I.  
Manos, D.  
Martel, J.P.  
Martin, J.  
Masserweh, G.  
Mayer, L.  
McDonald, L.  
Mohsin, H.  
Normore, W.  
Mowatt, J.  
Oxner, J.H.  
Psooy, B.  
Salgado, M.J.  
Simms, J.D.  
Surette, J.  
Teed, L.  
Tonkopi, E.

## A. Course of Study

### First and Second Year Medicine

Through the cases in the COPS curriculum, the student becomes familiar with the many diagnostic imaging modalities (x-ray, ultrasound, computerized tomography, magnetic resonance, and nuclear medicine) and with interventional radiology such as needle biopsy, angioplasty, percutaneous tubal drainage, and vascular embolization. Electives are available for first and second COPS clerkship.

There are four three hour compulsory Wednesday afternoon educational sessions. The emphasis is placed on the investigation of patient problems, using various imaging modalities, interventional diagnostic and therapeutic radiology. One month electives are also available in clerkship.

Texts:

- Appleton, Hamilton, Simon, *Surface and Radiological Anatomy*

The following books are suggested reading:

- Squire - *Fundamentals of Roentgenology*
- Meschan - *Synopsis of Roentgen Signs*, and Armstrong - *X-Ray Diagnosis*

## B. PGY1

One month electives available from September to June inclusive.

## C. Residency Training

An integrated University residency training program is available in the Department consisting of a five year program meeting the requirements of the Royal College of Physicians and Surgeons of Canada in Diagnostic Radiology. Participating hospitals include QE II Health Sciences Centre, IWK-Grace Health Centre, the Victoria General Hospital, and Saint John Regional Hospital.

## D. Fellowship Training

Clinical fellowships are available in Cardiovascular, Gastrointestinal, Musculoskeletal, Neuroradiology, and General Imaging.

## E. CME Programs

The department offers two week clinical traineeships in General Imaging (CT, Nuclear Medicine, Ultrasound, Cardiovascular, Interventional, Mammography, General Pediatric Radiology and Neuroradiology) between October and May.

# Emergency Medicine

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Location: Halifax Infirmary, Suite 355  
QEII Health Sciences Centre  
1796 Summer Street  
Halifax NS B3H 3A7  
Telephone: (902) 473-2214  
Fax: (902) 473-3617  
Email: emergency.medicine@dal.ca  
Web page: <http://emergency.medicine.dal.ca>

## Head

Yoon, P.W. (District Chief, Capital Health)

## Director, Division of EMS

Cain, E.

## Professors

Croskerry, P. (cross appointment in Medical Education)  
Kovacs, G. (cross appointment in Medical Education)  
Murphy, M. (primary appointment in Anesthesia)  
Petrie, D. (Medical Director, EHS LifeFlight)  
Ross, J. (cross appointment in Medical Education and Anesthesia)  
Stewart, R. (cross appointment in CHE, Anaesthesia, Physiotherapy)  
Tallon, J. (Medical Director, Provincial Trauma Program) (cross appointments in Surgery and CHE)  
Yoon, P.W. (District Chief, Capital Health) (Head, Emergency Medicine)

## Associate Professors

Bullock, G. (cross appointment in Medical Education)  
Cain, E.  
Campbell, S. (Site Chief, QII HSC) (Medical Director, In-House Paramedics)  
Green, R. (cross appointment in Critical Care)  
LeBlanc, C. (cross appointment in Family Medicine and Medical Education)  
Magee, K. (Program Director, RCPS)  
Taylor, B. (cross appointment in Pediatrics)  
Travers, A. (cross appointment in CHE)  
Watson, M.L. (cross appointment in Family Medicine) (Program Director, CFPC)  
Wren, P. (primary in Pediatrics) (Associate Site Chief, IWK)  
Yanchar, N. (primary appointment in Surgery)  
Zed, P. (primary appointment in Pharmacy)

## Assistant Professors

Ackroyd, S.  
Asbridge, M. (primary appointment in CHE)  
Black K. (cross appointment in Pediatrics)  
Blackie, B. (cross appointment in Pediatrics) (Postgraduate Coordinator, Pediatrics Emergency Medicine)  
Carr, B. (cross appointment in Family Medicine)  
Carter, A.  
Clory, M. (Site Chief, CCHC)  
Currie, T. (Site Chief, CBRH)  
Das, B.  
Field, S. (undergraduate coordinator)  
Henneberry, R.  
Howlett, M. (cross appointment in Medical Education) (Site Chief, SJRH)  
Hurley, K.  
Jarvis, C.  
Keyes, P. (Education Site Coordinator, Saint John, NB)  
McCulloch, D. (primary in Pediatrics)  
McLeod, B.  
McTimoney, M. (cross appointment in Pediatrics)

Murphy, N. (Director, Poison Centre)  
Murray, J.  
Schwartz, S. (primary in Pediatrics) (undergraduate coordinator, Pediatric Emergency Medicine)  
Talbot, J.  
Vaillancourt, C.  
Weatherhead, D.

## Adjunct Assistant Professor

Scott, J. (primary in Pediatrics)

## Lecturers

Addie, B. (primary in Family Medicine)  
Allen, D.  
Alansari, A.  
Albert, J.  
Avery, C.  
Bader, J.  
Beck, G.  
Black, D.  
Blandford, A. (cross appointment in Family Medicine)  
Bood, T.  
Cajee, I. (postgraduate coordinator)  
Cameron, S.  
Campbell, G.  
Champion, P.  
Chesser, T.  
Clark, G.  
Coakley, A.  
Cox, C.  
Curry, S.  
Davis, M.  
Dingle, M. (cross appointment in Family Medicine)  
Drake, W.  
Duguay, G.  
English, K.  
Ferguson, L. (primary in Family Medicine)  
Ferguson, M. (primary in Family Medicine)  
Fieldus, W.  
Findlater, J. (cross appointment in Family Medicine)  
Fletcher, M.  
Gillis, J.  
Grant, J. (cross appointment in Pediatrics)  
Hamson, A. (cross appointment in Pediatrics)  
Hannigan, Jay  
Hannigan, Jennifer  
Hanson, S.  
Hayden, M.  
Hebb, L.  
Holmes, A.  
Howlett, T.  
Huntsman, J.  
Jensen, J.  
Keith, K.  
Kienitz, N.  
Landry, S.  
Lantz, C.  
LeGresley, A.  
Leverman, J.  
Levesque, C. (cross appointment in Family Medicine)  
Levy, D.  
Lohoar, A.  
Losier, C.  
MacDonald, S.  
MacIntyre, J.  
MacNeil, R. (primary appointment in Family Medicine)  
MacPhee, S. (cross appointment in Pediatrics) (Acting Site Chief, IWK)  
MacVicar, G.  
McCrea, J. (cross appointment in Family Medicine)  
McGraw, M.  
McKenna, P. (cross appointment in Family Medicine)  
McMahon, L.

McMullen, M.  
 McVey, J.  
 Meagher, J. (cross appointment in Family Medicine)  
 Melanson, S.  
 Milburn, C.  
 Miller, S.  
 Morley, C. (primary in Pediatrics)  
 Morrison, H.  
 Murphy, K.  
 O'Brien Caines, S.  
 O'Hanley, P. (cross appointment in Family Medicine)  
 Parkash, R. (Clinical Chief, DGH)  
 Pische, T.  
 Sampson, J.  
 Schwartz, S. (primary in Pediatrics) (Undergraduate coordinator Pediatric Emergency Medicine)  
 Sigsworth, W. (cross appointment in Family Medicine)  
 Smith, L. (cross appointment in Family Medicine)  
 Smith, S.  
 Smyth, P. (cross appointment in Family Medicine)  
 Sohn, M.  
 Stokes, R.  
 Swift, A.  
 Walker, J.  
 Walsh, P. (cross appointment in Family Medicine)  
 Watson, M.  
 Whalen, R.  
 Wu, K.  
 Wurster, C.  
 Young, G.  
 Young, M.  
 Young, N.

## A. Emergency Medicine

The primary objective of the undergraduate program in Emergency Medicine is to ensure medical students are introduced to the many facets of Emergency Medicine and its role in the delivery of health care. The field of Emergency Medicine is an exciting one. Physicians practicing in this area are continually exposed to a wide variety of clinical disease and injury. Severity of presentation is also tremendously variable, requiring prioritization and the ability to rapidly judge how ill or injured patients are: a physician may be seeing a small child with a fever one minute, then be intubating a patient with acute respiratory distress the next.

## B. First- and Second-Year Medicine

During second year, faculty teach suturing, casting and splinting and basic airway management as part of the skills and procedures program. Faculty members participate each year in the COPS program. There are a number of second year elective positions at the QEII HSC.

## C. Clinical Clerkship (Med III and IV)

Introduction to Clerkship is a multidisciplinary activity, with Emergency Medicine faculty taking a leadership role in the administration and running of this section. It is the first one-month unit of Phase I of clinical clerkship and consists of: lectures, small group sessions, simulated patient encounters, skills and procedures, and advanced life support sessions. The objectives of the month are to familiarize students with hospital and clinic processes, refresh students' basic clinical and communication skills, and set a framework for clinical problem solving.

All medical students complete a three-week rotation during Phase I of the clerkship. Students complete 12 shifts at various sites including tertiary care adult hospitals, a pediatric hospital and community hospital.

## D. Electives

Electives can be arranged in Emergency Medicine. Special requests are considered for all levels of medical training.

## E. Residency Training

The College of Family Physicians Residency in Emergency Medicine is a one-year program after completing the CFPC Program. The residents are

prepared to practice a mix of Family Medicine and Emergency Medicine with a focus on community hospitals. The Residency is divided over several sites, including Halifax, NS, Saint John and Moncton, NB.

Rotations include Adult Emergency, Pediatric Emergency, CCU, Orthopedic Surgery, Plastic Surgery, ICU and an elective. The program prepares residents to challenge the annual CFPC-EM certification examination.

The **Royal College of Physicians and Surgeons** residency in Emergency Medicine is a five year program offering extensive exposure to the clinical aspects of Emergency Medicine and related specialties. In addition, the resident receives specific training in relevant aspects of medical education, pre-hospital care and administration. Active participation in original research is a core component of this program. Residents have the option to pursue subspecialty training (Pre-hospital Care, Toxicology, ICU etc.) during either the fourth or fifth year, and ample elective time to pursue a masters degree.

### Year One

Twelve weeks of Emergency Medicine. Eight weeks each of: Internal Medicine, Plastics and Surgery. Four weeks each of: Psychiatry, Pediatric Emergency Medicine, Pediatric Anesthesia and Adult Anesthesia.

### Year Two

Twelve weeks each of: Emergency Medicine and ICU. Eight weeks each of: Neurosciences, Pediatric Emergency Medicine and Orthopedics. Four weeks of CCU.

### Year Three

Twelve weeks of Emergency Medicine. Four weeks each of: Pre-hospital, Research, Medical Education, Plastics, Trauma, Elective, Pediatric Emergency Medicine, Pediatric ICU, Community Emergency Medicine and EDTUS/EM.

### Year Four

Twelve weeks of Emergency Medicine. Twenty-four weeks Elective. Four weeks each of: Administration, Research, Toxicology and Anesthesia.

### Year Five

Twenty weeks of Emergency Medicine. Twelve weeks Elective. Eight weeks each of: Research, Pediatric Emergency Medicine and Senior Trauma.

### Suggested Textbooks

*Emergency Medicine: A Comprehensive Study Guide*, JE Tintinalli, E Ruiz, RL Krome

*Emergency Medicine: Concepts and Clinical Practice*, Rosen, Barkin et al

## F. Continuing Medical Education

A number of the Faculty participate in the planning of CME for Dalhousie CME short courses as well as presenting lectures/classes internationally and nationally which are offered by the Canadian Association of Emergency Physicians. Faculty also participate extensively as invited speakers/teachers at regional, national and international conferences.

## G. Research

Since its inception, our department has demonstrated an exceptional commitment to building research capacity and advancing knowledge in Emergency Medicine. Our investigators have a broad range of research interests that reflect the diverse nature of clinical practice in emergency departments and in pre-hospital care. Our particular strengths are in the areas of EMS and trauma systems, resuscitation, advanced airway management, patient safety and clinical decision-making, medical education and knowledge transfer, as well as in public health and injury prevention. There is close collaboration with our EMS colleagues in the province and other EM researchers in Canada and the U.S.

Our highly skilled Research Support Team facilitates, supports and promotes the research activities in our department. They contribute their expertise in clinical trial coordination, database management, research administration, grant applications and Research Ethics Board submissions.

# Family Medicine

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Location: Abbie J. Lane Building, Eighth Floor  
QE II HSC  
Telephone: (902) 473-4747  
Fax: (902) 473-4760

## Head Dalhousie Family Medicine

Archibald, G.

### Professors

Burge, F.  
Cameron, I.A.  
Delva, D.  
Gass, D.A. (post-retirement)  
Hayes, V. (post-retirement)  
Hennen, B. (post-retirement)  
MacLachlan, R.

### Associate Professors

Archibald, G.  
Brosky, G.  
Cameron, S.  
Cervin, C.  
Hall, J.  
Horrey, K.  
McIntyre, P.  
Miedema, B.  
Murray, T.J. (major appointment in Medicine)  
Natarajan, N.  
Nixon, M.D. (post-retirement appointment)  
Putnam, W.  
Smith, P.  
Tatemichi, S.

### Assistant Professors

Apostolides, C.  
Bell, M.  
Bergin, F.  
Brown, D.  
Bussey, L.  
Clarke, B. (major appointment in Medicine)  
Collings, J.  
Davies, C.  
Dufour, K.  
Ernest, G.  
Farquar, A.  
Fisher, R.  
Fitz-Clarke, J.R.  
Gold, E.  
Jayabarathan, A.  
Lacas, A.  
Laughlin, T.  
Marshall, E.  
McKenna, C.  
O'Neil, B.  
Piccinini, H.  
Postuma, P.  
Spencer, P.W.  
Whelan, A.M. (major appointment in Pharmacy)

### Lecturers

Ackerman, M.  
Addie, B.  
Adenuga, O.

Altenkirk, G.  
Archibald, S.  
Arseneau, J.  
Ashby, J.  
Ashton, B.  
Atkinson, C.  
Atkinson, S.  
Aucoin, M.  
Balser, E.  
Barkhouse, L.B.  
Barkwell, R.  
Barry, T.  
Beaton, B.  
Bell, B.  
Bennett, M.  
Berghuis, H.  
Blackadar, A.  
Blaggrave, D.  
Blanchard, M.  
Bloom, S.  
Bonang, L.  
Booth, W.  
Boulay, R.  
Braun, R.  
Brien, D.V.  
Brooks, J.  
Buchholz, K.  
Buffett, B.  
Buhariwalla, F.  
Burrill, R.  
Burton, C.  
Bustin, R.  
Cadegan, P.  
Cain, M.  
Caines, S.  
Cameron, S.  
Campbell, D.  
Campbell, G. (major appointment in Emergency Medicine)  
Canty, A.  
Carlos, M.  
Carmichael, P.  
Carrier, J.  
Carruthers, G.  
Celliers, A.  
Chandra, M.  
Chiasson, M.  
Chow, C.  
Christie, K.  
Clarke, K.  
Coady, K.  
Coish, C.  
Collins, A.  
Colpitts, A.  
Comeau, L.  
Connell, C.  
Connidis, S.  
Conrod, M.  
Conter, H.  
Conyers, R.  
Cooper-Rosen, E.  
Cote, C.  
Couture, S.  
Craig, B.  
Craig, P.  
Critchley, C.  
Crouse, S.  
Cudmore, D.  
d'Anjou, C.  
Davey, C.  
Davidson, B.  
Davis, P.  
Desmond, J.

Despres, M.	Johnson, W.L.
D'Intino, A	Johnston, M.
Donald, G.	Jost, E.
Doran, William	Kazimirski, M.
Dow, M.	Keating, P.
Doyle, M.	Keddy, J.
Ellerker, M.	Keizer, S.
Ellerker, S.	Kelly, C.
Elliott, C.	Kelly, P.
Ellis, S.	Kerr, P.
Eros, E.	Kinnear, H.
Fairman-Wright, M.	Kirkpatrick, J.
Fellows, J.	Kukreja, T.
Ferguson, L.	Lacey, K.
Ferguson, M.	LaFleur, E.
Fewer, K.	LaFrance, M.
Field, D.	Lambropoulos, C.
Fletcher, M.	Langley, S.
Foley, A.	Lappin, S.
Forest, G.	Laskowski, Derek (cross with Psychiatry)
Fraser, J.	Lawand, C.
Fraser, P.K.	Lawless, J.
Fraser, Z.	Lawson, B.
Frent, G.	Leahey, S.
Frizzle, T.	LeBlanc, S.
Gallagher, K.	LeCours, M.
Gallant, D.	Lee, P.
Gallant, S.	Lee, W.
Gammell, L.	Lee, W.R.
Genge, R.	Lewis, V.
Ghenea, I.	Li, J.
Giffin, B.	MacCallum, M.
Glazebrook, K.	MacCara, M.
Goddard, T.	Macdonald, C.
Goodfellow, M.	MacDonald, D.
Goodine, R.A.	MacDonald, G.
Goodwin, J.	MacDonald, I.
Gorman, M.	MacDonald, J.W.
Gradstein, J.	MacDougall, S.
Gradstein, R.	MacFarlane, A.
Graham, J.	MacKean, P.
Grant, G.	MacKenzie, R.J.
Gregoire, T.	MacKillop, J.
Griffin, G.	MacKinnon, R.
Grimes, G.	MacKnight, R.
Guy, T.	MacLean, C.B.
Haddad, C.	MacLennan, M.
Haines, G.	MacNearney, P.C.
Haleem, S.	MacNeil, L.
Hall-Losier, S.	MacNeil, M.
Hansen, P.	MacNeill, R.S.
Harrison, D.	Mader, J.
Hart, R.	Mah, E.
Hauman, H.	Makkar, N.
Harvey, W.	Mansfield, P.
Hawes, V.	Marshall, C.
Henderson, J.D.	Martell, D.
Henderson, J.H.	Martin, B.
Herman, S.	Massarelli, E.
Hickox, S.	McAuley, P.
Hollway, G.	McCormick, K.
Hooley, P.	McCrossin, M.
Houstoun, A.	McCutcheon, S.
Howard, J.	McDonald, A.J.
Hudson, C.	McKay, L.L.
Irrinki, A.	McLaughlin, W.
Irvine-Meek, J.	McNab, J.
James, H.	McNally, J.Cj.
Jeans, L.A.	McNally, K.
Jenkins, J.	McNeill, J.
Johnson, J.K.	Mercer, C.
Johnson, M.	Merritt, R.

Mershati, A.  
 Milburn, C.  
 Mishra, H.  
 Mitton, K.  
 Moon, J.  
 Moraes, A.  
 Morse, E.  
 Moyse, C.  
 Muise, R.  
 Mullan, R.  
 Mullins, JR.  
 Murphy, P.  
 Murray, K.  
 Murray, K.  
 Murray, K.A.  
 Neumann, A.  
 Newson, K.  
 Newton, P.  
 Nguyen, H.  
 Nicholson, J.  
 Northrop, S.  
 Nowlan, C.  
 Nunn, D.  
 O'Brien, C.  
 Olatunde, O.  
 O'Leary, D.  
 Oliver, R.  
 Olmstead, D.  
 Ortiz, A.  
 Parker, K.  
 Patriquin, M.  
 Perley, M.  
 Petropolis, N.  
 Phelan, P.  
 Plaxton, K.  
 Plummer, A.G.  
 Poirier, A.  
 Ponton-Beltran, C.  
 Prendergast, J.  
 Pugh, R.  
 Raghavan, S.  
 Raiche-Maarsden, M.  
 Randell, L.C.  
 Reid, D.  
 Reisch, H.  
 Rideout, A.  
 Ritter, J.  
 Roberts, S.  
 Robertson, S.  
 Ross, D.  
 Rowe, D.G.  
 Sainz, B.  
 Salah, J.  
 Salgado, D.  
 Sampson, M.  
 Saunders, K.  
 Saunders, W.D.  
 Savvopoulos, S.  
 Sealy, S.  
 Seaman, S.  
 Searle, L.  
 Sebastian, T.  
 Segato, P.  
 Sharma, S.  
 Sharpe, J.  
 Sheehan, N.  
 Sheehan, W.  
 Shehzad, A. A.  
 Silburt, B.  
 Silver, K.  
 Simon, M.  
 Skanes, S.

Slivko, T.  
 Slys, G.  
 Smith, A.  
 Smith, M.  
 Smith, V.  
 Snell, T.  
 Soliman, E.  
 Sommers, J.  
 Sommers, R.  
 Srinivasan, K.  
 Stewart, D.I.  
 Stewart, T.  
 St. Peters, C.  
 Straub, D.  
 Strong, J.  
 Stuart, C.  
 Sutherland, D.  
 Sutherland, L.  
 Sutton, C.  
 Symington, D.  
 Telfer, C.  
 Thomas, G.R.  
 Thompson, K.  
 Thomson, C.  
 To, D.  
 Todd, C.  
 Todd, R.  
 Tompkins, J.A.  
 Tran, P.  
 Vardy, P.  
 Veinot-Nash, J.  
 Verma, B.  
 Wadden, J.A.  
 Wadden, M.  
 Walter, A.  
 Watson, A.  
 Watson-Creed, G.  
 Watts, J.  
 White, E.  
 Wiebe, A.  
 Wieder, J.  
 Wildish, J.  
 Wile, I.  
 Wilson, K.W.  
 Wohlgemut, A.  
 Wood, D.  
 Woodford, T.  
 Yang, L.  
 Yee, K.  
 Yoshida, L.  
 Zed, J.  
 Zigante, N.  
 Zuidhof, A.  
 Zwicker, H.

## **A. Family Medicine**

As a multi-disciplinary educational team, we strive for excellence in teaching, using creative and innovative programs that support an educational foundation for students who go on to pursue Family Medicine Residency Program, as well as those interested in specialty training. We celebrate the collaborative aspects of practice and model this and life-long learning to our students, emphasizing the importance of continuity of care and the doctor/patient relationship.

## **B. MED I and MED II**

The Department participates in various units of the case-based learning tutorials and communication programs as well, students have the opportunity to learn more about family medicine through med I and II yearly electives.

### C. Clerkship (MED III)

All students complete a 6 week Family Medicine Clinical Clerkship rotation. Students have the option of completing either two 3-week rotations or one 6-week rotation with family doctors throughout the Maritimes. During this time third year medical students (clerks) will have the opportunity to augment the knowledge they gained during the Med I and II years.

The unit begins with a day and a half of orientation and seminars and ends with evaluations including a project presentation, an OSCE and a Multiple Choice Exam.

### D. Electives

Additional Family Medicine rotations are offered to clerks during their 4th year through elective opportunities throughout the Maritimes.

### E. Continuing Medical Education

The faculty contribute toward several Continuing Medical Education short courses either in planning or presentation, as well as traveling to community hospitals in the Maritime Provinces and presenting specific topics relating to Family Medicine.

### F. Residency Training

The Department of Family Medicine offers a two-year residency program. Our aim is to encourage our residents to become effective, compassionate family physicians who can care for their patients in hospital, ambulatory and community settings and are prepared to meet the changing health needs to the community. The program is accredited by the College of Family Physicians of Canada and candidates who complete this program are eligible to sit the certification examinations of the College of Family Physicians of Canada.

The residency programs in Family Medicine -Emergency Medicine, Health Care of the Elderly and Palliative Care are also available as extensions of the two-year Family Medicine program and are also accredited programs of the College of Family Physicians of Canada.

The Dalhousie Family Medicine residency program has approximately 96 residents (48 in each year) being taught across the Maritimes. There are six principal teaching sites: (Cape Breton, Fredericton, Halifax, Moncton, Prince Edward Island and Saint John) and many small communities where residents do rotations. Each of the six sites is a home base for a group of residents.

The program has an emphasis on rural practice and are prepared to meet the changing health needs of the community and moving around the Maritimes had been one of the characteristics of the program. New in July 2011 is the three year integrated Family Medicine Emergency Medicine Program based in Saint John, New Brunswick. This program will provide a training model that will train comprehensive family physicians with a special focus on the provision of emergency care. To better integrate the training of a physician who will practice Family and Emergency Medicine concurrently, this program combines the two aspects of practice in a more cohesive manner.

#### Suggested Textbooks:

- Patient Centered Medicine: Transforming the Clinical Method, Stewart, M. et al
- *Mosby's Family Practice Sourcebook: Evidence-based Emphasis, 3rd Edition, Ken Marshall*
- *A Textbook of Family Medicine, 2nd Edition, Ian R. McWhinney*
- Therapeutic Choices, 4th Edition, Evans, Michael Mosby 2006

#### Suggested Journals:

- *Canadian Family Physician*
- *The Journal of Family Practice*

## Medicine

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Location: Bethune Building, Fourth Floor  
QEII Health Sciences Centre  
Halifax, NS  
Telephone: (902) 473-2379

### The Carnegie and Rockefeller Professor and Head of Department

Purdy, R.A.

#### Professors

Acott, P. (major appointment in Pediatrics)  
Anderson, D.R.  
Bata, I.  
Benstead, T.  
Clarke, D.B. (major appointment in Surgery)  
Couban, S.  
Cox, J.  
Darvesh, S.  
Finlayson, L.A.  
Forward, K. (major appointment in Pathology)  
Gardner, M.J.  
Geldenhuys, L. (major appointment in Pathology)  
Grunfield, E. (Adjunct)  
Haase, D.A.  
Handa, S.P. (Saint John)  
Hanly, J.G.  
Hirsch, D.  
Horacek, B.M.  
Howlett, S. (major appointment in Pharmacology)  
Issekutz, T.B. (major appointment in Pediatrics)  
Johnston, B.L.  
Kells, C.M.  
Kiberd, B.A.  
Kirby, R.L.  
Kirkland, S.A. (major appointment in Community Health and Epidemiology)  
Langley, R.G.  
Leddin, D.  
Lo, C. (major appointment in Radiology)  
Ludman, M. (major appointment in Pediatrics)  
MacIntosh, D.G.  
Mann, O.E.  
Maxner, C.E.  
Miller, R.A. (major appointment in Radiology)  
Mitnitski, A.  
Morrison, N.  
Murray, T.J.  
Nassar, B. (major appointment in Pathology)  
O'Brien, B.D.  
Padmos, A.M. (Adjunct)  
Parker, L. (joint appointment with Pediatrics)  
Peterson, T.  
Phillips, S.  
Pohlmann-Eden, B.  
Pollak, P.T.  
Purdy, R.A.  
Rayson, D.  
Robertson, H.A. (major appointment in Pharmacology)  
Robinson, K.S.  
Rocker, G.  
Rockwood, K.  
Ross, J.B.

Sadler, R.M.  
 Schlech, W.  
 Simpson, C.D.  
 Soroka, S.D.  
 Sutton, E.  
 Title, L.  
 Tonks, R.S. (Adjunct)  
 Turnbull, G.K.  
 UR, E. (Adjunct)  
 Van Zanten, S.J.O.V. (Adjunct)  
 Walsh, N. (major appointment in Pathology)  
 Weaver, D.  
 West, K.A.  
 West, M.L.  
 Yeung, P. ((major appointment in Pharmacy)

## Associate Professors

Abbott, E.C.  
 Bakowsky, V.  
 Basta, M.N.  
 Bewick, D. (Saint John)  
 Beydoun, H.  
 Bhan, V.  
 Blanchard, C.  
 Bowie, D.M.  
 Bowles, S. (major appointment in Pharmacy)  
 Carver, D.  
 Cockeram, A. (Saint John)  
 Colwell, B.D.O.  
 Comeau, T. (Saint John)  
 Dipchand, C.  
 Dorreen, M.  
 Farina, D.  
 Fernandez, C. (major appointment in Pediatrics)  
 Finkle, S.N.  
 Fisk, J.D. (major appointment in Psychiatry)  
 Freter, S.H.  
 Garduno, R. (major appointment in Microbiology & Immunology)  
 Giacomantonio, N.  
 Ginther, D.G.  
 Gordon, J.  
 Grant, I.  
 Green, P.  
 Gregor, R.D.  
 Haldane, D.J. (major appointment in Pathology)  
 Hatchette, T.F. (major appointment in Pathology)  
 Hernandez, P.  
 Hoey, J. (Saint John)  
 Horne, S.G.  
 Imran, S.A.  
 Jackson, S.  
 Jarrett, P. (Saint John)  
 Josephson, E.B.  
 Kaiser, S.  
 Keough-Ryan, T.  
 Koilpillai, C.J.  
 Lang, B.A. (major appointment in Pediatrics)  
 Lodge, R.  
 Love, M.  
 McCormick, R.  
 MacKay-Lyons, M. (major appointment in Physiotherapy)  
 MacKnight, C.  
 Mallery, L.  
 Marr, D. (Saint John)  
 McGlone, J.M. (major appointment in Psychology)  
 McIntyre, P.  
 McNeil, S.A.  
 McParland, C.P.  
 Miller, R.A.W.  
 Morgunov, N., (major appointment in Physiology & Biophysics)  
 Morrison, D.L.  
 Nixon, M.D. (joint appointment with Family Medicine)

Parkash, R.  
 Patel, S.  
 Peltekian, K.  
 Quraishi, A.  
 Rajaraman, R. (Adjunct)  
 Raju, M.K. (Saint John)  
 Ramsay, S.E. (major appointment in Pediatrics)  
 Reid, E.L.  
 Reiman, A. (Saint John)  
 Sapp, J.  
 White, D.  
 Wood, L.A.  
 Workman, S.

## Assistant Professors

Alqdah, M.  
 Andreani, O. (Saint John)  
 Andrew, M.  
 Apostolides, C.  
 Assi, H.  
 Baer, C.  
 Beaudin, D.J. (Saint John)  
 Charlebois, P.  
 Clayton, D.  
 Cookey, B.J.  
 Costain, G. (Saint John)  
 Crofts, P.A.  
 Crowell, R.  
 Cummings, E.A. (major appointment in Pediatrics)  
 Davidson, R.J. (major appointment in Microbiology & Immunology)  
 Davis, I.R.C.  
 Davis, M.L.  
 Dobson, R.L. (major appointment in Radiology)  
 Dornan, J.M. (Saint John)  
 Drucker, A.  
 Dupere, D.  
 Dyack, S. (major appointment in Pediatrics)  
 Elkhateeb, O.E.  
 Eskes, G. (major appointment in Psychiatry)  
 Foyle, A. (major appointment in Pathology)  
 Fraser, J. (major appointment in Radiology)  
 Gallant, G.J.  
 Gee, S.  
 Gillis, J. (major appointment in Pediatrics)  
 Goodyear, M.D.E.  
 Grant, E. (Saint John)  
 Gray, C.  
 Gruchy, S.E.  
 Gubitz, G.  
 Guy, F.C.  
 Hanada, E.  
 Hancock, J. (major appointment in Anesthesia)  
 Hasegawa, W.S.  
 Hobbs, C.  
 Horton, R.  
 Huber, A. (major appointment in Pediatrics)  
 Jeyakumar, A.  
 Joshi, P.C. (Saint John)  
 Joyce, B.M.  
 Keeling, D.N. (Saint John)  
 Kew, A.  
 Kidwai, B.  
 King, D.B.  
 Kirby, S.  
 Koller, K.E.  
 Koshi, E. (major appointment in Anesthesia)  
 Lacuesta, G.  
 Linden Smith, J.  
 MacDonald, D.  
 MacDonald, E. (Saint John)  
 MacDonald, N.  
 MacNeil, D. (Saint John)

MacNeil, M.  
Manning, J.D.  
McGibbon, A.  
McKelvey, J.R.  
McVeigh, S.A  
Mears, P.  
Merryweather, R.J.  
Michael, R.T.  
Moorhouse, P.  
Morzycki, W.  
Murray, S.J.  
Nadeem, S.N.  
Pahil, R.S.  
Panek, R.  
Pasternak, S. (major appointment in Pathology)  
Penney, L.S. (major appointment in Pediatrics)  
Perk, M.  
Rajda, M.  
Ramer, S.A.  
Ransom, T.  
Reardon, M.  
Rebello, R.  
Rohde, J.R. (major appointment in Microbiology & Immunology)  
Saric, A.  
Schoffer, K.  
Schweiger, F.  
Shatshat, S.  
Sheridan, W.J.  
Shivakumar. S.P.  
Short, C.A.  
Skidmore, D. (major appointment in Pediatrics)  
Slayter, K. (Adjunct)  
Sohi, P.S. (Saint John)  
Song, X. (Adjunct)  
Stewart, J.W.  
Stewart, R.  
Teskey, R.J. (Saint John)  
Thomas, N. (joint appointment in Microbiology & Immunology)  
Williams, G.S.  
Williams, S.  
Winsor, W.  
Yhap. M. (major appointment in Pediatrics)  
Younis, T.

### Lecturers

Adams, L.  
Aikman, P.  
Aires, L.M.  
Ajayi, A.  
Al-Amri, A. (Saint John)  
Al-Karain, M.Y.  
Ansari, S.O.  
Aslam, Z.  
Barry, C. (Saint John)  
Baxter, K. (Saint John)  
Baxter, M.L.  
Bedard, R.  
Bessoudo, R. (Saint John)  
Binedell, W.  
Bishop, G.W. (Saint John)  
Bourgeois, R.  
Bourque, S.  
Brake, D.  
Burnell, M.J. (Saint John)  
Chakfe, Y.  
Champion, P.E.  
Clarke, B. (major appointment in Family Medicine)  
Connors, L.  
Curley, M.  
D'Intino, A.F.  
Desai, D.  
Docherty, P.

Dolan, S.P. (Saint John)  
Douglas, J. (Saint John)  
Dow, G.  
Duke, S.  
Ecker, G.  
Epstein, I.L.  
Feltmate, P.  
Fong, P. (Saint John)  
Forgeron, M.P. (Saint John)  
Gallant, T.M.  
Gillis, C. (Saint John)  
Gogan, N. (Saint John)  
Gorman, M. (major appointment in Family Medicine)  
Hanson, D.  
Harper, B.  
Harrigan, L.  
Harvey, R.  
Hayes, R. (Saint John)  
Henderson, J.  
Hewlett, T.J.  
Hussein, S.  
Igoe, M.  
Irvine, M.  
Johnson, J.K. (major appointment in Family Medicine)  
Joy, G. (major appointment in Radiology)  
Kasina, R.  
Keefe, J. (Adjunct)  
Kelly, C.  
Kemp, K.M.  
Khan, F.  
Klonowska, M.  
Koller, O.L.  
Kuruakose, R. (Saint John)  
Lazovskis, J.  
Leckey, J.R.  
Leckey, R.  
Lightfoot, P.D.  
Lutchmedial, S. (Saint John)  
MacAulay, D.  
MacDonald, P.  
MacDougall, A.D.  
MacKinnon, M. (Saint John)  
MacLean, G.L. (Saint John)  
MacPherson, K.M. (major appointment in Community Health & Epidemiology)  
MacSween, M.  
Maharaj, M.  
Majaess, G.G.  
Manzar, K.  
Marsters, D.  
McAvinue, T.  
McMullen, S.  
Milczarek, J.  
Moghrabi, B.H.  
Mountain, A.D.  
Nestel, M.  
Northgrave, S.  
Nowak, Z.N.  
O'Connell, C.  
Paddock, V. (Saint John)  
Paradiso, G.  
Parkash, R.  
Parkash, S. (major appointment in Pediatrics)  
Parker, K. (Adjunct)  
Pike, J.H.  
Pippy, C. (Saint John)  
Poole, B.  
Poyah, P.  
Rappard, S.  
Reid, P.H. (Saint John)  
Rhynold, E.S. (Saint John)  
Robinson, D.

Rubin, S.  
 Sadowska, E. (Saint John)  
 Searles, G. (Saint John)  
 Shaikh, A.  
 Shaw, E.  
 Sheehan, W. (major appointment in Family Medicine) (Saint John)  
 Sheppard, D.  
 Shrayyef, M.Z.  
 Schröder, R.  
 Skedgel, C. (Adjunct)  
 Snow, S.L.  
 Solven, F.  
 Squarey, K.J.  
 Stern, R.  
 Stevenson, R.S. (Saint John)  
 Sullivan, G. (Saint John)  
 Taillon, A. M.  
 Taylor, T.A.  
 Thanamayooran, S.  
 Thompson, K.  
 Toal, S. (Saint John)  
 Torok, M.T.  
 Tremaine, R.D.L.  
 Trudeau, C.D.  
 Webster, D. (Saint John)  
 West, P.H.F. (Saint John)  
 Weston, L.E.  
 Wightman, H.  
 Wong, J.  
 Woo, D.C.  
 Worley, S.  
 Yung, J.  
 Zaman, K.  
 Zwicker, D.

## A. Academic Programs

The Department of Medicine is located at the Queen Elizabeth II Health Sciences Centre, Halifax, N.S. and the Saint John Regional Hospital, Saint John, N.B.

Clinical rotations including ambulatory care in the Queen Elizabeth II Health Sciences Centre are undertaken at all sites including the Victoria General, Nova Scotia Cancer Centre, Nova Scotia Rehabilitation Centre, Halifax Infirmary and Abbie J. Lane Memorial.

## B. Academic Classes

### First-Year Medicine

The Department of Medicine participates in the following components of the Med1 curriculum (e.g., writing cases, giving lectures and tutoring):

- Foundations
- Host Defense
- Metabolism and Homeostasis
- Human Development

Members of the Department of Medicine also teach in the Clinical Skills program.

The divisions involved with this teaching are:

- Cardiology
- Clinical Dermatology & Cutaneous Sciences
- Endocrinology
- Gastroenterology
- General Internal Medicine
- Geriatric Medicine
- Hematology
- Infectious Disease
- Medical Oncology
- Nephrology
- Neurology
- Palliative Medicine
- Physical Medicine & Rehabilitation

- Respiriology
- Rheumatology

### Electives

Students choose electives from the divisions listed above.

## Second-Year Medicine

1. The Department of Medicine provides 15 bedside half-day teaching sessions at weekly intervals. These sessions are conducted in small groups and are designed for students to practice integrating their learning and to become proficient at conducting complete histories and physical examinations on patients with a variety of presenting complaints. The Department also provides seven half-day sessions to one-third of the class at a time at weekly intervals as a clinical introduction to Neurological Medicine. Recommended Texts: Cecil's Essentials of Medicine; Davidson's Principles and Practice of Medicine; Bates, A Guide to Physical Examination.
2. Electives: The Department offers students electives in areas within its various divisions.
3. Members of the Department are involved in the Case Practice sessions at the Fenwick Learning Resource Centre, where students have clinical encounters with simulated patients which illustrate the relevance of the material they are learning in the corresponding COPS (Case Oriented Problem Stimulated) curriculum component.

## Third and Fourth-Year Medicine

### i. Core Medicine Clerkship

The core Internal Medicine Clerkship consists of 12 sequential weeks of full time internal medicine clinical care experience during the third year. This is broken down into three four-week rotations. Each Clinical Clerk does one rotation on a medical teaching unit at the Halifax Infirmary Site of the QEII Health Sciences Centre or in the Saint John Regional Hospital. A second general medical type experience will be selected from a short menu of general medical teaching services at the Victoria General and Halifax Infirmary Sites of the QEII Health Sciences Centre (Cardiology, Geriatric Medicine, Hermatology, Intensive Care, Nephrology, Neurology, Palliative Medicine). A third four-week rotation is a medical sub-specialty selective, which the students can take at the QEII Health Sciences Centre or the Saint John Regional Hospital.

During these rotations the Clinical Clerk functions as a junior member of house staff with responsibilities for inpatients and, particularly during the sub-specialty selective rotation, outpatient care. Students improve their history and physical examination skills under the supervision of more senior members of the clinical care team. They also learn to investigate and manage common medical problems. This involves a mature commitment to continuous patient care including on-call responsibilities, staying within the health care facility for a 24-hour continuous time block.

Students participate in teaching rounds on each of the rotations to which they are assigned. There are also daily noon hour seminars presented at the Halifax Infirmary site of the QEII Health Sciences Centre, and a series of lectures at the Saint John Regional Hospital. In addition, a series of two- or three-hour Wednesday seminars provides an educational program to the Clinical Clerks on topics that are less commonly seen on clinical rotations. The Clinical Clerks are provided with a list of common medical topics around which they should base their reading for internal medicine.

At the end of each rotation each student is evaluated using a standardized in-training evaluation report (ITER). This is filled out by the student's preceptor with input from more senior house staff as well as other health care professionals. At the end of the 12-week block a written multiple choice examination takes place. At the end of every 2 blocks (24 weeks) there is an Objective Structured Clinical Examination (OSCE); the March OSCE is formative and the September OSCE is comprehensive.

### ii. Clerkship Electives in Internal Medicine

During the fourth year of medical school, the students are provided with a block of time for elective experiences. During this time, a Clinical Clerk may choose to do an elective within the Department of Medicine. These electives may be similar to the sub-specialty rotations in third year, or a

more individualized program may be arranged with a preceptor within the Department of Medicine.  
 During the 21 week elective period, students must complete a three-week Care of the Elderly rotation, a minimum of three weeks in an interdisciplinary elective, and a minimum of three weeks in a non-tertiary or community setting.  
 Evaluations consist of completion of an in-training evaluation report by the preceptor.

### C. Residency Training

The Department provides a fully approved Internal Medicine training program and fully approved specialty training in Cardiology, Critical Care, Dermatology, Endocrinology, Gastroenterology, General Internal Medicine, Geriatric Medicine, Hematology, Infectious Diseases, Medical Oncology, Microbiology, Nephrology, Neurology, Palliative Medicine, Physical Medicine Rehabilitation, Respiriology, and Rheumatology. These programs are based at the various sites of the QEII Health Sciences Centre. As of July 2007, Core Internal Medicine training is also offered at the Saint John Regional Hospital as a satellite training site.

1. Internal Medicine: The core program in internal medicine is a three-year program in which the resident gains experience in general internal medicine, critical care and most of the sub-specialties of internal medicine. The general internal medicine experience includes two large Medical Teaching Units with pyramidal tiers of housestaff. There are significant ambulatory care rotations from the second year onwards. Community experience is offered in the first year. The third year of training includes more consultation experiences. Successful completion of the core program in internal medicine is a prerequisite to sub-specialty programs.
2. Cardiology: This program is based at the Halifax Infirmary with rotations to the Izaak Walton Killam - Grace Health Centre.
3. Critical Care: This program is based at the Victoria General Site with rotations at the Halifax Infirmary.
4. Dermatology: This program is based at the Victoria General Site with rotations at the Halifax Infirmary Site and the Izaak Walton Killam - Grace Health Centre.
5. Endocrinology: This program is based at the Victoria General Site.
6. Gastroenterology: This program is based at the Victoria General Site and the Halifax Infirmary Site with elective rotations in Pathology and Radiology or to the Izaak Walton Killam - Grace Health Sciences Centre.
7. General Internal Medicine: This includes a fourth year of training which is specifically tailored to career needs.
8. Geriatric Medicine: This program is based in the Veteran's Memorial Building.
9. Hematology: This program is based at the Victoria General Site with rotations to the Izaak Walton Killam - Grace Health Sciences Centre and the Hematology Laboratories.
10. Infectious Diseases: This program is based at the Victoria General Site, with rotations at the Halifax Infirmary.
11. Medical Oncology: This program is based at the Victoria General site and Nova Scotia Cancer Centre.
12. Infectious Diseases/Microbiology: This is a combined program based at the Victoria General Site.
13. Neurology: This program is based at the Halifax Infirmary Site.
14. Palliative Medicine: This Program is based at the Victoria General Site.
15. Physical Medicine and Rehabilitation: This program is based at the Nova Scotia Rehabilitation Centre, with rotations available in appropriate medical and surgical disciplines.
16. Respiriology: This program is based at the Halifax Infirmary site.
17. Rheumatology: This program is based in the Victoria General Site.

## Microbiology and Immunology

Location: Sir Charles Tupper Medical Building  
 Telephone: (902) 494-3587  
 Fax: (902) 494-5125

### Professor and Head of Department

Marshall, J.S.

### Professors

Anderson, R.  
 Bortolussi, R.A. (major appointment in Pediatrics)  
 Duncan, R.  
 Forward, K.R. (major appointment in Pathology)  
 Halperin, S.A. (major appointment in Pediatrics)  
 Hoskin, D.W. (major appointment in Pathology)  
 Issekutz, A.C. (major appointment in Pediatrics)  
 Issekutz, T. (major appointment in Pediatrics)  
 Johnston, G.C.  
 Lee, P.W.K. (joint appointment in Pathology)  
 Lee, S.F. (joint appointment in Oral Biology)  
 Lee, T. (joint appointment in Surgery)  
 Lehmann, C. (major appointment in Anaesthesia)  
 Lin, T.-J. (joint appointment in Pediatrics)  
 Marshall, J.S.  
 Richardson, C. (joint appointment in Pediatrics)  
 Stadnyk, A.W. (major appointment in Pediatrics)

### Associate Professors

Barnes, C.  
 Davidson, R.  
 Faulkner, G.T.  
 Garduno, R. (joint appointment in Medicine)  
 Giacomantonio, C. (major appointment in Surgery)  
 Haldane, D.J.M. (major appointment in Pathology)  
 Johnston, B. (joint appointment in Pediatrics)  
 West, K. (major appointment in Medicine)

### Assistant Professors

Berman, J. (major appointment in Pediatrics)  
 Easton, A. (major appointment in Pathology)  
 Hatchette, T. (major appointment in Pathology)  
 Legare, J.F. (major appointment in Surgery)  
 Li, Y.H. (major appointment in Dentistry)  
 Liwski, R. (major appointment in Pathology)  
 Mailman, T. (major appointment in Pediatrics)  
 McCormick, C.  
 Rohde, J.  
 Thomas, N. (joint appointment in Medicine)  
 Wang, J. (joint appointment in Pediatrics)

### Sr. Instructor

Murray, L.E.

### A. Course of Study

#### First-Year Medicine

The Department of Microbiology and Immunology contributes to the undergraduate medicine curriculum in the first year of medical school through its offering in the Host Defence Unit. The unit is comprised of a series of lectures, case studies and laboratory sessions which address basic science issues underlying clinical studies encountered in the disciplines of Immunology, Inflammation and Infectious Disease.

## Residency Training

An integrated University residency training program is given by the Department. It comprises four years in Medical Microbiology and meets the requirements of the Royal College of Physicians and Surgeons of Canada. Participating hospitals are the QEII Health Sciences Centre and the Izaak Walton Killam Health Centre for Children, Women and Families.

## B. Graduate Studies

The MSc program generally requires a minimum of two years to complete and comprises classes in microbiology and immunology and allied disciplines, and research work resulting in a written thesis.

The PhD program is approximately four to five years duration and involves class work as for the MSc plus research of a high calibre culminating in a thesis.

Graduate program streams in Immunology, Virology, Molecular Genetics, Cancer Cell Biology and Microbial Pathogenesis are available to allow well-qualified students to concentrate their studies while acquiring general knowledge and understanding of major concepts in Microbiology and Immunology. Please consult the Graduate Studies calendar for list of classes offered.

Students should consult the Graduate Studies Calendar or the Graduate Studies Coordinator for a full description of these programs.

## C. Research Facilities

Members of the Department are housed in the Sir Charles Tupper Medical Building, the QEII Health Sciences Centre, the IWK Health Centre, the Centre for Clinical Research, Mackenzie Building, and the Dentistry Building. Research in both basic and clinical microbiology, immunology and related disciplines is carried out in laboratories at these locations.

## D. Classes

### Classes for Dental Students

First Year Microbiology: This class covers the general principles of medical bacteriology, virology, mycology, parasitology and immunology. Specific topics related to oral infectious diseases complete the class.

### Classes for Science Students

The Department of Microbiology and Immunology offers a BSc. Honours program, a Combined Honours program with the departments of Biochemistry & Molecular Biology and Biology, and provides a wide range of classes, dealing with various aspects of microbiology and immunology. Students should consult the Faculty of Science Undergraduate Calendar for a list of courses offered.

### Classes for Health Professions Students

The Department of Microbiology and Immunology offers separate microbiology courses to students in the School of Pharmacy, School of Nursing, Dental Hygiene, Dentistry and School of Physiotherapy. Please consult the appropriate Calendar for detailed course descriptions.

# Obstetrics and Gynecology

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Location: IWK Health Centre  
5980 University Avenue  
PO Box 9700  
Halifax, Nova Scotia B3K 6R8  
Telephone: (902) 494-2455

## Professor Emeritus

Tupper, W.R.C.

## Professor and Head of Department

Armson, B.A.

## Professors

Allen, A.C. (major appointment in Pediatrics)  
Armson, A.  
Bent, A.  
Dodds, L. (joint appointment in Pediatrics)  
Farrell, S.A.  
Graves, G.R.  
Joseph, K.S. (joint appointment in Pediatrics)  
Van den Hof, M.  
Wenning, J.  
Wilkinson, M.  
Young, D.C.

## Associate Professors

Allen, V.  
Bentley, J.  
Bouzayen, R.  
Craig, C.  
Dempster, J.  
Gilmour, D.  
Grimshaw, R.  
MacLeod, L.  
Parish, B.  
Scott, H.  
Shukla, R. (major appointment in Anaesthesia)  
Stinson, D.L. (major appointment in Pediatrics)  
Whyte, R. (major appointment in Pediatrics)

## Assistant Professors

Amir, B.  
Delisle, I.  
Hamilton, L.  
Jangaard, K. (major appointment in Pediatrics)  
Kieser, K.  
Murphy-Kaulbeck, L.  
Murphy, P. (major appointment in Physiology/Biophysics)  
Pearce, P. (major appointment in Psychiatry)  
Reardon, E.  
Rittenberg, D.  
Rittenberg, P.  
Robinson, S. (major appointment in Medicine)  
Sanderson, F.  
Scott, T.  
Van Eyk, N.  
Vincer, M. (major appointment in Pediatrics)  
Zilbert, A.

## Lecturers

Colford, D.  
Kogon, D.  
Lee, W.

Mawdsley, S.  
Sheppard, K.

### Clinical Instructors

Adam, C.  
Brodie, G.  
Butt, K.  
Caddick, R.  
Christie, G.B.  
Connors, S.  
Crowley, J.  
Crumley, J.  
Cudmore, D.W.  
Gardner, A.  
Gillespie, K.  
Knickle, D.A.  
Landau, P.  
MacKay, J.

The objectives of the Department are to make available a basic core of knowledge in Obstetrics and Gynecology, and, at the same time, provide sufficient opportunity for self-education. The objectives are those laid out in the "core curriculum" developed by the Association of Professors of Obstetrics and Gynecology.

The objectives indicate the minimum of knowledge, skills and behaviour patterns the student must attain prior to entering a residency. The Department provides lectures, audio-visual aids, discussion groups and suggested reading material. In addition, students have an opportunity to be actively involved in patient assessment and care.

### A. COPS Clerkship

Third year medical students spend six weeks in Obstetrics & Gynecology. Students may choose to do their rotation in Halifax, Saint John, or Kentville. The rotation provides a broad view of reproductive health as it pertains to women, covering the full spectrum from birth to climacteric. Students are provided with opportunity for good clinical exposure at all sites.

### B. Electives

The Department of Obstetrics and Gynaecology offers electives in General Obstetrics and Gynaecology (either at the IWK or in community sites), Operative Gynaecology, Gynaecology, Maternal-Fetal Medicine, Gynaecologic Oncology, Urogynaecology, and Reproductive Endocrinology. Students outline their learning objectives and appropriate preceptors are assigned.

### C. Postgraduate Training in Obstetrics and Gynecology

Training required to be a specialist in Obstetrics and Gynecology involves five years of post-MD specialty training, which includes a PGYI year. Rotations include Obstetrics and Gynecology, Palliative Care, Internal Medicine, General Surgery, Surgical Intensive Care, Emergency Medicine, and elective rotations. During the PGYI year trainees may receive part of their education at the IWK Health Centre and the QEII Health Sciences Centre in Halifax, Nova Scotia; Saint John Regional Hospital, Saint John, New Brunswick.

The remaining four years, PGYII through PGYV, involves two years of core Obstetrics and Gynecology, a year and a half of sub-specialty and electives, and six months as senior resident in Obstetrics and Gynecology. This program is designed to meet the requirements of the Royal College of Physicians and Surgeons of Canada. Hospitals participating are the IWK Health Centre and the QEII Health Sciences Centre in Halifax, Nova Scotia, and the Saint John Regional Hospital, Saint John, New Brunswick.

A formal academic program includes, Grand Rounds and Perinatal Rounds, Journal Clubs, and weekly resident education seminars covering all areas of obstetrics and gynaecology.

Post graduate training is offered in Maternal-Fetal Medicine, Reproductive Endocrinology and Urogynaecology.

## Ophthalmology & Visual Sciences

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Location: Queen Elizabeth II Health Sciences Centre  
1276 South Park Street  
Halifax, NS B3H 2Y9  
Telephone: (902) 473-4343

### Professor and Head of Department

Cruess, A.F.

### Professors

Baldrige, W.B.  
Barnes, S.  
Chauhan, B.C.  
Guernsey, D.  
Heathcote, J.G.  
Kelly, M.E.  
LaRoche, G.R.  
LeBlanc, R.P.  
Maxner, C.E.  
Ramsey, M.S.  
Tremblay, F.

### Associate Professors

Artes, P.  
Dickinson, J. D.  
Kozousek, V.  
Nicolela, M.  
O'Brien, D.M.  
Persaud, D.D.  
Robitaille, J.  
Samad, A.

### Assistant Professors

Andrews, D.M.  
De Becker, I.  
George, S.P.  
Hoskin-Mott, A.E.  
Humayan, M.  
MacNeill, J.R.  
Mishra, A.V.  
Orr, A.  
Pasternak, S.  
Rafuse, P.E.  
Ritenour, R.  
Sapp, G.A.  
Seamone, C.  
Shuba, L.

### Lecturers

Belliveau, D.J.  
Hahn, E.  
Lakosha, H.  
Maleki, B.  
Mann, C.G.  
Mohandas, R.  
Pretty, B.R.  
Scott, R.C.  
Silver, M.  
Tan, A.

## A. Undergraduate Medical Training

Med1      Students learn ocular examination in the patient-doctor curriculum

Med2      Ophthalmology is represented in the neuroscience curriculum

Med3 & 4 Electives available

## B. Residency Training

An integrated University residency training program is available consisting of a five year postgraduate program with four core clinical years meeting the requirements of the Royal College of Physicians and Surgeons of Canada. The PGY1 year consists of formative rotations in relevant services including twelve weeks of Ophthalmology. Clinical activities are carried out in the facilities of the QEII Health Sciences Centre, the IWK Health Centre, and selected community based locations. A mandatory research component of the program is supported by a strong faculty.

# Pathology

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Location:            Tupper Building  
                         Eleventh Floor  
Telephone:        (902) 494-2091  
Fax:                (902) 494-2519

## Professors Emeriti

Ghose, T.  
Janigan, D.T.

## Head of Department

Heathcote, J.G.H.

## Professors

Anderson, D.  
Blay, J.  
Forward, K. (joint appointment in Microbiology and Immunology)  
Fraser, R.B.  
Geldenhuis, L.  
Greer, W.L.  
Guernsey, D. (cross appointment in Physiology and Biophysics)  
Hanly, J. (major appointment in Medicine)  
Heathcote, J.G.H.  
Hoskin, D. (joint appointment in Microbiology and Immunology)  
Issekutz, A. (major appointment in Pediatrics)  
Issekutz, T. (joint appointment in Pediatrics)  
Lee, P. (joint appointment in Microbiology and Immunology)  
Lee, T. (major appointment in Microbiology & Immunology)  
Macauley, R.  
Marshall, J.S. (major appointment in Microbiology and Immunology)  
Nanj, A.  
Nassar, B.A.  
Sadek, I.  
Waisman, D.  
Walsh, N.  
Wanless, I.

## Associate Professors

Alwayn, I.  
Barnes, P.J.  
Bullock, M.  
Cheng, C.  
Easton, A.  
Flick, J. (Saint. John)  
Foyle, A. (cross appointment in Medicine)  
Gaskin, D.  
Haldane, D.  
Harrison, K.  
Hatchette, T.  
Hirsch, G.M. (major appointment in Surgery)  
Johnston, B. (major appointment in Microbiology and Immunology)  
Liwski, R.  
Magee, F.  
Morava-Protzner, I. (Saint. John)  
Murray, S.K.  
Riddell, C. (cross appointment in Biochemistry)  
Robitaille, J. (major appointment in Ophthalmology)  
Sapp, H.  
Shawwa, A.  
West, K. (major appointment in Medicine)  
Xu, Z.

## Assistant Professors

Bedard, K.

Dakin-Hache, K.  
Davidson, R.J. (major appointment in Microbiology & Immunology)  
Dellaire, G.  
Godlewski, M.K. (Saint John)  
Hancock-Friesen, C. (major appointment in Surgery)  
Hossain, M. (Saint John)  
Huang, W.Y.  
Kabwash, E.  
Koupaei, R.  
Leblanc, J.  
Legaré, J.F.  
MacLellan, D. (major appointment in Surgery)  
Mailman, T.  
Merrimen, J.  
Morash, B.  
Obenson, K. (Saint John)  
O'Brien, A.M.E. (Saint John)  
Pasternak, S.  
Protzner, F.K. (Saint John)  
Yang, P.

### **Lecturers**

Bowes, M.J.  
Rahmeb, T.  
Umar, I.

### **Adjunct Professors**

MacIntosh, R.  
Samuels, M.  
Wright, J.R.

## **A. Course of Study**

### **First Year Medicine**

General Pathology: Pathology in the first year of medicine is combined with Immunology and Microbiology to form an eight week unit (PIM Unit) in the COPS curriculum. The four weeks of pathology teaching deals with understanding of basic responses of cells, tissues and organs to various injurious stimuli with particular emphasis on the role of such responses in the pathogenesis of disease. The subjects covered by the program are: cell injury, inflammatory responses, neoplasia, fluid and hemodynamic derangements. These are presented to the students through: (1) lectures, (2) case discussion in small group tutorial sessions, (3) laboratory sessions.

The class provides students with the basic pathology knowledge necessary to understand pathological changes in diseased organs in the subsequent years.

### **Second Year Medicine**

System Pathology: System Pathology forms a part of the organ oriented units established for the second year. Several members of this Department are actively involved in incorporating laboratory sessions and lectures in various system units.

### **Electives**

A program is available, by arrangement, for a limited number of students who wish to have electives and extend their learning in pathology beyond what is presented in the core program of lectures and laboratories, specifically those considering pathology as a future career.

## **B. Open Conferences**

A number of departmental conferences in the Dr. D.J. Mackenzie Laboratories are available to students. These are scheduled weekly throughout the year and are: surgical pathology, gross autopsy pathology, neuropathology, GI pathology, nephropathology, pulmonary, dermatopathology uropathology, transplant pathology, ear-nose-throat, cytological nervous system, eye, gynaecologic pathology rounds, lecture classes in pathobiology, clinical medical biochemistry.

## **C. Residency Training**

An integrated University residency training program is available in the Department, meeting the requirements of the Royal College of Physicians and Surgeons of Canada in Anatomical Pathology, General Pathology and Hematologic Pathology. Participating hospitals are the QEII Health Sciences Centre, the IWK Health Centre for Children, Women and Families, and the Saint John Regional Hospital in Saint John, New Brunswick.

## **D. Classes**

### **Classes for Dentistry Students**

Second Year: A systematic survey of human disease is given with special emphasis on material directly relevant to the practice of Dentistry. The class is described in detail in this calendar in the Faculty of Dentistry section.

### **Classes for Graduate Students**

The Department currently offers both a MSc and a PhD graduate studies program. Please consult the Graduate Studies calendar for class information.

# Pediatrics

Interim Head: Dr. Wade Watson  
Location: IWK Health Centre  
Halifax, Nova Scotia  
Telephone: (902) 470-8229  
Fax: (902) 470-7975

## Professors

Acott, P., MD (Dalhousie), FRCPC, Nephrology/Endocrinology  
Allen, A., MD, CM (McGill) FAAP, FRCPC, Neonatal-Perinatal Medicine  
Bernstein, M.L., MD, FRCPC, Chief, Division of Hematology, Oncology  
Blake, K., MB (London), FRCPC, General Pediatrics  
Bortolussi, R., MD (Toronto), FRCPC, Pediatric Infectious Disease  
Bryson, S., PhD (McGill) Joan & Jack Craig Chair in Autism  
Camfield, C., MD (U.Michigan) FRCP, General Pediatrics/Neurology  
Camfield, P., MD (Harvard), FRCPC, Neurology  
Cook, H., BSc, MSc, PhD (Dalhousie), Atlantic Research Centre  
Crocker, J., MD, FRCPC, DCL (Hon), Nephrology  
Dodds, L., MS (U Washington), PhD (U Toronto), Perinatal Epidemiology  
Dooley, J., MB, BCh, BAO (Ireland), FRCPC, Neurology  
Fernandez, C., MD (McMaster), FRCP, Pediatric Hematology/Oncology  
Finley, J., MD (McGill), FRCPC, Pediatric Cardiology  
Frager, G., MD (McMaster), FRCPC, Hematology/Palliative Care  
Goldbloom, R., OC, MD, CM (McGill), FRCPC, FAAP, General Pediatrics  
Halperin, S., MD (Cornell), FRCPC, Infectious Disease  
Issekutz, A., MD (Dalhousie), FRCPC, Infectious Disease and Immunology  
Issekutz, T., MD (Dalhousie), FRCPC, Head, Division of Immunology  
Kronick, J., MD, PhD (McMaster) Medical Genetics, FAAP, FRCPC  
Langley, J., MD (Dalhousie), MSc (McMaster), FRCPC, Infectious Disease  
Ludman, M., MD (Brown) FRCPC, FCCMG, Medical Genetics  
MacDonald, N., MD (Ottawa) FRCPC, Infectious Disease  
McMaster, C., BSc, PhD (Manitoba), Membrane Biochemistry & Molecular Biology  
McMillan, D., MD (Alberta), FRCPC, Neonatal-Perinatal Medicine  
Parker, L., PhD, Pediatrics & Community Health & Epidemiology  
Ridgway, N., BSc, MSc, PhD (UBC), Atlantic Research Centre  
Stadnyk, A., BSc, PhD (McMaster), Immunology  
Walker, C. R., MB, ChB (Manchester, UK), FAAP, FRCPC, Pediatrics (Neonatal-Perinatal Medicine)  
Watson, W.T.A., MD (dal), FRCPC, Clinical Immunology and Allergy  
Whyte, R., MB, BS (London), FRCPC, Neonatal-Perinatal Medicine

## Associate Professors

Chambers, C., PhD (UBC), R. Psych, Pediatric Psychology / Gastroenterology  
Cummings, E., MD (Western), FRCPC, Endocrinology  
Dyack, S., MD (Dalhousie), FRCPC, FCCMG, Medical Genetics  
Fernandez, C., MD (McMaster), FRCPC, Pediatric Hematology/Oncology  
Gordon, K., MD (Queen's), MSc (Michigan), FRCPC, Neurology  
Hawkins, A., MD (Memorial), FRCP, Developmental Pediatrics  
Huber, A., MSc (UT), MD (UBC), FRCPC, Pediatric Rheumatology  
Jangaard, K., MD (Dalhousie), FRCPC, Neonatal-Perinatal Medicine  
Lang, B., MD (Dalhousie), FRCPC, Pediatric Rheumatology  
Larson, A., MD (California), FRCPC, General Pediatrics  
LeBlanc, J., MD (McMaster), MSc, FRCPC, General Pediatrics  
Lin, T-J. PhD (China), Immunology  
Mahdi, G., MB, (Ain Shams), MRCP, FRCPC, Gastroenterology  
McLean, J., BSc (McMaster), MD (McMaster), FRCPC, Developmental Pediatrics  
Otley, A., MD (Toronto), MSc, FRCPC, Gastroenterology  
Ramsey, S., MD (Ottawa), FRCPC, Pediatric Rheumatology  
Rashid, M., MB, BS, MEd, FRCPC, Gastroenterology  
Rosen, K., PhD (Moscow State), Atlantic Research Centre

Sharratt, G., MB (London), FRCPC, Cardiology  
Shea, S., MD (Calgary), FRCPC Developmental Pediatrics, Undergrad Education  
Smith, I., MSc (Brown), PhD (Dalhousie), Developmental Pediatrics  
Stinson, D., MD (Western Ontario), FRCPC, Neonatal-Perinatal Medicine  
Vincer, M., MD (Memorial), FRCPC, Neonatal-Perinatal Medicine  
Warren, A., MD (Memorial), FRCPC, Cardiology  
Wood, E., MD (Dalhousie) MSc, FRCPC, Neurology, Postgrad Education  
Wren, P., MD (Queen's), FRCPC, Emergency Medicine

## Assistant Professors

Berman, J.N. MD (Toronto), FRCPC, Hematology/Oncology  
Brna, P., BSc, MD (Dalhousie), FRCPC, Pediatric Neurology  
Chen, R., MD (Dalhousie), FRCPC, Cardiology  
Chowdhury, D., MBBS, DCH, MRCP(UK), FRCP(Edin), General Pediatrics  
Crooks, B., MB (Birmingham), Hematology  
Devins, M., MB BCh BAO, MRCPI (Paeds), DCH, Dip Pall Med (Paeds)  
El-Naggar, W., MD, CABP (Cairo), Neonatology  
Esser, M., MD, PhD (Dalhousie), FRCPC, Neurology  
Fraboni, T., MD (Ottawa), FRCPC, Developmental Pediatrics  
Gatien, J., MD (Dalhousie), FRCPC, Allergy  
Gillis, J., MD (Dalhousie), Medical Genetics  
Graven, M., MD (Florida), MPH (Florida), MSc (New Jersey), FAAP, Neonatal-Perinatal Medicine  
Holland, J.L., BSc, MSc, MD (Toronto), FRCPC, General Pediatrics  
Hughes, D., MD (Dalhousie), FRCPC, Respiriology  
Johnston, B., PhD (Calgary), Microbiology/Immunology  
Kawchuk, J., MD (Alberta), FRCP, Developmental Pediatrics  
Manos, S.H., BSc, MD (Dalhousie), FRCPC, General Pediatrics  
McBride, E., MD (Ottawa), FRCPC, Pediatric Hematology/Oncology  
McCulloch, D., MD (Dalhousie), FRCPC, Emergency Medicine  
Mokashi, A., MD (Alberta), FRCPC, Pediatric Endocrinology  
Ornstein, A., MD (McGill), FRCPC, General Pediatrics/Child Protection  
Penney, L.S., BSc, MD (Memorial), Medical Genetics  
Pinto, T., MD (McGill), FRCPC  
Price, V.E. MBCHB (Pretoria), MMed (Pediatrics) (Pretoria), Hematology/Oncology  
Schwartz, S., MD (McGill), FRCPC, General Pediatrics  
Skidmore, D., MD (Western), FRCPC, Medical Genetics  
Smith, D., MD (Dalhousie), FRCPC, General Pediatrics  
Stringer, E., MD (Dalhousie), MSc (Toronto), FRCPC, Pediatric Rheumatology  
Van der Spoel, A., PhD (Erasmus), Atlantic Research Centre  
Wong, K.K., MD (Albata), FRCPC, Pediatric Cardiology  
Woolcott, C. G., PhD  
Yhap, M., MBCHB (Bristol), FRCPC, Hematology/Oncology

## Lecturers

Chowdhury, S., MBBS, DCH (Ireland), MRCP (UK), MRCPCH, FRCP (Edin)  
Kapur, S., MD (Dalhousie), FRCPC, Allergy/Immunology  
McRobert, E., MB, BCh (Trinity), FRCPC, Neonatology  
Morley, C., MD (Dalhousie), FRCPC, General Pediatrics  
Parkash, Sandhya, MD (Dalhousie), FRCPC, Pediatrics, CCMG  
Rex, Dr. G. MD (Memorial), FRCPC, Allergy/Immunology  
Szudek, E., MD (Poland), FRCPC, Neonatal Perinatal Medicine  
Wenning, J., MD (Dalhousie), FRCSC, Obstetrics

## Regional Appointments

### Saint John, NB

Alexander, W., MD (Memorial), FRCPC, Lecturer  
Garey, N., MD (Dalhousie), FRCPC, Assistant Professor  
Meek, D., MD (Wales), FRCPC, Assistant Professor  
Ojah, C., MD, BS (West Indies), FRCPC, Assistant Professor  
Paras, E., MD (Turkey), FRCPC, Lecturer  
Siau, S., MD (Nat.Taiwan), Lecturer  
Sanderson, S., MD (Toronto), FRCPC, Lecturer

### Sydney, NS

Grant, J., MD  
Kajetanowicz, A., MD

Lynk, A., MD

## **Charlottetown, PE**

Bethune, M., MD

Bigsby, K., MD

Morrison, K., MD (Dalhousie), FRCPC, General Pediatrics

Noonan, P., MD

Zelman, M., MD

## **Summerside, PE**

Wong, D. MD

## **Moncton, NB**

Canning, A., MD

Canning, R., MD

### **A. First-Year Medicine**

First-year core pediatric material on growth and development is studied within the context of the life cycle sessions, which are a part of the first-year patient doctor unit. Within the life cycle sessions, students acquire an overview of human growth and development from infancy through old age. A series of lectures/large group sessions cover psychological, emotional, and behavioural aspects of child development. Additional large group sessions look at adulthood and old age within a developmental framework. Adolescence is studied in a case-based tutorial.

First-year students, working in pairs, are assigned to follow a newborn infant and his/her family during the first year of life. The students visit the family at home on four occasions. They observe the physical and behavioural development of the infant and conduct standardized screens of development. In addition, they observe the parent/child interactions, infant temperament, and learn about common medical problems and preventive health care in the first year of life including nutrition, immunization and injury prevention.

Additional learning opportunities in pediatrics occur within the genetics, embryology and reproductive class, where the cases have many pediatric-related aspects.

### **B. Second-Year Medicine**

The program is devoted principally to the acquisition of the basic skills of pediatric history-taking, family interviewing and the physical examination of infants and children. This program is carried out on wards of the IWK Health Centre and two standardized structured experiences are held at the Fenwick Learning Resource Centre (The Parent & Tot Program). Students also attend the neonatal nurseries of the IWK to develop experience and understanding of medical problems of the newborn infant. Two home visits to the infants whose early growth and development they observed during the first year is mandatory in the second year schedule.

Recommended Textbook: Goldbloom, RB, 3rd ed. Pediatric Clinical Skills, W.B. Saunders, 2003.

### **C. Clinical Clerkship (Third-Year Medicine)**

Core Pediatrics is a six week rotation. The students spend six weeks at the IWK or six weeks at offsite hospitals (i.e. Saint John Regional, Saint John, NB; Queen Elizabeth Hospital, Charlottetown, PEI; Prince County Hospital, Summerside, PEI, St. Martha's Hospital, Antigonish). At the IWK, the students spend three weeks on the general pediatric inpatient teams under the direct supervision of the residents and the attending physicians. They spend three weeks in an ambulatory care setting and attend general and sub-specialty clinics and emergency. The offsite rotations cover general pediatrics on the inpatient ward with integration of ambulatory and ER throughout the six weeks. Many sites offer neonatal training with certification in resuscitation. At all sites students are active members of the team and gain considerable experience in history taking, physical examination, diagnosis, and treatment of childhood diseases. Formal and informal teaching sessions are conducted by members of faculty/residents. The clerks are also encouraged to attend the various clinical case conferences held daily in the hospital. Tutorials are held throughout the rotation and a wide range of common pediatric problems are encountered. These tutorials are delivered to the off-site locations

using the Bridget technology system. The students are evaluated for each six weeks of their rotation and there is an end of unit MCQ and an OSCE examination at the end of 24 weeks.

#### **Recommended Texts:**

1. Nelson's Textbook of Pediatrics, R.R. Behrman and V.C. Vaughn III, latest edition, W.B. Saunders Company.
2. Essential Pediatrics, D. Hull, D.I. Johnston, 4th edition, Churchill Livingstone.
3. Pediatrics, A Primary Care Approach, C.D. Berkowitz, 2nd edition, W.B. Saunders Company, 2000.
4. Pediatric Clerkship Guide, Essential Guide to the Pediatric Clerkship, Jerold C. Woodhead, Mosby Inc., 2003.
5. Pediatric Clinical Skills, R.B. Goldbloom, 3rd edition, W.B. Saunders Company, 2003.

### **D. Fourth-Year Medicine**

Med 4 primarily consists of elective time, but there is set criteria which the students need to meet during the section now called, "The Non-Tertiary/Community and Interdisciplinary Rotations". Students choose from a number of opportunities in Pediatrics. Approximately one-third of fourth year students rotate through Pediatrics in this unit.

### **E. Electives**

The Department of Pediatrics offers elective programs for interested students in all four years. Arrangements for these electives may be made through the Department early in each academic year. The department elective representative for the first two years is Dr. D. Hughes, 470-8218, and for the clerkship year is Dr. Wade Watson, 470-6554. Inquiries regarding elective programs at other medical schools or from students at other schools should be directed to the Undergraduate Medical Education Office at Dalhousie Email: [electives@dal.ca](mailto:electives@dal.ca)

### **F. Residency Training**

The Department of Pediatrics at Dalhousie University offers a four-year postgraduate training program in pediatrics. Successful completion of this residency renders the trainee eligible for the specialty examinations in paediatrics offered by the Royal College of Physicians and Surgeons of Canada, and by the American Board of Pediatrics. The program is based primarily at the IWK Health Centre. This institution with pediatric beds, serves as the tertiary care pediatric referral centre for the three Maritime provinces of Canada, Nova Scotia, New Brunswick, and Prince Edward Island. In addition, it serves as a community pediatric hospital for the Halifax Regional Municipality. The population of the metropolitan area is approximately 400,000. The referral base in the Maritime provinces is approximately 1.8 million.

Residents also rotate to Neonatology and Perinatology at the IWK Health Centre (6000 deliveries per year) An active Regional Reproductive Care Program encourages antenatal referrals of all high-risk pregnancies from Nova Scotia and PEI. Exposure to normal newborns and an extremely busy neonatal intensive care unit provide a broad range of neonatal exposure for residents. Pediatric residents also attend high-risk deliveries.

The Saint John Regional Hospital is a facility which has a pediatric unit affiliated with Dalhousie University. Residents rotate through general inpatients pediatrics and ambulatory pediatrics at the Saint John Regional which provides secondary and some tertiary care for children from a large area of New Brunswick. Saint John is a city of 130,000. Accommodation is provided for residents who are on rotation in Saint John.

The program in paediatrics is designed to provide a well-rounded experience, covering all "core" areas, but also providing time for specialization in areas of individual interest. The first three years of training cover the core requirements established by the Royal College of Physicians and Surgeons of Canada. Specific rotations will include the Emergency Department, Ambulatory Clinics, In-patient general Pediatric wards, Newborn Intensive Care Units, Pediatric Intensive Care Unit, Pediatric Surgery, Child Psychiatry, Behavioural and Developmental Pediatrics, and many of the Pediatric subspecialty services. In addition to time set aside for research, the fourth year of the program can usually be individually designed to meet the specific training needs and interests of the resident.

There is ample time for electives, which may be spent pursuing a clinical specialty, or engaging in a research project. Many of the faculty members are actively involved in research, and resident participation is mandatory.

The training program provides “graded responsibility” to house staff according to the level of seniority and expertise. House staff will be on call no more than one night in four. Senior trainees do less on call. Each resident is permitted four weeks paid vacation per year, and is funded to attend one educational conference per year.

The Department of Pediatrics is made of an outstanding group of pediatricians, scientists, and staff, all of whom are committed to improving child health through patient care, education, research, and leadership. The Department is comprised of 15 divisions and over 80 faculty primarily sited at the IWK Health Centre.

Pediatricians throughout the Maritimes are also members of the Department and play important roles in clinical teaching of both medical students and residents. We have an excellent general pediatric residency program and seven accredited subspecialty residency programs. Further information about our divisions, research programs and education programs can be found on other pages of the website: (<http://pediatrics.medicine.dal.ca>).

## G. Resident Evaluation

All pediatric postgraduate trainees must take the annual in-training examination of the American Board of Pediatrics. This examination provides valuable feedback concerning areas of strengths or weaknesses in clinical knowledge. It also helps the Department to assess its own deficiencies or weaknesses. After each clinical rotation, an in-training evaluation report is completed and is reviewed with the trainee. The trainees are interviewed twice annually to review evaluations and general progress. The clinical skills of the resident staff are assessed regularly by means of oral and clinical examinations.

## H. Rounds and Conferences

At the IWK Health Centre, regularly scheduled conferences include weekly Grand Rounds, Admission Rounds, Radiology Rounds and many subspecialty conferences. In addition, there is dedicated educational time set aside for pediatric trainees. A weekly schedule of pediatric conferences and teaching sessions also exists at the Saint John Regional Hospital. All residents are subsidized to attend one approved national or international scientific meeting per year.

## I. Continuing Medical Education

Members of the Department of Pediatrics participate in the activities of the Division of Continuing Medical Education, offering annual short classes in selected topics of pediatric interests, preceptorships for periods of two to four weeks, and special training programs tailored to individual needs of physicians interested in their own continuing education. In addition, Departmental teachers attend clinical teaching conferences at various hospitals throughout the Maritime Provinces.

# Pharmacology

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Location: Tupper Building, Sixth Floor  
Telephone: (902) 494-3435

## Professors Emeriti

Gray, J.  
Renton, K.W.  
Robertson, H.A.  
Ruedy, J.R.  
Vohra, M.M.  
White, T.D.

## The Carnegie and Rockefeller Professor and Head of Department

Sawynok, J.

## Professors

Acott, P. (major appointment in Pediatrics)  
Blay, J.  
Denovan-Wright, E.M.  
Gajewski, J.B. (major appointment in Urology)  
Hall, R.I. (major appointment in Anesthesia)  
Howlett, S.E.  
Hung, O.R. (major appointment in Anesthesia)  
Kelly, M.E.M.  
Lehmann, C. (major appointment in Anesthesia)  
Lynch, M.E. (major appointment in Psychiatry)  
MacRae, T.H. (major appointment in Biology)  
Pohlmann-Eden, B. (major appointment in Neurology)  
Robertson, G.S. (major appointment in Psychiatry)  
Rusak, B. (major appointment in Psychiatry)  
Sawynok, J.

## Associate Professors

Pasumarthi, K.  
Sinal, C.

## Assistant Professors

Dupré, D.J.  
Esser, M.J. (major appointment in Pediatrics)  
Fawcett, J.  
Goralski, K. (major appointment in Pharmacy)

## Adjunct Professors

Pollak, P.T. (major appointment in Pharmacology and Cardiac Services, U of Calgary)  
Rupasinghe, H.P.V. (major appointment in Department of Environmental Sciences, Nova Scotia Agricultural College)

Pharmacology in the first years of Medicine introduces students to the principles of pharmacology and some specific drug groups primarily through a case-oriented approach. Students attend small group tutorial sessions where cases are discussed and learning issues addressed. These sessions are supplemented with selected lectures.

## A. BSc (Med) Program

The Department of Pharmacology offers a BSc (Med) program in Pharmacology. Please consult the Department for details.

## B. Electives

Opportunities for elective work in pharmacology are open to students. Laboratory research experience can include work during the summer months as paid summer research assistants. Other formats of electives (eg.

reading courses, clinical trial shadowing) can also be arranged in collaboration with clinical faculty.

### C. Continuing Medical Education

The Department participates in this program primarily through presentation of lectures given at various centres in the Maritime Provinces in association with other units.

### D. Residency Training

The Department provides formal and informal training sessions for residents. With approval, training in various research laboratories of the department can be arranged for residents to enhance their research skills.

### E. Classes

#### Classes for Dental Students

Separate Pharmacology classes for dental students are given throughout the Dental program. These are designed to emphasize those drugs most commonly employed by dentists. However, other drugs are also discussed, especially in connection with medical problems their patients may have which are not necessarily associated with their dental problems. Drug interactions and allergic reactions are stressed.

Students in the dental hygiene program receive a separate class of lectures (DH 3007) directed at their requirements.

#### Classes for Arts and Science Students

Introductory classes are offered as a credit in the Honours BSc (Biology and Biochemistry) programs under the designation Biology 4404A, 4407B, 4408B, Biochemistry 4804A, 4806B, 4807B, Neuroscience 4374A, 4376B, 4377B.

#### Graduate Studies

Advanced work leading to the MSc and PhD degrees is offered to both science and medical graduates. The Calendar of the Faculty of Graduate Studies should be consulted.

#### Classes for Health Professions Students

Students registered in First Year of the College of Pharmacy receive instruction in pharmacology designated as PHAC 1470.03. This consists of a series of cases and associated lectures. Students in the Occupational Therapy program receive a class of lectures designated OCCU 6130.01.

## Physiology and Biophysics

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Location: Tupper Building, Third Floor  
Telephone: (902) 494-3517  
Fax: (902) 494-1685

### The Carnegie and Rockefeller Professor and Head of Department

Murphy, P.R.

#### Professors

Barnes, S.A.  
Brown, R.E. (major appointment in Psychology)  
Chauhan, B. (major appointment in Ophthalmology)  
Croll, R.P.  
Fine, A.M.  
French, A.S.  
Henzler, D. (major appointment in Anesthesia)  
Linsdell, P.  
McDonald, T.F.  
Meinertzhagen, I.A. (major appointment in Psychology)  
Murphy, P.R.  
Pelzer, D.J.  
Rasmusson, D.D.  
Schmidt, M. (major appointment in Anesthesia)  
Torkkeli, P.H.

#### Associate Professors

Carrey, N. (major appointment in Psychiatry)  
Chappe, V.  
Cowley, E.A.  
Morgunov, N.  
Murphy, M.G.  
O'Blenes, S. (major appointment in Surgery)  
Tremblay, F. (major appointment in Ophthalmology)  
Wang, J. (major appointment in School of Human Communication Disorders)

#### Assistant Professors

Ali, I.S. (major appointment in Surgery)  
Anini, Y.  
Chen, R. (major appointment in Pediatrics)  
Dong, Xianping  
Krueger, S.  
Li, A. (major appointment in Medicine)  
Pavlov, E.  
Rose, R.A.  
Sapp, J.L. (major appointment in Medicine)

#### Adjunct Professor

Rittmaster, R. (Glaxo-Smithkline)

#### Senior Instructor

Penney, C.

### A. Course of Study

#### First Year Medicine

First-year studies follow the case-based learning curriculum. The department provides tutors, cases, lectures and laboratory /conference sessions in the Metabolism I Unit.

#### Second Year Medicine

The department provides tutors, cases, lectures and laboratory /conference sessions in the Metabolism II Unit.

## B. Clinical Clerkship

### Electives

The Department offers two types of elective programs to limited numbers of medical students. The Department or Office of the Dean of Medicine may be contacted for details.

1. small research projects under the direction of staff members, and
2. investigations in some depth of published work on a topic of the student's choice, utilizing the resources of the staff member and the Kellogg Health Sciences Library.

### C. Graduate-Level Classes

The Department offers suitably qualified students an opportunity to study for the degrees of Master of Science and Doctor of Philosophy. Advanced graduate seminars and lecture classes are given in cell and molecular physiology, cardiovascular physiology, membrane physiology, endocrinology, neurophysiology, etc. A complete description of these programs is in the calendar of the Faculty of Graduate Studies.

### D. Classes

#### Classes for Students in the Health Professions, Dentistry, and Other Faculties

- Dentistry 1119.01: For Students in Dentistry
- Dental Hygiene 2853.06: For students in Dental Hygiene
- Physiology 1000X/Y.06: Human Physiology (Distance Education class equivalent to Physiology 1010X/Y.06)
- Physiology 1010X/Y.06: Human Physiology
- Physiology 1400.06: Human Physiology (for students in Pharmacy)
- Physiology 2030X/Y.06: Human Physiology
- Physiology 2031.03: Human Physiology A
- Physiology 2032.03: Human Physiology B
- Physiology 2570.03: Cellular Neurophysiology
- Physiology 3120.03: Exercise Physiology in Health and Disease
- Physiology 3320.03: Human cell Physiology
- Physiology 3420.03: Sensory Physiology
- Physiology 3520.03: Core Concepts in Medical Physiology
- Physiology 4000.03: Current Advances in Synaptic Function and Plasticity
- Physiology 4324.03: Endocrine Physiology
- Physiology 4680.03: Cardiovascular Physiology
- Physiology 4328X/Y.03: Directed Project in Physiology

## Psychiatry

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Location: 8th Floor, Abbie Lane Building  
QEII Health Sciences Centre  
Halifax, NS  
(902) 473-2470 (telephone)  
(902) 473-4887 (fax)

Administration  
Room 8211  
(902) 473-3868 (telephone)  
(902) 473-4887 (fax)

Education Office  
Room 8103  
(902) 473-5664 (telephone)  
(902) 473-4545 (fax)

Research Office  
Room 8412  
(902) 473-2466 (telephone)  
(902) 473-4596 (fax)

International Psychiatry  
Room 8208  
(902) 473-4252 (telephone)  
(902) 473-4887 (fax)

Child and Adolescent Psychiatry  
IWK Health Centre  
4th Floor - Link  
Head  
Orlik, H.  
(902) 470-8375 (telephone)  
(902) 470-8937 (fax)

### Professors Emeriti

McCormick, W.O.  
Munro, A.

### Professor and Head of Department

Delva, N

### Professors

Abbass, A.  
Addleman, D.  
Alda, M.  
Doane, B.  
Duffy, A.  
Kisely, S.  
Kutcher, S.  
Leslie, R.  
Lynch, M.  
McGrath, P.  
Morehouse, R.  
Murphy, J.  
Robertson, G.  
Robertson, H.  
Rusak, B. (Killam Professor)  
Stewart, S.  
Tibbo, P.

### Adjunct Professors

Kopala, L.

### Associate Professors

Alagband-rad, J.

Carrey, N.  
Cassidy, K.-L.  
Chisholm, T.  
Cook, A.  
Eskes, G.  
Fisk, J.  
Flynn, M.  
Gardner, D.  
Good, K.  
Hajek, T.  
Harris, A.  
Hazelton, L.  
LeBlanc, J.  
Milliken, H.  
O'Donovan, C.  
Orlik, H.  
Rajda, M.  
Reynolds, P.  
Stokes, A.  
Teehan, M.  
Theriault, S.  
Vallis, T.

### **Adjunct Associate Professors**

Burley, J.  
Chambers, C.  
Fisk, J.

### **Assistant Professors**

Abidi, S.  
Aicher, J.  
Aspin, J.  
Bains, R.  
Bagnell, A.  
Barrett, S.  
Bekele, Y.  
Bhaskara, S.  
Bosma, M.  
Brooks, S.  
Brunet, A.  
Buffett, L.  
Carandang, C.  
Casey, S.  
Chehil, S.  
Cooper, K.  
Corkum, P.  
Doucet, J.  
Forsythe, P.  
Fraser, R.  
Gordon, E.  
Hassan, S.  
Hipwell, A.  
Howard, R.  
Hudec, M.  
James, S.  
Jetly, R.  
Johnson, S.  
Kaiser, A.  
Kelln, B.  
Khatri, J.  
Kinley, J.  
Kronfli, R.  
Laurier-Horner, B.  
Lazier, L.  
LeBlanc, J.  
Lewitzka, V.  
Liashko, V.  
Libbus, Y.  
MacDonald, J.  
MacKay, T.  
Maynes, D.  
McGrath, D.

Mills, P.  
Morrison, D.  
Morrison, J.  
Murphy, A.  
Murphy, C.  
Neilson, G.  
Newman, A.  
Ortiz, A.  
Ortiz, A.  
Pearce, P.  
Pellow, T.  
Pencer, A.  
Propper, L.  
Relja, M.  
Rubens, M.  
Sadek, J.  
Schmidt, M.  
Schollen, M.  
Shahid, Raheel  
Slayter, I.  
Sokolenko, M.  
Tait, G.  
Sadek, J.  
Tran, S.  
Ursuliak, Z.  
Walker, J.  
Walentynowicz, M.  
Westwood, D.  
White, K.  
Whitby, D.  
Wilson, A.  
Zinck, S.

### **Adjunct Assistant Professors**

Hann, G.  
Marceau-Crooks, H.  
Semba, K.  
Walter, G.

### **Lecturers**

Ahmad, K.  
Alexiadis, M.  
Aquino, E.  
Assh, D.  
Beck, N.  
Bergin, S.  
Bhattacharyya, A.  
Bilski-Pitrowski, M.  
Black, K.  
Borst, S.  
Bradley, B.  
Burke, B.  
Butler, B.  
Butler, G.  
Calkin, C.  
Campbell, L.  
Cane, D.  
Childs, C.  
Crist, W.  
Davis, D.  
Davis, J.  
Dhar, N.  
Dini, E.  
Edwards, W.  
Foley, B.  
Fraser, J.  
Garvey, L.  
Gleich, S.  
Gray, G.  
Gusella, J.  
Hoyt, L.  
Jefferson, S.

John, O.  
 Joshi, V.  
 Junek, W.  
 Keizer, H.  
 Keshen, A.  
 Khan, G.  
 Khan, N.  
 Laskowski, D.  
 MacDonald, S.  
 MacNeill, K.  
 Maguire, H.  
 McAllindon, J.  
 Mershati, A.  
 Millar, J.  
 Milligan, S.  
 Morgan, M.  
 Mulhall, D.  
 Muthu, M. S.  
 Napier, L.  
 O'Neill, M.  
 Peters, C.  
 Pilon, D.  
 Poder, K.  
 Potter, L.  
 Pottle, R.  
 Riives, M.  
 Roberts, D.  
 Robertson, N.  
 Ross, M.  
 Rowe, H.  
 Russell, D.  
 Steele, C.  
 Stewart, C.  
 Tak, F.  
 Taylor, G.  
 Thurgood, A.  
 To, D.  
 Tomlinson, M.  
 Tulipan, T.  
 Upshall, P.  
 Warren, K.  
 Whitehorn, D.  
 Wood, W.  
 Woulff, N.

The objectives of undergraduate teaching in the Department of Psychiatry are: to underline the significance of biopsychosocial factors in normal human development and in illness, to enable students to recognize psychiatric disorders, and to treat these disorders within their competence, or refer the patient for psychiatric investigation and management.

## A. Course of Study

### First Year Medicine - Human Behaviour

1. Within the Patient/Doctor Unit, students will receive several sessions of didactic teaching on topics including normal cognitive, social and emotional development stages, learning theory and defense mechanisms.
2. Two multidisciplinary seminars focus on infant temperament and family functioning.
3. A multidisciplinary approach to the assessment and management of psychiatric illness in adolescents follows.
4. The patient contact program consists of three sessions, each of three hours, with eight to ten students supervised by senior psychiatrists. These are designed to introduce students to psychiatric disorders by exposing them to actual patient interviews. Students will also observe diagnostic and treatment sessions.

## Second Year Medicine - Clinical Psychiatry Second Year Medicine - Clinical Psychiatry (effective Fall 2011)

Psychiatry, neurology and neuroanatomy produce an integrated unit in second-year called the Neurosciences Unit. The psychiatry teaching takes place during the final three weeks of the unit. Major topics include the biopsychosocial model of illness, attachment theory and developmental perspectives, neuroanatomical correlates of mental illness, psychiatric epidemiology, psychopharmacology, and principles of psychotherapy. Psychotic, Mood, and Anxiety Disorders are used to illustrate these topics. The Neurosciences Unit runs in parallel with a patient contact program consisting of five half-day patient interviewing sessions that are part of the Clinical Skills Unit. Under supervision, groups of students learn to complete a psychiatric history and to assess the patient's mental status. They then discuss diagnosis and management with a faculty tutor.

## Third and Fourth Year Medicine - Clinical Clerkship

Year 3, Phase 1- During the Psychiatry Unit, students will complete a six week core rotation which will include a variety of both inpatient and outpatient clinical experiences. Rotations are offered in the Halifax Metro Area, as well as at other affiliated sites throughout the Maritimes.

Teaching sessions occur weekly and are in didactic form or a review of clinical vignettes covering the following topic areas: stigma, psychopharmacology, child psychiatry, personality disorders, depression, eating disorders, anxiety, psychosis, substance abuse, etc.

Year 4, Phase 2- Clerks will participate in 18 weeks of elective time which could include psychiatry. In addition, clerks will complete a 3 week rotation in Care of the Elderly (COE). Vacation time and CaRMS interviewing time can be scheduled around the clinical rotations.

## B. Electives

Electives are offered in all four years. These vary from supervised individual patient psychotherapy to involvement in research projects.

## C. Residency Training

This covers Postgraduate Years (PGY) 1 to 5.

PGY-1: This year provides broad clinical training in the following areas: psychiatry, internal medicine, emergency medicine, pediatrics, family medicine, neurology, choice of selective for three blocks.

PGY-2 to -5: These years of integrated university residency training are planned to meet the requirements of the Royal College of Physicians and Surgeons of Canada. Participating units and hospitals are the Queen Elizabeth II Health Sciences, IWK Health Sciences Center, The Nova Scotia Hospital and Atlantic Health Sciences Corporations (NB).

Each postgraduate student spends at least 4.5 years in the central university program to complete the mandatory rotations required by the Royal College. The remaining months are spent in a variety of psychiatric or related clinical or research settings in the Maritime Provinces or elsewhere.

Electives available in the senior years include additional training beyond the minimum time in geriatric or consultation/liaison psychiatry or experience in eating disorders, sleep/wake disorders, neuropsychiatry, international psychiatry, forensic psychiatry, semi-rural community psychiatry, pain management, research projects or secondment to relevant non-psychiatric experience, such as neurology.

On the successful completion of the Residency Program and the Royal College Examinations, an individual can seek further sub-specialty training in the Fellowship Program.

## D. Fellowship Program

This program has been developed to enhance training in psychiatric medicine which will meet the clinical service needs of the Province of Nova Scotia and the academic initiatives of the Department. The Department is offering Fellowship positions in academic sub-specialty areas. Openings are available for candidates in the following areas of interest: Child and Adolescent Psychiatry, Forensic Psychiatry, Geriatric Psychiatry, International Psychiatry, Psychotherapy, Schizophrenia: First

Episode Psychosis, Sleep Medicine and Mood Disorders. Applicants must be medically qualified, possess an FRCPC (Psychiatry), be eligible for licensure in the Province of Nova Scotia and be able to practice clinically in a subspecialty area with supervision.

Salary is based on Department of Psychiatry's alternate funding plan.

On the successful completion of the application process, the Fellow will be required to develop their individual learning objectives and curriculum as determined together with their respective Fellowship Supervisor.

Fellowship programs will begin on July 1 and end on June 30 unless other dates are negotiated.

Applicants should submit a curriculum vitae and a statement of their subspecialty interests to:

Director of Fellowship Program  
Department of Psychiatry, Dalhousie University  
Abbie J. Lane Building--8th Floor  
5909 Veterans Memorial Lane  
Halifax, Nova Scotia B3H 2E2  
Deadline for applications: March 1

## E. Continuing Education

Dalhousie University Department of Psychiatry has earned national and international recognition as a provider of excellent quality, innovative, continuing education programs and services. Our Faculty members have been recognized as experts in their field and lecture frequently throughout the Atlantic provinces, nationally and internationally. Several have won prestigious awards for their educational work. The overall goal of the Department of Psychiatry is to provide leadership in mental health education for psychiatrists, other mental health professionals, family physicians and the community, with the ultimate aim of promoting the highest standards of mental health care. The following is a sampling of some of our programs that keep us on the cutting edge of continuing mental health education and professional development:

- Consultation Services for Continuing Education Programming
- Early Psychosis Community Education Programs
- Bipolar Disorder Preceptorship
- "Shared Care" Educational Programs for Family Physicians
- Individualized Traineeships
- Psychotherapy Courses, The Centre of Emotions & Health
- Videoconferencing of Educational Programs
- Atlantic Canada Psychosis Conference
- Annual Academic Day
- Annual Research Day
- On-site and future electronic-based specialized programs for psychiatrists and other health professionals
- Royal College of Physicians and Surgeons of Canada accredited clinical conferences, university rounds, journal clubs, psychotherapy seminars, addiction seminars & research forums

For further information view our website: <http://www.psych.dal.ca>

# Radiation Oncology

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Location: Nova Scotia Cancer Centre  
5820 University Avenue  
Halifax, NS B3H 1V7  
Telephone: (902) 473-6010  
Fax: (902) 473-1273

## Head

Ago, C.T.

## Associate Professors

Andrew, J.W.  
Carson, J.  
Joseph, P.  
Rheume, D.E.

## Assistant Professors

Ahmed, A.  
Hale, M.E.  
Hollenhorst, H.  
Meng, J.S.  
Mulroy, L.  
Nolan, M.  
Rajaraman, M.  
Rutledge, R.  
Saunders, S.L.  
Schella, J.W.  
Wilke, D.R.

## Lecturers

Ahmed, S.  
Cwajna, W.  
Grant, J.B.  
Grant, N.

## A. Undergraduate

Members of the department, while not having direct responsibility for the didactic aspects of undergraduate teaching, participate in the educational experience of these students at every opportunity. A large volume of clinical material is available at the NSCC/QEII HSC, and students attend many of the multidisciplinary oncology clinics, particularly in their senior years. This is particularly relevant to their understanding of the complex issues involved in the management of patients with various malignancies.

## B. Electives

Student electives, up to one month in duration, are strongly encouraged. The time is spent with department faculty and preceptors, and students are exposed to the clinical and technical aspects of radiation oncology. It provides an overview of a clinical modality central to a broader oncology program. Small clinical research projects are encouraged and supported.

## C. Residency Training

This is an accredited program of the Royal College of Physicians and Surgeons of Canada. Training is intensive, and provide the residents with solid grounding in the basic sciences of radiation biology, physics and oncology, along with ongoing clinical training. Residents from other programs spend elective time in the department and specific lectures are frequently given by departmental faculty to graduate students in other departments.

## D. Continuing Medical Education

Department faculty participate fully in several CME programs across the Maritime Provinces.

# Surgery

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Location: Department of Surgery  
Suite 8-838  
V.G. Hospital  
1278 Tower Road  
Halifax, NS B3H 2Y9  
Telephone: (902) 473-8337  
Fax: (902) 473-4442

## Professors Emeriti

Gillis, D.A.  
Norvell, S.T.  
Ross, E.F.  
Stevenson, W.D.  
Yabsley, R.

## Head of Department

Park, A.

## Professors

Acott, P. (cross appointment in Pediatrics)  
Ali, I.  
Alexander, D.I.  
Bance, M.  
Bonjer, J. (Adjunct)  
Brownstone, R.  
Clarke, D.  
Gross, M.  
Guernsey, D. (cross appointment in Pathology)  
Hirsch, G.  
Hoskin, D. (cross appointment in Pathology)  
Hyndman, J.C.  
Jamieson, C.G.  
Johnston, M.  
Kiberd, B. (cross appointment in Medicine)  
Lalonde, D. (New Brunswick)  
Law, J. (cross appointment in Anesthesia)  
Lawen, J. (cross appointment in Urology)  
Leighton, R.K.  
MacDonald, A.S.  
Massoud, E.  
Mendez, I.  
Morris, S.F.  
Nelissen, R. (Adjunct)  
Phillips, D. (cross appointment in Psychology)  
Porter, G.  
Stanish, W.D.  
Sullivan, J.A.  
Wang, J. (cross appointment in School of Human Communications Disorders)  
West, K. (cross appointment in Medicine)

## Associate Professors

Agu, R. (cross appointment in Pharmacy)  
AL-Habib, N. (New Brunswick)  
Alwayn, I.  
Amirault, J.D.  
Biddulph, M.  
Bnsseau, G.  
Buduhan, G.  
Bullock, M. (cross appointment in Pathology)  
Calverley, V.  
Connolly, S. (New Brunswick)

Corsten, P.G.  
Dunbar, M.  
Fletcher, J. (New Brunswick)  
Giacomantonio, C.  
Giacomantonio, J.M.  
Glazebrook, M.  
Gratzer, P. (cross appointment in Biomedical Engineering Medicine)  
Hancock Friesen, C.  
Hentleff, H.  
Howard, J.  
Keough-Ryan, T. (cross appointment in Medicine)  
Kerr, D. (New Brunswick)  
Kirkpatrick, D.  
Leahey, J.L.  
Lee, T.D.G. (joint appointment in Microbiology and Immunology)  
Legare, J.F.  
Manson, N. (New Brunswick)  
O'Brien, D.  
O'Brien, J. (New Brunswick)  
Paletz, J.  
Parrott, J. (New Brunswick)  
Pelletier, M. (New Brunswick)  
Peltekian, K. (cross appointment in Medicine)  
Reardon, G.  
Sparks, G. (New Brunswick)  
Stein, J.  
Taylor, M.  
Trenholm, A. (New Brunswick)  
Vair, D.B.  
Wilson, K.L.  
Wood, J.  
Valstar, E. (Adjunct)  
Yanchar, N.

## Assistant Professors

Abraham, E. (New Brunswick)  
Aiken, S. (cross appointment in School of Human Communication Disorders)  
Ali, Imtiaz  
Al-Shayji, A. (New Brunswick)  
Attard, J. (New Brunswick)  
Baskett, R.  
Bendor-Samuel, R.  
Bethune, D.C.G.  
Brown, J. (cross appointment in Biomedical Engineering)  
Brown, T.  
Casey, P.  
Casha, S.  
Christie, S.  
Clifton, N.  
Coady, C.M.  
Coles, C.  
Earl, E.M. (cross appointment in Physiotherapy)  
El-Hawary, R.  
Ellsmere, J.  
Fawcett, J. (cross appointment in Pharmacology)  
Fleetwood, I.  
Hart, R.  
Helyer, L.  
Johnson, L.  
Johnson, P.  
Johnston, B. (New Brunswick)  
Johnston, D.G.  
Klassen, D.  
Laryea, M.  
Lee, M.  
Legay, D.  
MacKean, G.  
McNeely, P.D.  
McIntyre, P.B.  
Minor, S.

Mitchell, A.  
Molinari, M.  
Morris, D.  
Mowatt, James (New Brunswick)  
Mowatt, John (New Brunswick)  
Murdoch, J.  
Nasser, J.  
Newman, A. (cross appointment in Psychology)  
O'Blenes, S.  
Oxner, W.  
Pickett, G.  
Richardson, C.G.  
Scarath, H. (New Brunswick)  
Steeves, J. (New Brunswick)  
Stewart, K.  
Stiles, G. (New Brunswick)  
Topp, T.  
Trites, J.  
Wallace, T.  
Walling, S.  
Walsh, M.  
Wheelock, W. (New Brunswick)  
Williams, J.

## Lecturers

Adams, R. (New Brunswick)  
Allanach, W. (New Brunswick)  
Atiyah, A.  
Balys, R.  
Barton, P. (New Brunswick)  
Brennan, M.  
Brien, D.  
Brown, C. (New Brunswick)  
Brown, D.S. (New Brunswick)  
Charest, D. (New Brunswick)  
Clark, A. (New Brunswick)  
Cook, G. (New Brunswick)  
Croswell, J.  
Daigle, J.P. (New Brunswick)  
Dempsey, I.  
Dubois, P. (New Brunswick)  
Forgie, R. (New Brunswick)  
Forsythe, Michael Edgar (New Brunswick)  
Gallant, P.  
Garland, A. (New Brunswick)  
Goobie, P. (New Brunswick)  
Gorman, P. (New Brunswick)  
Howley, B. (New Brunswick)  
Hussain, A. (New Brunswick)  
Jain, T. (PEI)  
Kolyvas, G. (New Brunswick)  
LeBlanc, R.  
MacGillivray, B.J.  
MacLean, G. (PEI)  
Massoeurs, S.  
Maxwell, E.L. (New Brunswick)  
Mujoomdar, A. (New Brunswick)  
Murphy, J. (New Brunswick)  
Murphy, R. (New Brunswick)  
Nader, N.  
Nayden, D.  
Nuth, L.  
Orrell, K.  
Quartey, G. (New Brunswick)  
Rae, R. (New Brunswick)  
Roberge, R. (New Brunswick)  
Sers, R.  
Shakerinia, T. (New Brunswick)  
Skanes, S. (New Brunswick)  
Smith, A.N.  
Tait, H. (New Brunswick)  
Tees, D. (New Brunswick)

VanBoxel, P.  
Valeeva, L. (Clinical Associate)  
Venugopal, V.  
Wasilewski, L.  
Wilson, D.

The Department provides basic instruction in those diseases which fall within the field of surgery. Opportunities are provided to students so that they may become familiar with patients having surgical diseases, their diagnosis, investigation, and treatment. Students may pursue elective or research studies if they so desire.

## A. Course of Study

### First and Second Year Medicine

Members of the Department of Surgery participate in the pre-clerkship curriculum in the following areas:

1. As tutors in various problem-based-learning units that make up the COPS curriculum.
2. As preceptors for elective students in surgery.
3. As experts in Med 1 anatomy sessions.
4. As clinical teachers in the Med II Patient-Doctor component of the curriculum where students learn basic skills, history taking and physical examination.

## B. The Clerkship

At the completion of the second year, the student enters an 88-week clerkship, of which 9 weeks are spent in the Department of Surgery doing three rotations, each of three weeks.

General Surgery is a mandatory three week rotation. There are two selective rotations which are each three weeks long. They include: Cardiac Surgery, Neurosurgery, Orthopedics, Otolaryngology, Pediatric General Surgery, Plastic Surgery, Thoracic Surgery, Vascular Surgery and Urology.

During the three rotations the students will take emergency call in the hospitals.

Additional opportunities for the students exist in the form of electives in surgery under the supervision of an identified surgeon, either in Halifax or elsewhere.

## C. Residency Training

Integrated University Residency Training Programs in the disciplines of General Surgery, Orthopedic Surgery, Cardiac Surgery, Pediatric General Surgery, Neurosurgery, Otolaryngology, and Plastic Surgery are available in the department. The training programs in these disciplines are accredited by the Royal College of Physicians and Surgeons of Canada. Participating hospitals include the QEII Health Sciences Centre, IWK Health Centre, and Saint John Regional Hospital, Saint John, New Brunswick.

## General Surgery

The General Surgery Program is a five-year program. The program is designed so that its graduates are prepared to pursue community practice, or to compete for clinical and/or research fellowships. The first two years comprise the core program years and are divided into four week and eight week rotations. The final three years focus on mastery of general surgical knowledge and skills.

## Neurosurgery

The Division of Neurosurgery provides for a year of basic training in the neurological sciences, and at *least* thirty-six months of clinical neurosurgery (including pediatric Neurosurgery) with progressive responsibility. A full education program in allied neurological science fields is a part of this program.

## Cardiac Surgery

The cardiac surgery residency program is an integrated six year process which incorporates two years of core surgery, six months of general surgery, six months of adult cardiac surgery, six months of thoracic surgery, six months of pediatric cardiac surgery and twelve months of senior cardiac surgery resident. In addition, there is one year for academic enrichment. For those considering an academic career, this can consist of a

research year, which may lead to a MSc or PhD, while others may choose to develop an area of special clinical interest or expertise.

## Orthopedic Surgery

The Division of Orthopedic Surgery conducts a five-year program. During the first year, residents rotate through such specialties as Plastic Surgery, Neurosurgery, ICU, Cardiac Surgery, and Vascular Surgery. Elective rotations are available during this period of time. The three core years of Orthopedic Surgery are designed for the resident to gain experience in Adult, Pediatric and Traumatic Orthopedic Surgery. Residents are encouraged to carry out a post training year as a Fellow at this or another centre.

## Otolaryngology

The Division of Otolaryngology offers an integrated university resident training program, consisting of a five-year rotation meeting the requirements of the Royal College of Physicians and Surgeons of Canada. Residents are accepted into the program at the PGY1 level. Arrangements are made through the Department of Surgery to have two years of basic surgical training. From PGY3-PGY5, the residents are based at the QEII Health Sciences Centre and IWK Health Centre.

## Plastic Surgery

The Division of Plastic Surgery is similar in that the first two years are spent in general surgical rotations with particular reference to those subspecialties that are appropriate to plastic surgery. The two core years of Plastic Surgery are designed for the resident to gain experience in adult and pediatric traumatic and reconstructive surgery.

## Pediatric General Surgery

The Division of Pediatric General Surgery offers a two year fellowship program, one of six Royal College approved programs in Canada, to trainees who have completed training in General Surgery.

A formal academic program, in each specialty, with pathology seminars, grand rounds, basic science seminars, journal clubs, etc., functions throughout the year. The surgical divisions provide the funds for residents to travel to meetings to present their work. Funding is also provided for residents to attend two additional meetings during their period of training.

## D. Continuing Medical Education

The Department sends its members to various centres throughout the Maritime provinces at the request of the Division, for meetings, conferences, etc. This is an important function in that it is now realized that continuing medical education is essential for the continuing competence of the graduate doctor.

# Urology

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Location: 5th Floor, Victoria General Site, Room 293  
QEII Health Sciences Centre  
Halifax, Nova Scotia  
Telephone: (902)473-5853  
Fax: (902)473-5855

## Professors Emeriti

Awad, S.A.  
Belitsky, P.  
Mack, F.G.

## Professor and Head of Department

Bell, D.G.

## Professors

Anderson, P.A.  
Downie, J.W. (major appointment in Pharmacology)  
Gajewski, J.B.  
Grantmyre, J.E.  
Lawen J.G.  
Nassar, B.A. (major appointment in Pathology)  
Norman, R.W.

## Associate Professors

Bailey, G.G.  
Gupta, R. (major appointment in Pathology)  
Rendon, R.A.  
Schwarz, R.D.  
Wood, L.A. (major appointment Division of Medical Oncology)

## Assistant Professors

Bagnall, P.S.  
MacLellan, D.L.  
Merrimen, J. (major appointment in Pathology)  
Morse, M.J.  
Pringle, C. (major appointment in Diagnostic Radiology)  
Whelan, T.F.

## Lecturers

Ashfield, J.E.  
Bryniak, S.R.  
Butler, T.J.  
Chun, S.S.  
Dwyer, N.T.  
Feero, P.G.  
Hickey, L.T.  
LeBlanc, G.  
McLellan, R.A.  
Mulligan, J.M.  
Patrick, A.B.  
Palmer, B.W.  
Reid, R.I.  
Sitland, T.D.  
T'ien, W.  
Von Keman, H.

## I. Undergraduate Training

### A. The Pre-clinical Years (Med I and II)

The renal/urology component in Med II occupies two weeks of integrated introduction to a few of the pathologic processes in urology. In addition, every effort is made to co-ordinate with other units in the COPS program. Individual faculty from the Department serve as tutors.

### B. The Clinical Years (Med III and IV)

Urology is currently a surgery selective for all clinical clerks. During this three week experience, the students work with an individual staff preceptor at one of the main Dalhousie teaching hospitals. The clerks are responsible under the supervision of faculty and residents for patient care on the wards and in the out-patient settings. They are also exposed to common operative urological procedures. The ambulatory experience includes many of the specialty clinics in Urology. During the rotation, the students are expected to meet clinical challenges with an open, enquiring mind and to internalize an understanding of basic principles of urological physiology and pathology. There is a daily topic-based seminar program with the faculty to facilitate this process. The objectives of the rotation include clinical hypothesis formation and supervised decision making. These objectives are practised in all clinical settings but particularly in the out-patient clinics.

For those students wishing to carry on greater study of urologic principles, an elective experience is offered. This experience can be tailored to an individual student's needs and interests.

### C. Family Medicine Residency

Urology is offered as an elective. The four-week period can be spent at the Victoria General Hospital, the Halifax Infirmary, the IWK Health Centre or the Saint John Regional Hospital. The duties and assignments have been designed specifically to prepare the candidate for family practice.

### D. Residency Training

Specialty training in Urology is available in the Department. The five year training program includes two years of core Surgery (specially designed) and three years training in Urology. Successful completion fulfils the requirements for the Royal College of Physicians and Surgeons of Canada specialty examinations.

During their training the residents are expected to meet clinical problems with an open, enquiring mind and are given increasing responsibilities, commensurate with their experience. Wide exposure to a variety of urological conditions and procedures is provided. The rich clinical and surgical experience is supplemented by Departmental Grand Rounds, seminars and journal clubs. At the end of the training the resident is proficient in the specialty of Urology.

Participating hospitals include the QEII Health Sciences Centre, IWK Health Centre, and Saint John Regional Hospital.

## MedIT

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Location:	Sir Charles Tupper Building, Basement Level
Director of IT:	(902) 494-2709
Telephone:	Help Desk - (902) 494-1234
Fax:	(902) 494-2046
Email:	medit@dal.ca
Website:	<a href="http://IT.Medicine.dal.ca">http://IT.Medicine.dal.ca</a>

Below you will find a small sampling of the services we provide. Please call for further information, or visit our website.

### A. Computing Services

Phone: (902)494-1234  
Email: [meditsupport@dal.ca](mailto:meditsupport@dal.ca)

Our staff provides walk-in, phone, on-site and e-mail support for hardware and software services to the entire Faculty of Medicine community.

### B. Video / Audio Production

Phone: (902)494-1263  
Email: [jordan.urquhart@dal.ca](mailto:jordan.urquhart@dal.ca)

- digital - video/audio recording
- production/editing/streaming video
- CD-DVD Duplication
- digital editing
- images for power point presentations
- streaming video
- video and screen capture stills
- media conversion (CD/DVD/DV/VHS/SVHS/8mm Reels)

### C. Graphics

Phone: (902) 494-1267  
Email: [duane.jones@dal.ca](mailto:duane.jones@dal.ca)  
Provides graphic design, printing, illustration and animation services:

- Poster design and printing
- Brochures
- Newsletter
- Pamphlet development
- Banner animation
- Photo editing
- Logos
- Scanning

### D. Instructional Support Services

Office: Tupper Link - G-34  
Phone: (902) 494-1290  
Cellular: (902) 471-9372  
Email: [class@dal.ca](mailto:class@dal.ca)  
ISS provides multimedia equipment and support to Carleton (Health Sciences) Campus classrooms and seminar rooms located in the Tupper, Dentistry, Forrest, Burbidge and Chapter House buildings. Services include:

- Equipment Bookings
- Data projection
- Audio Conferencing
- Webcasting
- PA systems
- Conference Tech Support
- Room Demos
- Emergency Calls

## **E. MedIT Video Conferencing**

Phone: (902) 456-8566 (Halifax) and (506) 636-6015 (Saint John)

Email: videocon@dal.ca

Videoconference provides technical support for the state of the art video conferencing technology for the Dalhousie Medicine New Brunswick (DMNB) program.

DMNB offers a full undergraduate medical education program to students based in Halifax, Fredericton, Miramichi, Moncton and Saint John. In their first two years students attend classes in Saint John - and in their final two years they will fan out across the province to complete their clerkships in Moncton, Fredericton and Miramichi as well as in Saint John.

## **F. Website Development/Design**

Phone: (902) 494-5128

Email: medical.communications@dal.ca

Producing engaging, interactive, informative websites and providing site hosting / maintenance services.

## **G. Software Application Development**

Phone: (902) 494-1266

Email: dalmedix@dal.ca

Integration of custom web based tools that enhance your department or group's administrative communication needs for internal and external customers within the Dalhousie University and medical community alike. We can assist you by developing solutions such as interactive calendars, shared file storage, news and notice boards as well as custom application programs.

## **H. Records Management**

Phone: (902)494-2859

Email: monica.baccardax@dal.ca

To convert and safeguard vital paper file and electronic documents into Records Management System, to be accessed by authorized persons within the Faculty of Medicine.

- consultation retention details
- record inventory / quality control checks
- classification / indexing of records
- scanning / import / convert records

## Centres and Institutes

A number of centres and institutes for study and research in specific fields are based at the University. These are:

### Atlantic Health Promotion Research Centre

Managing Director: Sandra Crowell, MPA  
Canada Research Chair: Renee Lyons, PhD  
Other: Project Coordinators, Research Associates, Research Assistants, and students  
Tel: (902) 494-2240  
Fax: (902) 494-3594  
Website: <http://www.ahprc.dal.ca>

The Atlantic Health Promotion Research Centre (AHPRC) was established in 1993 to conduct interdisciplinary, collaborative health promotion and chronic disease prevention research. AHPRC has generated over \$20 million in research grants and contracts since 1993.

Current research focus includes chronic disease prevention, health policy focused on prevention and reducing health disparity. The centre is conducting research on knowledge translation, prevention of chronic illness and disability, settings and health, oral health of seniors and youth obesity.

The AHPRC is currently supported by the Faculties of Health Professions, Medicine, and Dentistry at Dalhousie University. Support for specific research projects comes from agencies such as Canadian Institutes for Health Research, Social Sciences and Humanities Research Council of Canada, Canadian Health Services Research Foundation, Nova Scotia Health Research Foundation and Heart and Stroke Foundation.

### Atlantic Institute of Criminology

Director: D.H. Clairmont, BA, MA, PhD

The Atlantic Institute of Criminology was established to provide a centre for research in the areas of criminology, policing, and other concerns of the justice system. Associate memberships are available to interested and qualified persons.

### Nuclear Magnetic Resonance Research Resource (NMR3)

Director: J.W. Zwanziger, BA, MS, PhD  
Coordinator: M.D. Lumsden, BSc, PhD  
Other Staff: U. Werner-Zwanziger, BSc, PhD

Established in 1982 with assistance from the Natural Sciences and Engineering Research Council, the centre is located in the Department of Chemistry and involves faculty, researchers and graduate students in all Maritime universities and many Dalhousie Departments. It is concerned with applications of magnetic resonance spectroscopy to problems in chemistry, materials science, biology, biochemistry, and related areas. Its current instrumentation includes Bruker AC-250 (Tecmag upgrade) and Avance-500 NMR spectrometers for liquids, Bruker Avance DSX 400 and Avance 700 NMR spectrometers for solids. The Avance-500 and Avance-700 NMR spectrometers were installed in 2003 with funding from NSERC, the Canadian Foundation for Innovation and the Atlantic Innovation Fund. The current director, Professor J. Zwanziger, holds the Tier 1 Canada Research Chair in NMR Studies of Materials.

The Resource offers facilities for hands-on use by researchers and also provides NMR spectra and expertise to scientists throughout the Atlantic Region. It also interacts widely with Maritime industries.

For information see: <http://nmr3.chemistry.dal.ca>

### Atlantic Research Centre (ARC)

Director: Neale Ridgway  
Phone: (902) 494-7133  
Website: <http://arc.medicine.dal.ca/>

Established in 1967, the ARC conducts basic biomedical research in the fields of lipid metabolism and cell signalling, areas of fundamental importance to a variety of disorders including cancer, neurological, heart and infectious diseases. It also provides education and expertise in these fields to undergraduate and graduate students, other researchers, and the general public. The ARC houses state-of-the-art facilities for biochemical and molecular biological research, including a regional proteomics service facility (DalGEN, <http://genomics.medicine.dal.ca/pms>), and is affiliated with the IWK Cheminformatics & Drug Discovery Laboratory. The Centre's staff hold appointments in the Departments of Pediatrics and Biochemistry & Molecular Biology in the Faculty of Medicine. Research at the ARC is supported by agencies such as the CIHR, NSERC, CFI, Heart and Stroke Foundation, National Cancer Institute, Atlantic Innovation Fund, and the IWK Health Centre.

### Brain Repair Centre

Chair: Dr. Ivar Mendez, (Professor and Head, Division of Neurosurgery, Department of Surgery and Cross-appointment in Department of Anatomy & Neurobiology, Faculty of Medicine)  
Website: <http://www.brainrepair.ca/>

The Brain Repair Centre (BRC) is a collaboration of Dalhousie University, the Capital District Health Authority and the IWK Health Centre. The BRC is a multi-disciplinary unit focusing on research that can lead to the diagnosis, treatment, and repair of the brain to overcome the effects of neurological and psychiatric disorders such as Parkinson's disease, Huntington's disease, Amyotrophic Lateral Sclerosis (ALS), Epilepsy, Muscular Sclerosis (MS), stroke and spinal cord injury. The BRC grew out of the clinical Neural Transplantation Program, collaboration between basic neuroscientists and clinicians interested in treating Parkinson's disease. The success of the Neural Transplantation Program led clinical and basic neuroscientists to decide to form the Brain Repair Centre. The BRC was formed in 1999 and has focused on stem cell transplantation, Parkinson's disease, spinal cord injury, psychotic disorders, stroke and neuroimaging as areas of innovation at Dalhousie University, Capital Health and the IWK Health Centre.

Examples of BRC achievements include:

- Attracted capital funding from private donors, institutions and the public sector to support construction and fit-up of the new Life Sciences Research Institute scheduled to open in early 2011. When the LSRI is completed, the Brain Repair Centre will become the anchor tenant of this new research and commercialization building with state-of-the-art research, equipment and facilities.
- Establishment of collaboration agreements with research teams at McLean Hospital/Harvard University; Jilin University, China; Cardiff University, Wales; and Neurodyn, Inc.
- Establishment of a \$12 million magnetic resonance imaging facility with the national Research council's Institute for Biodiagnostics (NRC-IBD).
- In 2006, the BRC was awarded \$5.5 million for infrastructure from the Canadian Foundation for Innovation, the largest such award to date in Atlantic Canada. Also in 2006, BRC received a \$3 million Atlantic Innovation Fund award for research, a follow-on to an earlier \$3 million research award.
- Dr. David Clarke, a member of the Brain Repair Centre used a virtual model of a patient's brain to remove a simulated brain tumour before removing the actual tumour the following morning. Developed by a partnership of the National Research Council and a team of about 50 people in 10 Centres across Canada, this was the first such surgery performed in the world.
- Medtronic Canada, Capital District Health Authority, QEII Foundation, and the Brain Repair Centre established a Canadian Centre of Excellence and Training at the Halifax Infirmary. This new \$3.5 million centre provides important new clinical facilities for training and development in imaging, spinal cord and neuromodulation.

- In the neurotransplantation field, the BRC is unique in Canada and one of only four centres worldwide involved in clinical application of neural transplantation, with the "Halifax Protocol" accepted as the world gold standard.
- The BRC is an innovative collaboration that integrates its research expertise with pioneers in the fields of imaging, neurology, stem cell neurobiology, vision, molecular neurobiology, pharmacology, psychiatry, clinical trials and cognitive neuroscience.
- The BRC brings together the expanding fields of neuroimaging and stem cell technologies with application to the treatment of neurological and psychiatric disorders.
- The BRC is the Atlantic Canada presence in the Stem Cell Network, a National Centre of Excellence in stem cell research.

The BRC places emphasis on moving basic science research from the bench to the clinical bedside and from the bedside back to the bench. A key objective of the BRC is to produce innovative technologies that will be commercialized.

## Canadian Institute of Fisheries Technology (CIFT)

Director: T.A. Gill, PhD  
 Telephone: (902) 494-6030  
 Fax: (902) 420-0219  
 Website: <http://cift.engineering.dal.ca>

CIFT was established in 1979 at the former Nova Scotia Technical College (later TUNS). The federal Department of Fisheries and Oceans provided much of its early specialized laboratory and seafood pilot scale processing equipment, and Industry Canada provided start-up funding and designated CIFT a centre of excellence. As a government-approved laboratory for advanced technology, it also provides R&D services on a cost-recovery basis to industry and to various governmental agencies. The Institute promotes technology transfer and the development of advanced technologies aimed at more effective commercial utilization of both marine and terrestrial resources in Canada and throughout the world.

In addition, CIFT offers unique opportunities for undergraduate and post-graduate training and research through the Food Science program. Major areas of emphasis are: food biochemistry and microbiology; fats, oils, nutraceuticals and other bioactives; physical properties of foods; fish/food process engineering; food safety and preservation; food rheology, food fermentation and beverage science.

### Facilities

CIFT is located in the MacDonald building of Sexton Campus at 1360 Barrington Street in downtown Halifax. The Institute's facilities include:

- fats and oils laboratory
- food chemistry laboratory
- food development laboratory
- sensory evaluation laboratory
- food process engineering pilot plant
- low temperature storage facility
- food physical properties laboratory
- food microbiology laboratory

These areas contain specialized instrumentation and food processing equipment to enable experimental processing, laboratory analysis, and product storage evaluation. In addition to a computer-controlled cold-storage facility, the pilot plant is equipped for experimental processing including freezing, chilling, thermal processing, drying and smoking, centrifugal separation, meat-bone separation and modified atmosphere storage.

The pilot plant is especially well equipped for thermal processing with a modern automated retort capable of steam, steam-air, or water immersion processing research. The specially designed cold-storage facility is computer controlled and particularly useful for the study of changes in foods as a result of frozen storage history. The pilot plant is also equipped with a custom-built computer-controlled heat pump dryer that is used in food dehydration experiments.

Specialized laboratory equipment includes: automated high performance and fast protein liquid chromatography systems, gas chromatography/mass spectroscopy system, preparative ultracentrifuge, multi-purpose refrigerated centrifuge, microtube centrifuge, analytical and preparative

electrophoretic/isoelectric focusing equipment, pulsed field electrophoresis system, thermocycler, DNA gel electrophoresis, Hoefer Daltsix for 2D electrophoresis, Image Master 2D elite software, capillary electrophoresis system, ultra-low temperature freezer, universal texture testing machine, various colorimeters, U.V. and visible spectrophotometer, spectrofluorometer, electrokinetic analyzer, workstation for mathematical modelling and computer simulation, Linkham shearing stage/microscope, Nikon microscope (various attachments), controlled stress rheometer with a high temperature/pressure attachment, controlled rate rheometer, Viscomat, and a rolling ball viscometer.

### Educational Opportunities

Undergraduate (BAsc) and graduate (MSc and PhD) programs are available through the Food Science and Technology program. Also post-doctoral research opportunities are offered. Graduate level class work and research opportunities relate to food science, seafood processing technology, marine oils, engineering design, packaging technology, fish post-mortem biochemistry, food microbiology, food rheology and food process science. Students with degrees in food science, engineering, chemistry/biochemistry, microbiology or biology are invited to apply.

## Centre for African Studies

Phone: (902) 494-3814/1377  
 Fax: (902) 494-2105  
 Director: Theresa Ulicki, PhD

This Centre, established in 1975, advances instruction, publication, research and development education programs in African Studies. Associated faculty offer classes through the Departments of History, International Development Studies, Political Science, French, Sociology and Social Anthropology and Philosophy. The Centre organizes academic and informal seminars and public policy conferences on Africa and encourages interdisciplinary interaction at all levels on African subjects and issues. It co-operates with the International Development Studies department and with the Lester Pearson International Office.

## Centre for Comparative Genomics and Evolutionary Bioinformatics

Director: Andrew J. Roger, PhD  
 Coordinator: Wanda Danilchuk  
 Phone: (902) 494 2620  
 Fax: (902) 494 1355  
 Website: <http://www.cgeb.dal.ca>

The Centre for Comparative Genomics and Evolutionary Bioinformatics (CGEB) at Dalhousie University encompasses an interdisciplinary group of researchers in the Faculties of Medicine, Science and Computer Science. Although microbial genome evolution and diversity is at the heart of many of the CGEB researchers' activities, our work spans computational biology, computer science, statistical modeling and comparative genomics, with a strong focus on method and theory. The application of DNA sequencing technologies to characterize the genomes of a wide diversity of microbes has generated vast quantities of genome sequence data. Now the intellectual challenge is to develop from this enormous resource more comprehensive and theoretically robust phylogenetic, genetic and ecological models to further our understanding of the many roles of microbes in the biological world.

CGEB researchers are united by the common goal of using this vast resource of genomic information to elucidate evolutionary patterns and processes: the pathways by which microbial organisms have diversified over the last 3.5 billion years of Earth's history and through which they continue to shape the global environment. Only through the integration of experimental genomic approaches and sophisticated bioinformatic modeling will we be able to achieve this goal.

CGEB researchers and trainees are supported by grants from the Canadian Institutes for Health Research (CIHR), Natural Sciences and Engineering Research Council (NSERC), the Nova Scotia Health Research Foundation (NSHRF). The Centre itself is supported by funding from the Tula Foundation (<http://www.tula.ca>), the Faculties of Medicine, Science and Computer Science. CGEB is also supported by a large grant from the Tula

Foundation (<http://www.tula.ca>) that provides funds for training top-notch postdoctoral and graduate trainees in the CGEB research specialties. We also have a regular seminar series that brings world renowned scientists to speak at Dalhousie University and interact with faculty members and trainees.

### Centre for Environmental and Marine Geology

Director: Professor D.B. Scott

This Centre was originally founded as the Centre for Marine Geology in 1983 to promote interdisciplinary studies of various types of problems in marine Geology, capitalizing on our unique position in Canada with links to related departments such as Oceanography, Physics, Biology, the Bedford Institute of Oceanography and our hosting of the Canadian office of the Ocean Drilling Program. Since 1983 the role of the Centre has changed, reflected in the new name, which better describes the work being done now where marine geology is combined with environmental problems. We have 3 new faculty that expand our expertise into new chronological techniques and permafrost as well as strengthening our capacity in the petroleum-related environmental geology. Some of the objectives of the Centre are to: 1) continue to expand our participation in a revitalized east coast offshore energy related problems; 2) continue our climate-change work with a variety of approaches both offshore and on land; 3) expand into Arctic regions both with major oceanographic and shore-based programs; and 4) expand our capacity to help solve some of the many environmental geology problems associated with urbanization.

### Centre for European Studies

Director: Finn Laursen, PhD, Canada Research Chair in European Studies  
Email: [euce@dal.ca](mailto:euce@dal.ca)

The Centre for European Studies was established in 2007 to promote research on all aspects of European society and its relations with the rest of the world. The Centre facilitates the work of Europeanist scholars at Dalhousie, including the participating Canada Research Chairs in European Studies, enables research collaboration with scholars from Canada and around the world on projects related to Europe and the European Union, and serves as the administrative home for the European Studies program.

### Centre for Foreign Policy Studies

Director: David R. Black, 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, international organizations, publication sales, and contracts.

The Centre's work is concentrated in the areas of Canadian and comparative maritime security and oceans policy, Canadian and American foreign and security policies, and global security and international development. Its geographical specializations include Canada, North America, Europe, and the South (especially Africa, Asia, and the Caribbean). The Centre encourages activities in these areas by Faculty, Research, and Doctoral Fellows, and advances communication among local and international communities in these fields through seminars, workshops conferences and colloquia, often in collaboration with local, national, and/or international organizations. It publishes occasional papers and monographs on Maritime Security, Canadian Defence and Security, and Global Security 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.

For further information, consult the Centre's website:  
<http://centreforforeignpolicystudies.dal.ca>.

### Centre for Innovation in Infrastructure

Director: John Newhook, PhD, P.Eng.  
Assistant Director: Dean Forgeron, PhD, P.Eng.  
Location: Room B233, Sexton Campus  
1360 Barrington Street  
PO Box 1000  
Halifax, Nova Scotia B3J 2X4  
Phone: 902-494-2847  
Email: [forgeron@dal.ca](mailto:forgeron@dal.ca)

The Centre for Innovation in Infrastructure is an industry-oriented research centre with the Faculty of Engineering and with strong affiliations with the Department of Civil and Resource Engineering. Established in 1983 as the Nova Scotia CAD/CAM Centre, the Centre originally focussed on assisting Atlantic Canadian industry with the integration of computer added manufacturing and computer aided design technology in their operations. Since the 1990's the Centre has continued to evolve to meet the needs of industry in other areas and to take a more active role in research and development in civil infrastructure.

Today the Centre act as a focal point for research, innovation and technology transfer in Civil Infrastructure related areas. The major funding partnerships are with the Atlantic Canadian departments of transportation, industries related to bridge and structural engineering and with companies developing new materials and products for infrastructure.

Our combined areas of expertise and research interests include:

- Structural Analysis and Design
- Structural Health monitoring
- Bridge engineering and innovations
- Soil-steel structures
- Fibre reinforced polymers
- Fibre reinforced concrete
- NDT of bridge decks and pavements
- Sustainable asphalt technology

The Centre has acquired and maintains significant testing equipment related to these research areas and contributes to the maintenance and operation of the research facilities within the Department of Civil and Resource Engineering.

### Centre for International Trade and Transportation

Location: 6100 University Avenue  
Suite 2060  
Halifax, NS  
B3H 3J5

Director: Daniel Lynch  
Phone: (902) 494-6248  
Fax: (902) 494-1483  
Email: [dan.lynch@dal.ca](mailto:dan.lynch@dal.ca)

Administrative  
Secretary: Maggie Lapp  
Phone: (902) 494-6553  
Fax: (902) 494-1483  
Email: [m.e.lapp@dal.ca](mailto:m.e.lapp@dal.ca)

Student Exchange  
Coordinator: Timothy Richard  
Phone: (902) 494-2224  
Fax: (902) 494-1483  
Email: [tim.richard@dal.ca](mailto:tim.richard@dal.ca)  
Website: <http://citt.management.dal.ca>

The Centre was established in 1975 with a mission to foster international business teaching and research and enhance Canada's global competitiveness through innovative programs and outreach services. It carries out these functions within the administrative framework of the School of Business Administration. CITT supports a wide range of learning experience including the Central & Eastern European Business Program and the Student Export Awareness Program. Each year the Centre hosts the Student Research Symposium, which is an opportunity for students to present their research to academic and business leaders. CITT offers research fellowships to international business majors in their final year of MBA and BComm study.

## Centre for Marine Vessel Development and Research (CMVDR).

Acting Director: Farid Taheri, PhD, PEng  
Phone: (902) 494-3935  
Website: <http://orca-atlantic.ca/>

The Centre for Marine Vessel Development and Research (CMVDR), was originally established in 1989 to provide specialized technical services to the Marine Industry. Emphasis was on pure and applied research in marine dynamics. Due to the recent impulse of offshore and marine activities in the Atlantic region, and the broadened focus of the sectors involved in these fields, the centre's mission was recently renewed. The current centre has a broadened the original mandate extensively and currently encompasses not only traditional areas of research, but also a wide range of new areas.

CMVDR is dedicated to carrying out research and tests in the areas of Off-Shore and Naval/Marine Engineering on topics with a particular interest to the Atlantic Provinces research and industrial communities. Furthermore, the Centre facilitates the transfer of technology between the University, Government and industry. The Centre provides research opportunities for students from Dalhousie and other universities in the Atlantic Provinces. The following list outlines the potential research areas that would complement the Centre's original activities:

- Study and development of offshore, marine and ship structures
- Application of new materials, such as carbon fiber-reinforced and sandwich composite hulls and structures
- Enhancement and characterization of response of such structure by the use of smart materials and sensors
- Complete fracture mechanics and fatigue analysis capability (experimental, analytical and computational)
- Finite element simulation and analysis
- Non destructive and destructive testing evaluation capabilities
- Study of ship hydrodynamics,
- Propeller design
- Pipeline design/analysis and integrity assessment
- Towing tank tests

CMVDR involves graduate students in pertinent multidisciplinary areas as much as possible in its research contracts with industry.

### Research Facilities

#### *Materials and Structural design/analysis and characterization*

Complete suite of computational and experimental facility for design/analysis and characterization of materials. The centre has access to the following equipment: computer-controlled Instron universal testing equipment; low-velocity impact tower equipped with various sensors; non-destructive mechanical testing capabilities; laser doppler vibrometer testing equipment; ultrasonic testing equipment (Boeing spec); Grindosonic (acoustic) testing equipment; environmental testing chamber; salt-fog testing chamber

#### **Marine Craft Model Towing Tank**

A marine craft model towing tank with dimensions of 1m x 1m x 30m is available. The carriage has a maximum velocity of 4.0m/s (13ft/sec) and can sustain a constant carriage speed over a usable rail length of 25m. A computer-controlled wave-making system is installed in the tank, comprising two wave-makers, one at each end. Each can act as a wave-maker or a wave-absorber. The system can make progressive or standing waves, as well as regular or irregular waves. The maximum wave height is about 0.3m (1 ft).

#### **Computing Facilities**

CMVDR has access to several commercial finite element software. The post-graduate Naval Architecture Program has sophisticated and networked Computer Systems to support its advanced research work. In addition to advanced hydrodynamic and hydroelastic software developed in-house, CMVDR has commercial hull design and analysis software packages, including FastShip, GHS, Shipul 2000, AutoShip and ABS Safehull. These are used to complement research efforts, and to instruct naval architecture students.

## Centre for Water Resources Studies

Location: Office D-514  
1360 Barrington St.  
Telephone: (902)-494-607  
Email: [cwrs@dal.ca](mailto:cwrs@dal.ca)

The Centre for Water Resources Studies was established in December, 1981, by a resolution of the Board of Governors (TUNS). The objectives of the Centre are to carry out applied research which contributes to the effective and sustainable protection of water resources in Atlantic Canada, nationally and internationally, and to facilitate the transfer of new knowledge to potential users. Research programs directed by the Centre address the design of cost-effective on-site wastewater systems, soil erosion processes, drinking water treatment, the use of roofwater cisterns for domestic water supply, eutrophication, watershed management and the computer modeling of hydrodynamic and hydrochemical processes. The Centre also has a number of research advisory panels, which involve professionals from industry, government and academia in applied research related to water use and water management.

### *Facilities*

The Centre for Water Resources Studies is located on the fifth floor of "D" Building on Sexton Campus. Laboratory and office space is available for specific graduate research topics, as well as ongoing research carried out by Centre personnel. Analytical equipment includes instrumentation for determining low levels of major ions and nutrients, as well as trace quantities of metal ions in water. The Centre has apparatus for laboratory investigation and pilot scale testing of innovative water treatment methods using Dissolved Air Flootation (DAF) and ozonation and has worked with local consultants and municipalities to develop new applications of the technologies. The Centre is a North American leader in the development of on-site sewage disposal and has had an active research program in this area since 1987. In conjunction with the Nova Scotia Agricultural College, the Centre has a field laboratory investigating sloping sand filters and septic disposal.

### *Educational Opportunities*

The Centre co-operates with academic units in the training of undergraduate and graduate students who have an interest in water resources. The Centre also participates in the program leading to a dual degree in water resources engineering and planning, in conjunction with the School of Planning into the Faculty of Architecture and Planning.

## Dalhousie Institute for Society and Culture (DISC)

Director: Assistant Dean, Research in the Faculty of Arts and Social Sciences  
Email: [discfass@dal.ca](mailto:discfass@dal.ca)  
Website: <http://arts.dal.ca/Research>

Established in 2008, the Dalhousie Institute on Society and Culture serves as the virtual home for the many divergent research activities and initiatives within the Faculty of Arts and Social Sciences. Its primary function is to support research within the Faculty through various fellowship programs, publicity and fund raising initiatives, publishing ventures, conferences and lecture series, and cross-disciplinary exchanges.

The Institute encompasses two broad and overlapping research clusters: *Societies in Local, National, and Global Contexts*, and *Cultural Representations and Presentations*. The former cluster aims to develop new knowledge about political, social, and economic transformations, about national and regional identities, and about global relations, whereas the latter seeks to investigate and preserve cultural traditions, literatures, and languages, to foster studies and theories of cultural identity, to stimulate artistic innovation, to examine the shaping influence of beliefs and religions, and to contribute to the cultural life and profile of the province. These two clusters, with a flexibility and breadth unequalled in Eastern Canada, are uniquely equipped to analyze social and cultural change.

## Eco-Efficiency Centre, Faculty of Management

Director: Michelle Adams  
Phone: (902) 494-4588  
Program Manager: Penny Slight  
Website: <http://www.dal.ca/eco-efficiency>

The Eco-Efficiency Centre (EEC) was established in 1998 as a partnership with Nova Scotia Power, Inc., and in 2005 was approved as a university centre in the Faculty of Management. It is currently linked to business, engineering, and resource and environmental studies programs. The EEC has achieved a national and international profile for its work in promoting research and action in relation to eco-efficiency and industrial ecology, especially in its application to industrial parks.

The objectives of the Centre are to:

1. develop and sustain eco-efficiency, industrial ecology, and corporate sustainability research programs at Dalhousie University;
2. provide education, research and employment opportunities for students;
3. develop and provide information and resources related to eco-efficiency, industrial ecology and corporate sustainability to business and government;
4. develop models of environmentally sustainable industrial development thereby improving environmental and financial performance of small and medium enterprises (SMEs) and larger corporate entities; and
5. foster sustainable business practices as models and develop local case studies for teaching purposes.

The research of the Centre provides small and medium-sized enterprises (SMEs) with the tools necessary to increase the overall sustainability of their operations by investigating and applying techniques such as pollution prevention, life cycle analysis and eco-industrial networking. At the same time the Centre researches the drivers and barriers to sustainability strategies providing data that influences the development of new government policies at all levels. The EEC provides opportunities for students to learn, faculty to collaborate in new action research initiatives and businesses to improve their environmental performance.

Areas of collaboration in research include:

Environmental Studies - Life cycle analysis, energy and material metabolism, industrial symbiosis, ecological footprint analysis.

**Business** - input/output analysis, supply chain management, reverse logistics, environmental accounting, eco-efficiency studies, supply chain management, education of personnel, and corporate sustainability.

**Engineering** - process optimization, energy and material balances, pollution prevention, industrial symbiosis, environmentally friendly building materials, product and process design.

**Planning** - green building design and construction, industrial park planning, zoning, land use standards, infrastructure design.

**Information Management** - geographic information systems, life cycle and industrial metabolism database management.

**Public Policy and Law** - economic and industrial development policies, regulations, economic instruments.

The continuing involvement of students and the increased focus on graduate research and research partnerships will assist in developing the research capacity and promote long term progress towards sustainability in Atlantic Canada and Canada generally. Co-op students from the Faculty of Management and Faculty of Engineering are hired regularly as are interns from the Master of Resource and Environmental Management and Master of Environmental Studies Programs.

Sustainability has been identified as a priority at all levels of government, particularly the federal government and agencies such as the Atlantic Canada Opportunities Agency and Industry Canada. The Centre has had working relationships with the Atlantic Canada Opportunities Agency, Natural Resources Canada's Office of Energy Efficiency, Environment Canada, the Nova Scotia Department of Environment, the Nova Scotia Department of Economic and Rural Development, and the Resource Recovery Fund Board Nova Scotia Inc.

## European Union Centre of Excellence

Director: Finn Laursen, PhD  
Phone: (902) 494-2980/7558  
Fax: (902) 494-1909  
Email: [euce@dal.ca](mailto:euce@dal.ca)  
Website: <http://www.euce.dal.ca>

Established in 2006, the European Union Centre of Excellence in Canada gives Dalhousie University recognition from the European Union to carry out projects and activities that promote greater awareness of the EU in Canada. During the period 2006-09 there have been three other centres in Canada with this title, located at Carleton University, the University of Toronto, and a joint centre at Université de Montréal/McGill University. While based in the Faculty of Arts and Social Sciences, with special emphasis on the Department of Political Science, this centre coordinates exchanges of faculty and students, conferences, workshops, symposia, and other projects and activities from other faculties as well, including Law, management, and Science.

The centre has just had its agreement with the European Commission renewed for the next three years. The new agreements include research activities on the Arctic policies of Canada and the EU, trade negotiations between the EU and Canada, various aspects of migration policies in Europe, EU Copyright legislation, the EU and the economic crisis, trade relations within the EU, public health policy in EU and Canada, merger control in EU and Canada, etc. The agreement also foresees a major annual conference on the following three topics: the EU's Area of Freedom, Security and Justice (including immigration and asylum policies), the Lisbon Treaty and Transatlantic Relations. The budget will also allow the centre to invite speakers from EU countries. There is further some support for teaching activities, as well as graduate students through fellowships and research assistantships.

## Health Law Institute

Director: William Lahey, BA, B.A., LLB, LLM  
Location: Dalhousie University  
6061 University Avenue  
Halifax, NS B3H 4H9  
Phone: (902) 494-6881  
Fax: (902) 494-6879  
Email: [hli@dal.ca](mailto:hli@dal.ca)  
Website: <http://www.dal.ca/hli>

An Interdisciplinary Institute of the Faculties of Law, Medicine, Health Professions, and Dentistry, the Institute is committed to the advancement of health law and policy and the improvement of health care practice and health systems in Canada through scholarly analysis, professional education, and public service. Its objectives are:

1. To foster strong and innovative health law and policy scholarship by:
  - contributing to research in health law and policy
  - providing external consultation services on matters having a significant impact on health law or policy
2. To advance health law and policy education by:
  - designing and implementing education programs for law, medicine, health professions and dentistry students
  - providing continuing education opportunities for health professionals and legal practitioners
3. To serve the public in our areas of expertise by:
  - contributing to the societal understanding of health law and policy issues
  - providing expertise to organizations in the public sector
  - engaging in the policy-making process at local, regional, and national levels.

## Institute for Research in Materials (IRM)

Director: Richard A. Dunlap, PhD  
Administrative  
Offices: 6414 Coburg Road  
Halifax NS B3H 3J5  
Phone: (902) 494-6373  
Fax: (902) 494-8016  
URL: <http://www.irm.dal.ca>

Established in 2002, IRM is made up of about 100 faculty members in seven faculties (Science, Engineering, Dentistry, Medicine, Architecture and Planning and Management and Health Professions) and eighteen departments. The goals of the Institute include advancing the collective interdisciplinary research efforts in materials science and engineering at Dalhousie University, facilitating interdisciplinary teaching in materials science within the existing discipline structure, and enhancing interactions between materials researchers at Dalhousie University with relevant government laboratories and industry, especially within the region. The Institute leads collaboration within the university on interdisciplinary applications to funding agencies for major equipment and research infrastructure, and collaborates with external organizations to pursue research opportunities.

All Dalhousie University faculty members carrying out research in the area of materials are eligible to be Members of IRM. Postdoctoral fellows and graduate students associated with these research groups are invited to become Associate Members of IRM. See [http://irm.dal.ca/Opportunities/Graduate\\_Students.php](http://irm.dal.ca/Opportunities/Graduate_Students.php) for details.

In addition to equipment operated by individual members of the Institute, IRM has established (2003) the Facilities for Materials Characterization, an \$11 million suite of instruments managed by the Institute.

The equipment includes:

- High-field solid-state NMR spectrometer (managed jointly with the Nuclear Magnetic Resonance Research Resource)
- Scanning electron microscope
- Focused ion beam
- X-ray photoelectron spectrometer (XPS)
- Secondary ion mass spectrometer (SIMS)
- Sputtering system
- Ultra-high speed optical systems
- Physical properties measurement system (PPMS)
- Scanning thermal microscope (SThM)
- Ultrasonic immersion testing equipment
- Hot press
- Grindo Sonic
- High-speed motion recorder/analyzer.

These facilities are open to external users. Please contact [IRM@dal.ca](mailto:IRM@dal.ca) for details.

## International Health Office

### Dalhousie Faculty of Medicine

Location: C-241 5849 University Avenue  
Halifax, NS B3H 4H7 Canada  
Phone: (902) 494-1965  
Fax: (902) 494-2799  
Email: [iho@dal.ca](mailto:iho@dal.ca)

Website: <http://iho.medicine.dal.ca>

Shawna O'Hearn, Director

Dr. Cathy Cervin, Confidential Academic Advisor for International Students

Colleen Cash, Project Manager

Andrea Papan, Manager of Global Health Education Program

Kathleen Gadd, Program Coordinator, International Students

Jennifer LeBlanc, Communications and Outreach Coordinator

Shonching Wang, Administrative Assistant

Suzanne Clarke, Student Outreach Coordinator

Sheri Roach, Student Researcher

The International Health Office was established in 2001. The mission of the International Health Office is to build leadership within the Dalhousie

community to advance global health. As the premier interprofessional global health program in Canada, we are recognized regionally, nationally and internationally for:

- exceptional learning opportunities that prepare health care professionals for lifelong leadership in global health;
- strong partnerships that improve health and health systems in under-resourced communities;
- engagement with faculty to conduct training, pursue research and inform public policy related to global health.

There are many ways for students and faculty to engage with our office; we coordinate Global Health electives, placements and summer programs, a Global Health Seminar Series, the Global Health Course elective, Global Health Research, Global Health mentorships and the Dr. Ron Steward Award for Student Leadership in International Health.

## Law and Technology Institute

Director: Chidi Oguamanam, LLB, LL.M, PhD  
Associate Director: Michael Deturbide, BSc, BJ, LLB, LL.M  
Location: Schulich School of Law  
6061 University Avenue  
Halifax, NS B3H 4H9  
Phone: (902)494-1469  
Fax: (902)494-1316  
Email: [lynda.corkum@dal.ca](mailto:lynda.corkum@dal.ca)  
Website: <http://www.dal.ca/law/lati>

The Law and Technology Institute was established at Dalhousie Law School in 2001 to provide teaching, research, and continuing education on technology law issues to students, faculty members, and the practicing Bar. The Institute participates, with the faculties of Computer Science and Management, in Dalhousie's Master of Electronic Commerce Program, and has commenced collaborative projects with the private sector and governments on information technology issues. Also, in conjunction with Dalhousie's Industry Liaison and Innovation Office, the Institute offers a student placement program in intellectual property and commercialization. Its faculty members provide graduate supervision to students interested in the developing field of technology law issues, and are active in law and technology organizations, such as IT.Can, and the International Society for Law and Technology. Faculty members of the institute are writers of the English edition of IT.Can bi-weekly newsletter. The Institute hosts an Eminent Speakers Series, which brings leading IT lawyers and academics to Dalhousie to share their expertise. The Institute is home to the Canadian Journal of Law and Technology, co-edited by Professors Deturbide and Reynolds. The CJLT is the pre-eminent technology law review in Canada.

### Classes Offered:

- Law and Technology
- Internet and Media Law
- Privacy Law
- Intellectual Property Law
- Information Technology Transactions
- Entertainment Law
- Intellectual Property and Commercialization Placement
- Special Topics on Intellectual Property (IPII)
- Copyright Law
- Patent law

Students also have the opportunity to pursue specialized interests in fields such as health law and alternate dispute resolution, as they relate to law and technology.

## Marine & Environmental Law Institute

Director: Aldo Chircop, JSD  
Associate Director: Meinhard Doelle, BSc, LLB, LLB, JSD  
Location: Schulich School of Law  
6061 University Avenue  
Halifax, NS B3H 4H9  
Phone: (902) 494-1988  
Fax: (902) 494-1316  
Email: MELAW@dal.ca  
Website: <http://www.dal.ca/law/MELAW>

The Institute, which is housed in the Law School, carries out research and consultancy activities and also directs the Marine & Environmental Law Program (MELP) academic specialization. Its current Director and primary researcher is the holder of an appointment as a senior Canada Research Chair in Ocean Law & Governance. In addition to their scholarly research and publication activities, MELP faculty, associates and staff carry out research projects and provide advisory services to agencies of the United Nations, international non-governmental organizations, and regional organizations as well as assisting government departments and non-governmental organizations in Canada and overseas.

The Marine & Environmental Law Institute is also the editorial office of the *Ocean Yearbook*, a major international interdisciplinary annual, devoted to ocean affairs. Dalhousie law students have the chance to gain experience working as research assistants on the Institute's research projects and workshops, and assisting with editing the *Ocean Yearbook*.

Schulich School of Law also hosts two other research institutes, the Health Law Institute and the Law & Technology Institute, as well as its concentrations in the fields of international law, business law and public law. In addition to the required courses in the MELP specialization, students are also encouraged to undertake research/courses in these and other fields in the LLB curriculum. This allows students to engage with emerging and cross-cutting topics such as biotechnology, environment and health, ethics, indigenous rights, animal rights, international trade law and human rights.

The MEL Institute supports student collaboration in addressing environmental issues through the Environmental Law Student Society and the East Coast Environmental Law Association, a non-governmental organization dedicated to environmental law education and advocacy. The MEL Institute encourages interdisciplinary collaborations within the Dalhousie community including the School for Resource and Environmental Studies (SRES), the Marine Affairs Program (MAP), the International Development Studies (IDS) Program, the Centre for Foreign Policy Studies, and the recently established Ocean Tracking Network (OTN) led by the Department of Oceanography. The MEL Institute also promotes national collaborations, for example, through the Ocean Management Research Network (OMRN). International linkages include, among others, the Global Forum on Oceans, Coasts and Islands and the IUCN Academy of Environmental Law.

## Minerals Engineering Centre

Director: Georges J. Kipouros, Ph.D, P.Eng  
Phone: (902)494-6100  
Location: 1360 Barrington Street  
G. Building, Sexton Campus  
Halifax, NS, B3J 2X4  
Phone: (902)494-3955  
Fax: (902)494-3506  
Website: <http://minerals.engineering.dal.ca>  
Email: [mec@dal.ca](mailto:mec@dal.ca)

The Minerals Engineering Centre was established from the Laboratory for the Investigation of Minerals. The Minerals Engineering Centre provides research, analytical and advisory services to industries, universities, and government bodies in Atlantic Canada, Canada and International. The Centre is located in G Building on Sexton Campus and is affiliated with the Materials Engineering program. The services offered include:

- Sample preparation of ores, soils, silts, rocks, cores and clay fraction
- Size analysis, including screening, sieving, and sub-sieve analysis
- Minerals separation using dense liquids

- Physical and chemical analytical methods using atomic adsorption, XRD, ICP, x-ray fluorescence spectrographic and wet chemical techniques
- Analysis of samples including geological, metalliferous ores, industrial minerals, coals, metals, alloys and water
- Mineral processing test work covering the whole range of investigative techniques from bench scale to pilot plant, including crushing, grinding, classification, gravity separation, dense medium separation, magnetic separation, electrostatic separation, flotation, flocculation, thickening, filtration, and drying
- Evaluation of biomass fuels.

The Minerals Engineering Centre provides opportunities for undergraduate and graduate students to learn various analytical and testing techniques applicable in their course of studies. It also offers services to faculty members to assist in their teaching and research activities.

Further information may be obtained from the Director of the Centre.

## Neuroscience Institute

Director: Alan Fine, V.M.D., PhD  
Contact: [neuroscience.institute@dal.ca](mailto:neuroscience.institute@dal.ca)  
Website: <http://www.neuroscience.dal.ca>

The Neuroscience Institute was founded in 1990 to promote and coordinate research in neuroscience, the modern interdisciplinary study of the brain and nervous system.

It 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. To this end, the Institute coordinates the activities of neuroscientists in the Faculty of Medicine, the Faculty of Science, the Faculty of Computer Science and the School of Biomedical Engineering, facilitating collaboration between clinical and basic scientists in these Faculties. Some foci of current research activity include: development and plasticity of the nervous system; cognitive neuroscience; motor control; autonomic function; synaptic function; and sensory physiology. The Institute also provides a vehicle to seek new sources of funding, and encourages new initiatives in all areas of neuroscience research at Dalhousie. In addition, the Institute promotes and coordinates training programs in neuroscience currently offered through its constituent departments at both the undergraduate and graduate levels. It sponsors seminar series annually, and coordinates a variety of community outreach events.

## Norman Newman Centre for Entrepreneurship

Director: Ed Leach, BComm (Dalhousie), MBA (Ivay), PhD (Nova Southeastern)  
Coordinator: Scott Sheffield  
Phone: (902) 494-6975  
Website: <http://entrepreneurship.dal.ca>

The Norman Newman Centre for Entrepreneurship resides within the Faculty of Management and through its activities in the domain of entrepreneurship supports the cornerstones of the faculty - managing with integrity and inculcating within our students an acceptance of their need to make a difference. Through programs like ACE/SIFE and the Entrepreneurial Skills Program (ESP), the North American Rural Entrepreneurship initiative (NAREN), the annual Enterprise conference and business plan competition, the presentation of guest speakers and lunch and learns supports the student community in achieving their entrepreneurial aspirations. The Centre is working with other on campus units like the Industry Liaison office (ILI) to contribute to the commercialization of research and off campus with InnovaCorp (the provincial incubator for technology and technical businesses soon to be located on campus) and with the Centre for Entrepreneurship Education and Development (CEED). The Centre engages with the business community through executive briefings on germane topics, subject matter presentations on creativity and creative problem solving and inclusion of the public in the Enterprise conference. Finally the centre contributes to the community at large through their work with Shad Valley (a national month long residential program for grade 10-12 students with strengths in the sciences), support of the Sierra Leone project in support of a school in Sierra Leone and contribution to the Construct the Future Project aimed at

employment opportunities in the construction trades for African Nova Scotians. Research and teaching concentrate on understanding the successful identification, evaluation and exploitation of entrepreneurial opportunities by both new and established companies.

### **Trace Analysis Research Centre**

Director: P.D. Wentzell, BSc, 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.

### **Vehicle Safety Research Team**

Director and Principal Investigator: C.R. Baird, PhD, PEng

The Vehicle Research Safety Team (VSRT) is one of six university-based teams located across Canada. These teams operate on a non-profit basis under contract to Transport Canada (Surface), and were established to conduct research into vehicular crashes.

The VSRT has been in operation since 1972 and, in addition to participating in national programs, has been involved in several other studies, including an on-going and expanding program of seeking out and examining alleged safety-related defects. The major portion of the program is geared to relating injuries from vehicular-crashes to the injury-causing mechanisms or sources in vehicles. As such, results of collision studies are continually being related to Transport Canada Vehicle Standards.

The team is composed of two professional engineers from the Faculty as well as two full-time investigators, one of whom is a professional engineer. In addition, an advisory committee exists, providing liaison and interaction with medical personnel, policing agencies and provincial transportation authorities. The VSRT has special research interests in causal factor evaluation methods, in computer-aided collision reconstruction, in data base management and modular analysis procedures, particularly in relation to injury severity and injury-causal factors.

The team is currently participating in a number of national programs including injuries associated with air-bag deployments and side impact collisions.

## **Resources and Services**

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### **1. Alumni Association/Alumni Relations**

The Alumni Association is comprised of over 100,000 graduates of Dalhousie University. A global network of volunteers keeps alumni informed and involved with the university. By providing many programs and services, the Association fosters a strong relationship between Dalhousie and its alumni.

Dalhousie alumni play a vital role in the health and future of the university. Many alumni return to Dalhousie regularly to hire graduating students. They also serve as advocates, ambassadors and student mentors. The financial support provided by our alumni helps ensure that Dalhousie will continue to provide exceptional post-secondary education to future generations.

The Alumni Association's Board of Directors works with the Dalhousie Alumni Relations Office, located in the Macdonald Building (494-8801/1-800-565-9969/alumni@dal.ca). Together, the Association and Alumni Relations strive to identify opportunities for alumni involvement, and to foster an environment that invites alumni to participate fully in Dalhousie's well-being. Visit the website at <http://www.dal.ca/alumni>.

### **2. Athletics and Recreational Services**

Athletics and Recreational Services offers a wide range of programs for every Dalhousie student. An extensive program of club and intramural activities offer fun, fitness and competition while 14 varsity sports provide excitement for athletes and spectators alike. For those who prefer recreational activities, there are a great number of fitness, leisure and aquatic instructional programs.

Recreation facilities on campus include: Dalplex-offering a 50,000 sq. ft. fieldhouse, international-size pool, two weight rooms, two regulation-size hardwood basketball/volleyball courts, numerous "no-fee" racquet courts, an indoor track, a rock climbing centre, and family-fitness features such as the Fun Zone play area, a family change room; Dalhousie Memorial Arena, Studley Gym, and F.B. Wickwire Memorial Field (one of Canada's largest artificial playing surfaces). The Cardio Plus Centre, the Rock Court, climbing centre, equipment, locker and towel rentals, and babysitting services, are available for additional fees. The F.H. Sexton Memorial Gymnasium on the Sexton Campus includes a gym, weight room, squash court and other facilities. For details on fitness and recreation at Dalhousie contact Dalplex at 494-3372, F.H. Sexton Memorial Gymnasium at 494-3550, the Intramural Office at 494-2002 or visit <http://www.athletics.dal.ca>.

### **3. Black Student Advising Centre (BSAC)**

The Centre is intended to foster a sense of community among all students who are of Black/African descent on campus and to increase intercultural awareness. The BSAC hosts a variety of events to help reach these objectives. The BSAC Advisor provides confidential services, individual and/or group assistance, impartial observation, relevant resource materials, along with referring students to other resources on or off campus that can benefit students' academic, personal and social development. The BSAC Advisor also provides information about scholarships, bursaries, employment and upcoming community events. The BSAC includes study space as well as a lounge. The BSAC is meant to be beneficial to ALL students, faculty and staff as a means of increasing awareness and sensitivity to students of African or Black descent and their issues and presence within the university community. For further information, contact: telephone (902) 494-6648; fax (902) 494-8013; email [BSAC@dal.ca](mailto:BSAC@dal.ca); website: <http://www.dal.ca/bsac>

#### 4. Career Services Centre

The Career Services Centre assists you in:

- exploring a full range of career and work possibilities that match your career goals;
- preparing job-search documents to present yourself effectively as a candidate for employment;
- obtaining information on employment opportunities and prospective employers;
- connecting with career opportunities through campus interviews, job and volunteer listings, referrals, direct application, networking, job-search events, publications, and/or information technology; and
- developing and maintaining relationships with organizations that provide career development and employment opportunities for you.

Please refer to Career Services Centre website at <http://www.dal.ca/csc> for more information on programs and services.

#### 5. Centre for Learning and Teaching

The Centre for Learning and Teaching (CLT) works in partnership with academic units, faculty members, and graduate students to enhance the practice and scholarship of learning and teaching at Dalhousie University. CLT takes an evidence-based approach to advocating for effective learning and teaching practices, curriculum planning, services to support the use of technology in education, and institutional policies and infrastructure to enhance the Dalhousie learning environment.

*Programming:* Workshop series, presentations, and demonstrations are scheduled to address the full spectrum of educational issues, including curriculum design, evaluation of student learning, teaching and learning strategies, and the effective integration of instructional technology.

*Confidential Consultations:* Confidential consultations on teaching and learning issues are also available to colleagues. CLT staff members provide confidential consultation services to teaching assistants, faculty, and administrators on a wide range of learning and teaching issues.

*Annual Events:* On an annual basis, CLT coordinates New Academic Staff Orientation, TA Days, Recording Teaching Accomplishment Institute, and the Dalhousie Conference on University Teaching and Learning that brings together presenters from across the University and the country to explore issues related to specific themes. CLT also organizes several university-wide teaching awards, including the Dalhousie Educational Leadership Award, the Alumni Award of Excellence for Teaching, and the President's Graduate Teaching Assistant Award.

*Certificate in University Teaching and Learning:* The Certificate program is offered to graduate students by the CLT in collaboration with the Faculty of Graduate Studies. The purpose of the program is to assist academic departments in preparing students for their teaching responsibilities and to enhance their professional development opportunities for other careers.

*Grants:* The CLT administers a small number of grants to assist faculty engaged in pedagogical initiatives aimed at enhancing student learning.

*Publications:* The CLT newsletter, Focus on University Teaching and Learning, is published twice a year and is available online on the CLT website (<http://www.learningandteaching.dal.ca>). Available to purchase or borrow from CLT are Recording Teaching Accomplishment are: A Dalhousie Guide to the Teaching Dossier and Learning through Writing: A Compendium of Assignments and Techniques. CLT's lending library includes both print and video resources on topics related to teaching that may be borrowed by faculty, teaching assistants, and administrators.

*Teaching and Learning with Technology:* A division of the Centre for Learning and Teaching, Instructional Media Services (IMS), offers expertise and support to the university in the areas of classroom design, media production, presentation technology, and technical services.

- Studley Audio-Visual Classroom Services supplies equipment, training, and support to students, staff, and faculty. AV Staff provide technical support for classrooms and operate equipment loan pools on Studley campus, as well as assist with classroom design and equipment installations across all three campuses.
- Video and Audio Production Services offers a full range of creative and production services for educational, promotional, or other academic or administrative purposes.

- Technical Services repairs and services electronic equipment and provides expert advice on the design and installation of classroom technology systems. For IMS locations and contact information see <http://learningandteaching.dal.ca/ims.html>.

*Distance Education:* CLT provides consultation on the development of distance education courses, and maintains an information Website for students and faculty (<http://distanceeducation.dal.ca>). Information about specific Distance Education courses or programs is also available from the Registrar's Office.

For further information, teaching resources, or a confidential consultation, you are invited to contact the Centre for Learning and Teaching, located at Suite G90, Killam Library, 6225 University Avenue (494-1622), (CLT@dal.ca), or you can visit the CLT website at: <http://learningandteaching.dal.ca>

#### 6. Counselling Services

The Counselling and Psychological Services Centre offers programs for personal, career and learning disability 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 programs, or individual counselling, include career planning, preparing for medical school admission interviews, exam anxiety reduction, public speaking anxiety reduction, grief and loss, sleep and relaxation, overcoming procrastination, and stress management. If you are looking for information on how majors relate to careers, occupational profiles, career decision-making, how to create a career portfolio, advanced studies, or distance learning courses, the Frank G. Lawson Career Information Centre within Counselling Services houses an extensive library of resources along with Career Information Assistants to help you find the information you need. The Counselling Services offices and its Lawson Career Information Centre are located on the 4th Floor of the Student Union Building. In addition to regular office hours, it is open Tuesday and Wednesday evenings during the academic year. Inquire or make appointments by dropping in or calling 494-2081. Detailed information on services and the scheduling of group programs and workshops is available on the Dalhousie Counselling Services website: <http://www.counsellingservices.dal.ca>.

#### 7. DalCard

The DalCard (also referred to as the Dalhousie University ID Card) is a convenient multi-purpose card, which gives the cardholder access to various facilities and services on and off campus. The DalCard is an identification card and also serves as a debit card for retail and vending purchases on and off campus; for printing at Academic Computer Labs; printing and photocopying at the Libraries; Dalplex membership and access card; and a residence meal plan and access card - all in one! The DalCard must be presented to write an officially scheduled examination or to use the library facilities. In addition, some services such as the issuance of bursary or scholarship cheques, require the presentation of a valid DalCard.

The DalCard Office is located at 1443 Seymour Street. Students on the Sexton campus may obtain the DalCard at the Student Service Centre, B Building, 1360 Barrington Street (accessible location). See <http://www.dal.ca/dalcard> for more information.

#### 8. 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 is 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, 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 Stomping Tom to name a few. Other performing and visual arts spaces 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 programs.

The Dalhousie Music Department presents weekly noon hour recitals in the Arts Centre. The Department also maintains a full production season including a faculty recital series and student ensemble concerts with music ranging from classical to jazz and contemporary. Further information on the Music and Theatre Departments can be found in their separate listings.

## 9. Dalhousie Multifaith Centre

The chaplains at Dalhousie provide confidential counselling on personal and spiritual issues and provide opportunities for prayer and worship, retreats, workshops, and social outings. The Centre provides a non-threatening environment where students and staff can address the basic questions of meaning and purpose in their lives.

Chaplains currently represent the Anglican, Bahá'í, Baptist, Christian Reformed, Conservative Jewish, Hindu, Lutheran, Orthodox Jewish, Shambhala Buddhist, Shi'a Muslim, Soto Zen Buddhist, Sunni Muslim, Roman Catholic, and United Church faith traditions. They are, however, available and receptive to all students, faculty, and staff regardless of religious background or can refer you to religious leaders of many other denominations and religions. For students who are concerned about religious groups on campus, the chaplains have developed four brochures, "Dalhousie Multifaith Centre," "Religious Groups: What to Expect, What to Accept, and What to Avoid," "Places of Worship At and Near Dalhousie," and "Frequently-Asked Questions on the Dalhousie Multifaith Centre."

In the event of an emergency, contact Dal Security at 494-6400 or the Student Union Building information desk at 494-2140 for chaplains' telephone numbers. Feel free to drop by the office any time to introduce yourself and to find out more about the centre and its services. Visit the website at <http://www.dal.ca/dmc>.

## 10. 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, a number of other constituency groups are represented on the Council because they are uniquely affected by many campus issues. 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 owned by the University and administered, managed and controlled by the Student Union and is paid for through Student Union fees, was opened in 1968 as a centre for student activity on campus. The Student Union Building provides a wide range of services for students including the Student Advocacy Service, Travel Cuts, The Grawood, Campus Copy, food services, and much more. 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 over 175 clubs, societies and organizations for students 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 in room 222 and is open from 8:30 a.m. to 4:30 p.m. Monday through Friday, telephone number 494-1106 or email [dsu@dal.ca](mailto:dsu@dal.ca). Check out the website at <http://www.dsu.ca>, or [my.dsu.ca](http://www.dsu.ca).

## 11. Housing/Residence Services

The University is pleased to guarantee residence in University-owned properties for all new Dalhousie undergraduate students who complete the residence application process by August 1st. It's important that students planning to attend Dalhousie think well in advance about their accommodation needs.

Students should be aware of several important points of reference in regard to residence accommodation. Upon admission to a program of study, all students will receive university residence information. They will also be asked to pay an admission deposit. It's important to apply to residence (online) and to pay the admission deposit promptly as the dates these are received will determine when the Residence Application is considered. Residence applications will not be considered from individuals who have not gained admission to a program of study, or paid their admission deposit and residence application fee.

Students with disabilities are encouraged to contact the Residence Office at (902) 494-1054, or email: [residence@dal.ca](mailto:residence@dal.ca), for information and assistance.

The traditional style residences at Dalhousie are chiefly for undergraduate students. All students living in traditional style residences are required to purchase one of the meal plan options available.

The information below gives a description of 1. traditional on-campus residences, 2. non-traditional on-campus residences, which includes apartment style housing owned by the university, 3. the services offered by the Off-Campus Housing office, and 4. general information. For information on residence fees, see the Fees section of the Calendar.

It is the responsibility of the individual student in all cases to make a separate online application to the university housing of her/his choice, or utilize the services provided by the Off-Campus Housing office.

### 1. Traditional On-Campus Residence

#### A. Studley (Main) Campus

##### i. Howe Hall

Centrally located on campus, Howe Hall provides accommodation for 700+ undergraduate students. The sprawling, grey ironstone complex is divided into six houses: Bronson, Cameron, Fountain, Henderson, Studley, and Smith. Houses are co-ed. Each house has its own distinctive identity and student government.

The houses offer both double and single rooms. Facilities include a dining room, lounges, television rooms in each house, a canteen, games room, study areas, laundry rooms, computer room and 24-hour front desk. Within residence rooms, ResNet (high speed Internet/wireless), local telephone service and cable TV service are provided.

##### ii. Shirreff Hall

Shirreff Hall provides accommodation to 440+ students. Located in a quiet corner of the campus, it is minutes from classes, the library, Dalplex and other facilities. Shirreff Hall is divided into four areas: the Annex, Newcombe House (female only), while Old Eddy & New Eddy are co-ed. Old Eddy and New Eddy have mostly single and double rooms while Newcombe and the Annex have single rooms only.

Shirreff Hall offers a dining room, an elegant library and visitors' lounge, study areas, computer rooms, games room, television lounges, kitchenettes, canteen, laundry room, and 24-hour front desk. ResNet (high speed Internet/wireless), local telephone service and cable TV service are provided within each room. Students also have access to two pianos.

##### iii. Eliza Ritchie Hall

Opened in 1987, Eliza Ritchie Hall is a co-ed residence. It provides traditional residence accommodation for 92 students in predominantly single rooms.

This three-storey building is located close to the Dalplex and to Shirreff Hall, where students normally have their meals. Facilities include study

rooms, a multipurpose room, reception area, laundry facilities, leisure lounges with kitchenettes and, within each room, ResNet (high speed Internet/wireless). Local telephone service and cable TV service are also provided.

#### *iv. Risley Hall*

Risley Hall is located on LeMarchant Street, behind the Student Union Building, and offers 490 single rooms, primarily to undergraduate students. Services include a dining room, laundry rooms, television lounges, computer room and a 24-hour front desk. Each room comes equipped with ResNet (high speed Internet/wireless), local telephone service and cable TV service.

#### *v. Lyall House, DeMille House, Colpitt House*

These properties, which were former faculty offices, have been converted into three mini-residences with a shared courtyard. There are a total of 49 single rooms in a co-ed living environment, with comfortable common space available to residents of each house. As in other traditional residences, a meal plan is required and meals can be eaten at any dining hall. Services include a shared laundry area and ResNet (high speed Internet), local telephone service and cable TV service are offered in each room.

### **B. Sexton Campus**

#### *i. Gerard Hall*

Gerard Hall is a 12-story traditional style co-ed residence that houses 230+ students in single, super single, and double rooms. It is located in the heart of downtown Halifax on the corner of Morris and Queen Streets. Gerard Hall offers laundry facilities, a computer lab and a big screen TV, DVD player and satellite access in the main lounge. Within residence rooms, ResNet (high speed Internet/wireless), local telephone service and cable TV service are provided. Gerard Hall residents commonly use the O'Brien Hall dining hall, only seconds away, or may use the dining halls in Howe, Risley or Shirreff Halls.

#### *ii. O'Brien Hall*

O'Brien Hall is a co-ed residence located in the heart of downtown Halifax. There are approximately 115 Dalhousie students residing in a combination of single and double rooms in O'Brien.

Facilities include a dining hall and laundry facilities. Within residence rooms, ResNet (high speed Internet/wireless), local telephone service and cable TV service are provided.

### **2. Non-Traditional On-Campus Housing, including apartments**

#### **A. Studley (Main) Campus**

##### *i. Residence Houses*

Dalhousie also has two residence houses, which are co-ed. Formerly single family homes, each house has kitchen, living room and washroom facilities, which are shared among the residents in the house. The character of these homes has been maintained as much as possible.

These houses have only single rooms, each with a bed, wardrobe, study desk, lamp and chair. Linen, cooking utensils and small appliances are not provided. A trained senior student acts as a House Assistant and liaises with the Residence Life Manager to provide administrative and resident related services. ResNet (high speed Internet), local telephone service and cable TV service are provided in each room. Meal plans are not mandatory but may be purchased for use at any dining hall on campus.

##### *ii. Glengary Apartments*

Located on the Studley Campus on Edward Street, Glengary Apartments is a four-storey brick building offering co-ed accommodation for 40+ students.

Glengary has 12 furnished apartments. Each apartment includes a kitchen, living room and bathroom. There are also four furnished 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. ResNet (high speed Internet/wireless), local telephone and cable TV service are provided in all apartments. Coordinators are available for

security and administrative services and also act as a resource for students who may need advice or assistance.

### **B. Sexton Campus**

#### *i. Graduate House*

This residence is home to 13 returning students, normally in single rooms. It is located next door to O'Brien Hall and is a short walk from Gerard Hall on Morris Street. ResNet (high speed Internet/wireless), local telephone service and cable TV service are provided in each room.

Meal plans are not mandatory but may be purchased for use at any dining hall on campus including O'Brien Hall, which is next door.

### **3. Living Off-Campus**

Dalhousie's Off-Campus Housing office is located in Risley Hall and offers help to students in finding off-campus 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. Telephones for calling landlords and material such as maps and transit schedules are available at the office.

Off-Campus Housing has a website: <http://www.dal.ca/och>. The site features a wide variety of housing resources available to students.

Based on the relatively low vacancy rate in Halifax, it is advised that students start looking for off-campus housing well ahead of the academic year.

### **4. General Information**

A non-refundable \$50 fee is payable when applying for residence. If you are submitting your residence application online, you can make the payment at <http://www.dal.ca/studentaccounts>. Select "Payments" and follow the links to "Pay Online." If you are submitting a paper application, the fee can be paid using cheque or Money Order (payable to Dalhousie University), Visa, MasterCard or American Express.

All new Dalhousie undergraduate students are guaranteed a place in residence if they complete the residence application process by August 1<sup>st</sup>.

For further information on living at Dalhousie, or for a hard copy of the residence application form, do not hesitate to contact:

#### **The Residence Office**

Location: 1443 Seymour St.  
Dalhousie University  
Halifax, NS B3H 3M6  
Telephone: (902) 494-1054  
Email: [residence@dal.ca](mailto:residence@dal.ca)  
Website: <http://www.dal.ca/residence>

#### **Assistant Vice President, Ancillary Services**

Location: 1443 Seymour St.  
Dalhousie University  
Halifax, NS B3H 3M6  
Telephone: (902) 494-3365

#### **Off-Campus Housing**

Location: Risley Hall, Room 1024  
1233 LeMarchant Street  
Halifax, NS B3H 3P6  
Telephone: (902) 494-2429  
Email: [och@dal.ca](mailto:och@dal.ca)  
Website: <http://www.dal.ca/och>

#### **ResNet**

Location: Dalhousie University  
1443 Seymour St.  
Halifax, NS B3H 3M6  
Telephone: (902) 494-8036  
Email: [resnet@dal.ca](mailto:resnet@dal.ca)

## 12. Information Technology Services (ITS)

Information Technology Services (ITS) empowers the success of students, faculty and staff through an overall focus on service, advising and consulting. The department is responsible for all centrally managed computing, networking and telecommunications facilities. University email, My.Dal, Online Learning Systems, network connections and much more are services provided by ITS. Additionally, ITS supports university instructional, research and administrative requirements.

Need help with a technical problem? Visit one of three Help Desks located on campus, make a quick call to 494-2376 or email [helpdesk@dal.ca](mailto:helpdesk@dal.ca). ITS staff supports numerous computer labs across the campus. In addition, wired and wireless connections for laptops are available in many campus locations, including residences.

Personal computers and related supplies can be purchased by students and Dalhousie employees through PCPC, the campus computer store ([pcpc.dal.ca](http://pcpc.dal.ca)).

With a range of new and emerging technologies, ITS staff will help you explore options to make the most of your experience at Dalhousie. See [its.dal.ca](http://its.dal.ca) for more information..

## 13. International Student & Exchange Services

The International Student & Exchange Services (ISES) office is committed to welcoming, supporting and serving the needs of new and continuing international and exchange students at Dalhousie. Advisors are available to meet with students on a variety of matters including finances, immigration matters, exchange opportunities, health insurance and personal issues. Referrals are made to other resources and services on campus when necessary. The ISES office organizes orientation activities that assist international and exchange students in adjusting to a new culture and in achieving their educational and personal goals. A variety of social, cultural and information programs are held throughout the year. During the fall and winter terms, an International Student Advisor is available to meet with students on Wednesdays at the Student Service Centre (Sexton Campus) at 1360 Barrington Street.

Student exchange and study-abroad services are facilitated by the Study Abroad and Exchange Advisors at the ISES Office. This branch of the office promotes student mobility by assisting departments and faculties with the establishment of student exchange agreements; managing university-wide exchange programs; advising students on international study, work and volunteer opportunities; providing pre-departure and re-entry services; administering the Study Work International Fund (SWIF) and the George Burris Study in England Bursary; and maintaining the International Opportunities Resource Library.

The ISES office is located in Room G 25 the Killam Library. You can email the ISES office at [ises@dal.ca](mailto:ises@dal.ca), call (902) 494-1566, or visit <http://www.dal.ca/ises>.

## 14. Libraries

The Dalhousie University Library System is organized to accommodate the needs of the undergraduate teaching programs, graduate and faculty research projects, and professional schools. The system is made up of the following components: the Killam Memorial Library - Humanities, Social Sciences and Science, the Sir James Dunn Law Library, the Kellogg Health Sciences Library, and Sexton Design and Technology Library - Architecture, Engineering, and Planning.

As of April 1, 2009, the holdings of the Dalhousie Libraries include over 1,922,824 volumes of books, bound periodicals, documents and bound reports, 453,527 microform units, 94,792 maps and other media, 11,716 music scores and 13,148 music recordings. The libraries subscribe to 42,587 serials titles, including 41,646 electronic titles.

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 University, Saint Mary's University, Cape Breton University, University of King's College, the Atlantic School of Theology, St. Francis Xavier University, Nova Scotia Agricultural College and Nova Scotia Community

College). Users borrow from Novanet libraries upon presentation of their University ID card.

## 15. Mature Student Services

Applicants who are Canadian Citizens or permanent residents and 21 years of age or older, by the first day of classes, and are not eligible for admission on the basis of regular admission requirements, may apply for admission as a mature applicant. In order to be eligible, the applicant must either have no university-level study, or have attempted less than one year of transferable coursework. The student cannot have been in full-time university-level study for a minimum period of two years.

Applicants must provide a completed application for admission, high school or post-secondary transcripts, any other relevant documents (e.g. SAT scores, if available), and a letter outlining life and work experiences since last attending full-time study. Applicants will be expected to clearly outline their education goals and motivation to succeed at university study. All factors will be considered in the admission decision.

Admission under this policy is restricted to first year of undergraduate programs. Applicants must have completed grade 12 English (or equivalent) with a minimum grade of 65. Admission to some programs will require completion of other required subjects.

A student admitted on this basis may be restricted in the number of classes he/she can register in during the first year. Otherwise, these students have the same rights, privileges and responsibilities as other students within their program.

Services include pre-admission counselling and university preparation courses such as Writing Skills for Academic Study, Chemistry, Physics, Academic Math and Pre-Calculus. For more information call (902) 494-2375 or visit <http://collegeofcontinuing.dal.ca>.

## 16. Office of Human Rights, Equity & Harassment Prevention

The overall mandate of the Office of Human Rights, Equity & Harassment Prevention is to foster and support an inclusive working and learning environment where all members of the University community share responsibility for establishing and maintaining a climate of respect.

The Office is responsible for administering a number of University policies including: the Accommodation Policy; the Employment Equity Through Affirmative Action Policy; complaints based on the Statement of Prohibited Discrimination; the Personal Harassment Policy; and the Sexual Harassment Policy. The Human Rights & Equity Advisor and the Advisor, Harassment Prevention/Conflict Management also liaise with the Office of the Vice-President, Student Services, regarding the Code of Student Conduct.

Other initiatives in the Office of Human Rights, Equity & Harassment Prevention include education and training on topics such as diversity, accommodation, harassment awareness and prevention, conflict resolution and more. Workshops are offered regularly for students, faculty and staff.

The website for the Office of Human Rights, Equity & Harassment Prevention offers downloadable versions of each of the policies, information on the education and training opportunities offered, and additional resources including an annual Mosaic Calendar featuring a variety of religious and cultural holidays, and a Diversity Glossary.

Contact: Bonnie Best-Fleming, Human Rights & Equity Advisor  
Gaye Wishart, Advisor, Harassment Prevention/Conflict Management

Where: Room 2, Basement Level, Henry Hicks Academic Administration Building, Studley Campus

Phone: 494-6672 / 494-1137

Fax: 494-1179

Email: [hrehp@dal.ca](mailto:hrehp@dal.ca)

Website: <http://www.hrehp.dal.ca>

## 17. Office of the Ombudsperson

The Dalhousie Office of the Ombudsperson 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 Office of the Ombudsperson, and all inquiries are strictly confidential.

The Office of the Ombudsperson is located in the Student Union Building, Room 407, 6136 University Avenue. Regular office hours are posted on the door at the beginning of each semester. The Ombudsperson can be reached by phoning (902) 494-6583 or by Email: [ombudsperson@dal.ca](mailto:ombudsperson@dal.ca), Website: <http://ombudsperson.dal.ca>.

## 18. 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 programs. 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 programs or to the office of Student Services or to specific service areas such as the Counselling Services Centre. The Registrar's Office also mails tens of thousands of letters and packages annually in response to requests for information and student records, from application to graduation and beyond.

Among the staff are people with expertise in financial aid and budgeting who are available for consultation.

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.

Students can access the services of the Registrar's Office at two locations. The main office is located in Room 133 of the Henry Hicks Academic Administration Building on the Studley Campus. Students attending classes at Sexton Campus can also access Registrar's Office services at the Student Service Centre which is located in Building B on the Sexton Campus.

Inquiries may be directed to:

The Registrar  
Dalhousie University  
Halifax, NS  
Canada B3H 4H6  
Telephone: (902) 494-2450  
Fax: (902) 494-1630  
Email: [admissions@dal.ca](mailto:admissions@dal.ca)

## 19. The Office of Student Accessibility & Accommodation (OSAA)

Dalhousie University is committed to providing an accessible environment that supports our academically-qualified students with disabilities to fully participate in university life. Staff at The Office of Student Accessibility & Accommodation (OSAA) work with faculty and staff to provide access to all educational programs, learning environments and campus offerings. An Advisor facilitates an intake process to assess a student's individual needs and, when needed, to recommend classroom supports and exam accommodations to faculty. Staff at OSAA, along with other Student Services units at University, support our students through a variety of academic and non-academic programs.

OSAA also fosters a welcoming environment for students with disabilities through ongoing informational and educational opportunities for faculty and staff. Ongoing efforts consistent with a reasonable and practical

allocation of resources are being made to continuously improve accessibility around campus, in the classroom and during exams. Early consultation is advised to ensure appropriate accommodation of your needs. We can be contacted by phone: voice (902) 494-2836, or by email ([access@dal.ca](mailto:access@dal.ca)). Please refer to our website for further information: <http://www.studentaccessibility.dal.ca>.

Please note that due to chemical sensitivities of persons who work and frequent this office, our environment must be scent free.

## 20. 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 academic 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 University Administration less intimidating.

The Advocates may be contacted through:

Location:	Student Advocacy Service Room 310 Dalhousie Student Union Building
Telephone:	(902) 494-2205
Email:	<a href="mailto:dsas@dal.ca">dsas@dal.ca</a>
Website:	<a href="http://www.dsu.ca/services/advocacy">http://www.dsu.ca/services/advocacy</a>

## 21. Student Clubs and Organizations

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 and interest based. Some are decades old with long traditions, others arise and disappear as students interests change. A list of clubs, societies and organizations is available every fall to new students who are encouraged to select and participate, this list can be found at [www.dsu.ca/tiger\\_societies](http://www.dsu.ca/tiger_societies). If there is not a society that meets your interests, the Dalhousie Student Union encourages and will help you to make your own. For more information on DSU societies please contact the society co-ordinator at [society.coordinator@dal.ca](mailto:society.coordinator@dal.ca) or by telephone at 494 1106 or visit [www.dsu.ca](http://www.dsu.ca) <<http://www.dsu.ca>> .

## 22. Student Services

The Vice-President, Student Services (VPSS), is Dalhousie University's chief officer of student affairs. Working with an integrated team of specialists across campus, the Office of the VPSS coordinates programs and delivers services in support of students' academic achievement, personal and professional development and community engagement.

Our efforts to enrich the Dalhousie student experience are focused in four key areas: Learning Connections; Community Connections; Wellness Connections; and Life, Leadership and Career Connections. Within each area, professionally trained counsellors and advisors are available to assist you at every step of your journey here at Dal, providing information and resources that are tailored to your individual needs and consistent with your educational and life goals.

Stop by the Office of the VPSS today, located on the third floor of the Henry Hicks Academic Administration Building (Room 326), or contact us at (902) 494-2404 to learn more about our extensive departments and wide range of services - from helping you transition in your first year of university, to supporting your leadership in the community, on the sports field and within the classroom. If you have questions about your classes; academic program; major, advanced major or honours selection; degree regulations; changing faculties, or if you are experiencing academic difficulties, a dedicated team of Academic Advisors can develop and implement a plan for your academic success. Contact the Academic Advising office in the Killam Memorial Library at (902) 494-3077 to schedule an appointment.

### 23. Studying for Success

Our primary goal is to assist you in becoming a more efficient and effective learner. As part of Student Academic Success Services, Studying for Success offers programs to help you reach your academic potential during your time at Dalhousie. Workshops are offered to small groups of students to develop or enhance personal learning strategies and, when applicable, are customized to focus on particular disciplines or fields of study ensuring that the workshop content is relevant to your needs. Topics regularly covered include time management, getting the most from lectures, critical reading, problem-solving, preparing for and writing exams. Study Skills coaches offer personal coaching either by appointment or on a drop-in basis during regularly scheduled hours, and will refer students to other academic resources when appropriate. For more details contact Studying for Success:

Location: 3104/3103, Killam Library  
Telephone: Appointments: 494-3077  
Coordinator: 494-2468  
Website: <http://sfs.studentservices.dal.ca/>

### 24. Turnitin.com

Plagiarism is considered a serious academic offence. Dalhousie University subscribes to Turnitin.com <<http://www.turnitin.com/static/index.html>>, a service which allows instructors to check student papers for originality. Academic Computing Services and the Dalhousie University Libraries jointly support this service.

Faculty who wish to use this service can get started at [http://academicintegrity.dal.ca/Turnitin%20at%20Dal/Instructions\\_for\\_usin.php](http://academicintegrity.dal.ca/Turnitin%20at%20Dal/Instructions_for_usin.php)

Resources for developing awareness among students, and to help them avoid plagiarizing are available at <http://academicintegrity.dal.ca/>

### 25. 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 required and recommended texts, reference books and supplies, as well as workbooks, self-help manuals and other reference material. As well, you can find titles by Dalhousie authors.

The Bookstore carries all necessary and supplementary stationery and supplies. Also available are gift items, mugs, clothing and crested wear, cards, jewelry, class rings and backpacks with new items being introduced on a regular basis. A Special Order department is located at the customer service area and will order and ship books worldwide and work with faculties and departments to meet their specific needs..

The main 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).

The Health Sciences Bookstore has the largest and most complete medical book section in Atlantic Canada, with over 2,000 titles in stock. Thousands of other titles are specially ordered annually, and the department ships out books to consumers and hospitals throughout the world. The Health Sciences Bookstore is located in the Dentistry building, 5981 University Avenue, and is open year round, Monday to Saturday. Hours vary throughout the year.

The Sexton Campus Bookstore is located in the Student Service Centre at 1360 Barrington Street (Building B) and is open from 9:00 a.m. - 4:00 p.m. Monday to Friday. It supplies texts and reference books required for Architecture and Engineering students as well as crested clothing, stationery and other supplies.

The Bookstore website has online ordering capabilities, for both textbooks and general merchandise. Visit the Bookstore online at <http://www.dal.ca/bookstore>.

### 26. University Health Services

The University operates a medical clinic in Howe Hall, 6230 Coburg Road (corner of LeMarchant and Coburg), which is staffed by family doctors and nurses. Further specialists' services are available and will be arranged through Health Services when indicated. Student information collected by

Health Services is completely confidential and may not be released without signed permission of the student..

Appointments are made during the clinic's open hours, from 9:00 a.m. to 10:00 p.m., Monday to Friday and 10:00 a.m. to 6:00 p.m., Saturday and Sunday, by calling 494-2171. In the event of an urgent medical problem, students may seek medical advice during clinic hours. After hours, students should seek assessment by calling 811 to speak to a registered nurse, or visit the local emergency room. The QEII emergency room on Summer Street is the closest emergency room.

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, may wish to contact and advise Health Services; preferably with a statement from the doctor. Further information is available on our website at <http://www.healthservices.dal.ca>.

### 27. University Secretariat

The University Secretariat provides professional and administrative support and advice to the Board of Governors and University Senate so as to facilitate their effective governance of the University.

The Secretariat manages, coordinates and informs the effective operation of the Board and Senate by:

- Supporting the operations of the University's governance bodies and their respective standing and ad hoc committees;
- Proposing and developing objectives and plans to establish and achieve priorities;
- Advising on governance issues and developing and implementing policies, procedures and processes that reflect governance best practices;
- Developing, implementing, managing and coordinating the University academic integrity, student discipline & academic appeals policies and processes, and maintaining official records relative to these processes;
- Serving as a repository for University policies and information and data on matters relating to University governance; and
- Facilitating communication and collaboration with key stakeholders.

Visit the website at: <http://secretariat.dal.ca/>

### 28. Writing Centre

The Writing Centre's programs recognize 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 other academic assignments. Students benefit from discussing their work with supportive instructors and peer tutors.

The Centre currently offers a number of services. The main office in the Killam Library's Learning Commons allows students to obtain advice on writing issues. Tutors also work part of the week at the Sexton Library and the Kellogg Library. Finally, seminars are held throughout the university year on topics such as essay writing, science writing, mechanics of writing, English as a second language issues, admission applications, etc.

Contact the Writing Centre by visiting the main office in the Killam Learning Commons, calling 494-1963 or emailing at [writingcentre@dal.ca](mailto:writingcentre@dal.ca). Students can also obtain information on services, hours of operation, and links to writing resources at <http://www.writingcentre.dal.ca>.

# Fees

## Student Accounts Office

Mailing Address: Henry Hicks Academic Administration  
Building (Room 29)  
6299 South Street  
Halifax, NS B3H 4H6

Website: <http://www.dal.ca/admissions.html>

Service Location: Studley Campus - Basement Henry Hicks Academic Administration Bldg.  
Sexton Campus - Student Service Centre

Telephone: (902) 494-3998  
Fax: (902) 494-2839  
Email: [Student.Accounts@dal.ca](mailto:Student.Accounts@dal.ca)

Office Hours: Studley Campus - Monday to Friday 9:00 a.m.-4:00 p.m.  
Sexton Campus - Monday to Friday 9:00 a.m. - 4:00 p.m.

### 2011/2012 Important Dates:

#### September

- 23 Fees due for fall term  
Last day to pay without late registration fee of \$50  
Last day for complete refund

#### October

- 24 \$50 reinstatement fees assessed on all outstanding accounts over \$275

#### November

- 7 Last day for partial refund fall term

#### January

- 13 Fees due for winter term and second instalment of regular session  
Last day to pay without late registration fee of \$50  
Last day for complete refund

#### February

- 13 \$50 reinstatement fee assessed on all outstanding accounts over \$275

#### March

- 5 Last day for partial refund for winter term

NOTE: Please consult the online summer school timetable for the summer school registration schedule.

### Website

<http://www.dal.ca/admissions.html>

## 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 programs of study during the fall, winter and summer terms. A section on University residence and housing fees is also included. Students wishing to register for the summer term should consult the summer school timetable online at <http://www.dal.ca> 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 in June 2011.

NOTE: Student tuition fees and other fees published herein are applicable only to regular students admitted to a program through the normal application process. Other students who are admitted to Dalhousie under

a special program or policy will be charged student tuition and other fees in accordance with such special program or policy. For further information regarding these fees, please contact Student Accounts or the Dean's office of the applicable faculty.

Students should make special note of the academic dates contained in the front section of the calendar as well as fee dates. 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.

All the regulations in this section may not apply to Graduate Students. Please refer to the Faculty of Graduate Studies section of the Graduate Calendar.

## II. University Regulations

The following general regulations are applicable to all payments made to the University in respect of fees. Please refer to our website for additional information on payment options.

- Fees must be paid in Canadian funds by cash, electronic bank transfer, interac, negotiable cheque or money order.
- If payment by cheque is 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 payment of tuition, the student's registration may be canceled and, if permitted to re-register, a late fee will apply.
- Accounts in arrears must be paid by cash, certified cheque, money order or interac prior to registration in a future term.

### A. Admission Deposits

#### 1. Note these rates are for 2010-2011. (For information only)

A non-refundable deposit of \$200 is payable on admission by all new undergraduate and graduate students. Undergraduate students accepted by April 20 are required to pay the deposit by May 15. Undergraduate students accepted after April 20 must pay the deposit within three weeks of receiving an offer of admission. Graduate students must pay the deposit within three weeks of receiving an offer of admission.

International Dentistry, Qualifying Dentistry and Internetworking students are required to pay a non-refundable \$2,500 admission deposit.

The admission deposit will be credited towards fees at time of registration.

### B. Registration

A student is considered registered after selection of course(s).

Selection of course(s) is deemed to be an agreement by the student for the payment of all assessed fees.

Non attendance does not constitute withdrawal. Students must ensure that they withdraw from all classes online.

### 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. A late registration fee of \$50.00 will apply if registration and payment of fees has not been completed by specified dates. This fee is payable at time of payment and will be in addition to regular fees.

### D. Academic Fees

#### 1. Fee Schedule

The 2011/2012 academic fee schedule is not yet available. Once fees are approved for 2011/2012, a complete schedule showing the required payments of the academic fees and deposits will be made available. The official schedule will be available online at <http://www.dal.ca/admissions.html>.

NOTE: Students registered in more than one program are required to pay separate academic fees for each program. Additional fees for distance courses and programs may apply.

## 2. Exchange Students

Outbound exchange students whose fees are paid to Dalhousie University will be assessed tuition and fees for 15 credit hours in their faculty.

### APPROVED TUITION FEES 2010/2011

Degree Program	Program Fee	Per Course Fee
Architecture, Community Design		630
Arts and Social Sciences		603
Computer Science		684
Dentistry		
Dentistry	14,074	
Dental Hygiene Diploma	7,530	
Dental Hygiene Degree		762
International and Qualifying	40,000	
Engineering		684
Health Professions		
Disability Management Diploma		900
Emergency Health Services Management Diploma		700
Health Administration		684
Health Science		702
Health Services Administration Diploma		684
Nursing & Kinesiology		702
Pharmacy		723
Recreation & Health Promotion		702
Social Work		666
Law	9,166	
Management		
Commerce Co-op		690
Management		606
Medicine		
MD	13,818	
Post-Graduates	2,498	
Science		684
Sustainability		684
<b>GRADUATE</b>		
<b>Masters</b>		
Architecture and Planning		
Post-Professional	7,254	
First Professional, Masters of Architecture		726
Environmental Design Studies	7,254	
Planning		762
Planning Studies	7,254	
Arts and Social Sciences	6,381	
Computer Science	7,254	
Dentistry		
MD/MSc (Oral and Maxillofacial)	14,481	
Prosthodontics	14,481	
Periodontics	14,481	
Electronic Commerce	8,042	
Engineering, Applied Science, Biomedical Engineering & Food Science	7,254	
Engineering - Internet Working (per course)		2,020
Health Informatics	8,042	
Health Professions		
Applied Health Services Research	6,476	
Clinical Vision Science	7,860	
Health Promotion, Leisure Studies	7,254	
Health Administration		732
Human Communication Disorders (Years 1 and 2)	9,110	
Human Communication Disorders (Year 3)	7,548	
Kinesiology and Nursing	7,860	
Pharmacy	9,108	
Occupational Therapy		
Entry Level	13,017	
Post Professional	9,108	
Physiotherapy		
Entry Level	13,017	
Rehabilitation Research	9,108	
Social Work		705
Law	8,944	
Management		
MBA Corporate Residency	19,000	
Environmental Studies	6,453	
Library and Information Studies		804
Public Administration		639
Resource and Environmental Management		639
Marine Management	6,453	
Medicine		
Community Health & Epidemiology	7,860	
Medicine - Except Community Health & Epidemiology	7,254	

Science	7,254	
<b>Doctorate</b>		
Arts and Social Sciences	6,699	
Computer Science	7,581	
Engineering, Applied Science & Biomedical Engineering	7,581	
Law	9,249	
Nursing	8,187	
Science	7,581	
<b>Continuing Fee</b>		
All Programs	1,986	
<b>International Student Differential Fee</b>		
All Programs except Graduate Thesis-based	7,260	
Graduate Thesis-based Programs	5,190	
International Dentistry, Qualifying Dentistry and Internet working are exempt.		
International Health Insurance	636 per year	
Note: Complete fee schedules are available online <a href="http://www.dal.ca/admissions.html">http://www.dal.ca/admissions.html</a> . The 2010/2011 fee schedule currently online is expected to be updated in June of 2011 with the 2011/2012 academic fees. Per course fees are based on a 3 credit hour course.		

## E. Payment

The payment of academic fees will be received at the Student Accounts Office located on the basement level of the Henry Hicks Academic Administration building or the Student Service Centre on Sexton Campus.

For the convenience of students, non-cash payments are accepted by mail. Fees paid by mail must be received by Student Accounts on or before the deadlines specified 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" on page 148:

- All students must pay the applicable deposit in accordance with Section A.
- Those holding external scholarships or awards paid by or through Dalhousie must provide documentation of the scholarship or award before term fees are due.
- Those whose fees are paid by a government or other agency must have the third party billing form completed and returned to Student Accounts by September 23 or January 13 for the respective term. The form is available online at <http://www.dal.ca/admissions.html>
- Those paying the balance of their account by Canada Student Loan must negotiate the loan by September 23 or January 13 for the respective term. Interest will be charged after these dates and a late registration fee will apply.
- Those whose fees are paid by Dalhousie University staff tuition fee waiver must present the appropriate waiver form and pay applicable incidental fees by September 23 or January 13.
- Those who are Canadian citizens or permanent residents, 65 years of age or over and enrolled in an undergraduate degree program will have their tuition fees waived, but must pay the applicable incidental fees.
- Scholarships or awards paid by or through Dalhousie University will be applied to academic and residence fees.
- When a Canada Student Loan, provincial loan or co-payable bursary is presented at the Student Accounts Office, any unpaid charges, will be deducted.
- Fees cannot be deducted from salaries paid to students employed at Dalhousie University.
- Any payments will first be applied to past due balances.

## F. Access to Student Financial Information

Student Accounts is often asked to disclose financial information on a student's account by parents and others so they can make accurate tuition payments.

University policy recognizes the financial account as belonging to the student and therefore, to protect student privacy, account information is considered confidential. For more information on granting permission for financial information to be released to a third party (such as a parent), please contact Student Accounts at (902) 494-3998 or visit our website at <http://www.dal.ca/admissions.html>.

## G. International Students

### 1. Differential Fee

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 \$3630.00 maximum per term, subject to increase in 2011/2012. There is a proportional charge for part-time international students. International Dentistry, Qualifying Dentistry and Internet working students are exempt. Graduate Students please see Section 4.7 of the Graduate Studies Calendar to determine the number of years a student is required to pay the differential fee. If a student receives landed immigrant status, the differential fee will not be assessed for the current term and beyond. In order to process a retroactive reimbursement of differential fees in a current term, proof of residency must be submitted to the Registrar's office prior to the last day of December, April, August for each term.

### 2. Health Insurance

International students will be charged for an International Student Health Insurance Plan when they register. If a student already has health coverage, they can apply to opt out of the International Student Plan at the International Student & Exchange Services Office (ISES) before September 23, 2011. Costs for the health plan change annually. More details on the international student health plan costs and opt out process can be found at the ISES website: <http://ises.dal.ca>.

Health Insurance - International Students (2010/2011 fees, for information only)

- Single - \$636.00 per year
- Couple - \$1236.00 per year
- Family - \$1560.00 per year

### H. Audit Classes

All students auditing a class pay one-half of the regular tuition fee plus full auxiliary fees, if applicable. In such cases, the student is required to complete the usual registration process.

A student who is registered to audit a class who during the session wishes to change their registration to credit must receive approval from the Registrar. 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. Graduate students please see Section 6.6.4 for audit information.

### I. Class Changes, Refunds and Withdrawals

Please consult Student Accounts for all financial charges and the Office of the Registrar for academic regulations.

#### Refund Conditions

**Students withdrawing from all courses must submit written notification to the Office of the Registrar. Non attendance does not constitute withdrawal so please ensure courses are dropped. Refunds due to course withdrawals will be effective when a course(s) is dropped online at <http://www.dal.ca/online> or written notification is received at the Office of the Registrar. Please contact Student Accounts to have your refund processed.**

In the Faculties of Architecture and Planning and Health Professions students who wish to withdraw from the University must obtain written approval from the appropriate school or college and submit the appropriate forms to the Registrar. Students should continue to attend class until their withdrawal has been approved.

Refunds will be processed as follows:

- a. Based on the withdrawal date, fees are refunded based on the percentages outlined in the online refund schedule <http://www.dal.ca/admissions.html>.
- b. No refunds will be made for 30 days when payment has been made by personal cheque or 60 days for a cheque drawn on a bank outside of Canada.
- c. A student who is dismissed from the University for any reason will not be entitled to a refund of fees.
- d. Refunds will be made to the National Student Loan Centre if a student has received a Canada or provincial student loan.

- e. Refunds will be prorated on fees paid by Dalhousie scholarships and/or fee waiver.
- f. A valid Dalhousie University ID must be presented in order for the student to receive a refund.
- g. No fee adjustment will be made for a student changing their degree or program as follows:  
Regular (Sept. - April) and Fall Terms After September 23  
Winter Term After January 13  
Summer Term After May 13

### J. Refund Schedule

Please visit <http://www.dal.ca/admissions.html> in June of 2011 to view the new refund schedule.

#### Important Information Regarding Refunds

- A portion of fees as outlined in the refund schedule will be assessed if withdrawal from a course occurs after September 23 (Fall Term) and January 13 (Winter Term). Withdrawals before these dates will be completely refunded, but no substitutions will be allowed from a financial perspective after these dates.
- Non-attendance does not constitute withdrawal and fees will be payable.
- The refund schedule does not apply to the University of King's College Journalism Program.
- For financial charge inquiries, contact Student Accounts at (902) 494-3998 or [Student.Accounts@dal.ca](mailto:Student.Accounts@dal.ca).

### K. Delinquent Accounts

Accounts are considered delinquent when the balance of fees has not been paid by September 23 for the fall term, (January 13 for the winter term).

Interest at a rate set by the University will be charged on delinquent accounts for the number of days overdue.

Effective July 1st, 2010 the rate of interest is 5.50% per annum, compounded monthly.

A student whose account is delinquent for more than 30 days will be denied University privileges including access to transcripts. A 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 in future terms until all outstanding amounts are paid in full. Subsequently, if the bank does not honour the payment, the student may be deregistered.

Graduating students whose accounts are delinquent on April 15 will not receive their degree/diploma parchment. For fall graduation the deadline is September 1. Transcripts are withheld until payment is received in full.

Accounts which become seriously delinquent may be placed in collection or further legal action may be taken against the individual. Students will be responsible for charges incurred as a result of such action.

### L. Canada Student Loans

Students planning to pay by Canada Student Loan should apply to their province in April or May so that funds will be available by the time payment is required. 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 class load requirements. A late fee of \$50.00 will apply if the loan is negotiated after September 23, 2011. (January 13, 2012 for students registered for winter term and May 13, 2012 for students registering for the summer term).

### M. 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 payment 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 cheques. Please contact the appropriate provincial office to determine eligibility as well as class requirements for provincial bursaries. For more information on student loans, bursaries or scholarships inquiries should be directed to the Registrar's Office - on the first floor of the Henry Hicks Academic Administration building, Room 123.

## N. Income Tax Credit from Academic Fees

The amount of academic fees constituting an income tax credit is determined by Canada Revenue Agency.

A special income tax certificate (T2202A) will be available annually through Web for Student at <http://www.dal.ca/online> no later than February 28 for the previous calendar.

## O. Identification Cards (DalCard)

All full and part-time students should obtain identification cards upon registration and payment of appropriate fees. If a card is lost, a fee of \$15.00 is charged. Regular session ID cards are valid until August 31.

## P. Student Fees

### 1. Student Union Fee

Every student registered at Dalhousie is a member of the Student Union and 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 budget.

For information only, 2010-2011 full-time student union fees are \$58.00 per term. DSU Health Insurance is \$253.00 per year. Students with separate health insurance may apply to the DSU for reimbursement. For more information please contact the Student Union Office in Room 222 of the Student Union Building (SUB), phone: (902) 449-2146 or visit their website at <http://www.dsu.ca>

### 2. Student Service Fee

Student Service provides and supports various Dalhousie Services including health services and athletics. For information only, 2010-2011 Student Service fee is \$113.00 per term for full-time students.

The following services will be provided without additional charges unless specified:

- Change from Audit to Credit
- Confirmation of Enrolment
- Confirmation of Fee Payment
- Dalplex Membership
- Leave of Absence Fee
- Letter of Permission
- Replacement Tax Receipt
- Transcripts (maximum of 5 requested at one time)

### 3. 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.

### 4. Additional Student Fees

The official fee schedules are available online at <http://www.dal.ca/admissions.html> and include other charges such as auxiliary, society, and facilities renewal fee.

Departments may also charge additional fees on a cost recovery basis not included in the schedules. Examples include but are not limited to; print or copy fees, transportation costs and material fees. Students registered in online courses and distance programs will be assessed additional fees for delivery of these courses.

Miscellaneous fees are charged as outlined in the table below.

Miscellaneous Fees 2011-2012		
Fee	Amount	Payable at
Late Registration	\$50	Student Accounts
Reinstatement Fee	\$50	Student Accounts
Returned Cheque	\$20	Student Accounts
Admission Deposit	\$200	Student Accounts

Application Fee	*\$65	Registrar
Late Graduation Application	\$50	Registrar
Replacement ID	\$15	DalCard Office
Replacement Bus Pass	\$15	DalCard Office or Student Accounts
Transcript	**\$5	Registrar
Fax Fees		
Metro	\$5	Registrar
Canadian	\$10	Registrar
International	\$15	Registrar
Residence Application Fee	\$50	Residence
* Except for the following programs which require payment of a \$70.00 application fee: Occupational Therapy, Pharmacy, Physiotherapy, Social Work; Diploma programs in Meteorology, Outpost and Community Health Nursing, and Health Services Administration; and all programs in the Faculties of Medicine, Dentistry (including Dental Hygiene), Law, and Graduate Studies		
** Where appropriate, contact Registrar's office for details		
Note: Fees are subject to change after publication of this calendar.		

### 5. University Bus Pass Fee (UPass)

All eligible full-time students will receive a Metro-Transit bus pass (UPass). The fee for the pass in 2010/2011 is \$135.00. Please refer to <http://www.upass.dal.ca> for further information and the most current rates.

## Q. Statements and Monthly Notices

Students with current activity will be issued electronic statements. Students will be notified through their official Dalhousie email account when a new statement is available. Subsequent monthly payment reminders will be sent to the student's official Dalhousie email address. Refer to <http://www.dal.ca/admissions.html> for more information.

## III. Residence Fees

Residence rates vary depending on the location and style of accommodations available. For up-to-date residence options and rates, please visit <http://www.dal.ca/residence>. All residence rates include local telephone service with voice mail features, cable TV service and ResNet (high-speed Internet/wireless). Rates **do not** include the non-refundable \$50 Residence Application Fee or, in the case of traditional residences, the Residence Council Fee.

It is important to note that traditional residences have a mandatory meal plan; however, there are several options available for students. Traditional residences include: Howe Hall, Risley Hall, Shirreff Hall, Eliza Ritchie Hall, Gerard Hall, O'Brien Hall and Mini Residences. Non-traditional residence options include: Glengary Apartments, Residence Houses and the Grad House. Meal plans are not required in non-traditional residences but are recommended. For up-to-date meal plan options and rates, please visit <http://www.foodservices.dal.ca>.

Important:

- Once offered admission to an academic program of study at Dalhousie, students are eligible to submit a residence application with the required \$50 non-refundable fee. **The application will not be processed until both the \$200 admission deposit and \$50 residence application fee have been paid in full.**
- Students must be registered full-time at Dalhousie to apply to residence.
- No refund will be made to any resident who is dismissed for misconduct. Discretionary power in exceptional circumstances remains with the Director, Residence Operations, in conjunction with the Directory Residence Life or their designates.
- All residence students, new and returning, who have received notification of their room assignment, must pay a \$500 deposit to confirm their acceptance. The deposit is due within the time frame specified by the Residence Office.
- The \$500 deposit is non-refundable.

- The \$50 residence application fee and \$500 deposit can be paid by credit card (M/C, Visa, Amex) by visiting <http://www.dal.ca/admissions.html>. For more payment options, please visit [www.dal.ca/admissions.html](http://www.dal.ca/admissions.html).
- No residence room will be held based on post-dated or “insufficient fund” cheques.
- Deposits or fees cannot be deducted from scholarships, fellowships, or similar awards.
- Residence agreements are for 8-month terms (September – April). Please note, residences close during the December break.

## **A. Residence Term**

The residence term commences the day before classes begin in September in the College of Arts and Science and ends on the last day of the examination period in the College of Arts and Science in April. Students must vacate the residence 24 hours after their last exam and residences are closed over the December break.

If required, 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 appropriate Residence Life Manager for accommodation for periods prior to or following the session as defined above.

## **B. Payment of Residence Fees**

Payment may be made in full at registration or in two instalments. The first instalment must be paid in full by September 23, 2011. Interest is assessed weekly at a rate as set by the University and will be charged on all accounts outstanding after September 23, 2011 and on any second instalment outstanding after January 13, 2012. 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. The student will be reinstated upon payment of the fees outstanding, the arrears interest, and a \$50 reinstatement fee. For additional information regarding outstanding or delinquent accounts, please see II. Fees, Section K.

All residence fees can be paid at the Student Accounts Office, the Student Service Centre (Sexton Campus), or online at <http://www.dal.ca/admissions.html>.

Students should make an appointment as soon as possible with the Assistant Manager of Student Accounts if they are having financial difficulties.

## **C. Residence Communications**

All residences are wired for high-speed Internet/wireless, local telephone service and cable TV access. The cost is included in residence fees. Check out the website at <http://www.dal.ca/rescomm>.

# Awards

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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. Faculty of Dentistry

### A. Scholarships in Dentistry

PLEASE NOTE: The University's scholarships described hereunder are credited to students' fee accounts automatically. If this should result in an overpayment of fees, the amount in excess will be rebated to the students by the Student Accounts Office about mid-November.

#### 1. Entrance Scholarships

Students in the DDS program are considered for scholarships by either of two committees. The Dental Admissions Committee assesses entering students for entrance scholarships. Scholarship applications are not required for entrance scholarship consideration. A supplementary application, however, will be required of those candidates whom the Committee will consider for the McGuigan Scholarship, which has a financial need component. The Academic Awards Committee considers continuing students for in-course scholarships which are tenable upon entering Second, Third or Fourth Year. No special application is required.

##### *Faculty of Dentistry Gifts and Memorial Scholarship Fund*

This scholarship will be awarded to the student entering the first year of Dentistry with the highest scholastic standing.

##### *Dalhousie Entrance Dental Scholarship*

A scholarship will be awarded to a student entering the first year of Dentistry who, in the opinion of the Faculty, merits this scholarship.

##### *Colgate-Palmolive Dr. Gordon Nikiforuk Dentistry Admission Scholarship*

Awarded to a student with superior academic achievement entering the first year of Dentistry at Dalhousie University and who has demonstrated financial need.

##### *The Dr. James P. McGuigan Memorial Scholarship*

This fund was established in 1983 to provide an annual entrance scholarship to an academically accomplished student who is a resident of the Atlantic provinces and who shows evidence of actual financial need. A supplementary financial application will be sent by the Dental Admissions Committee to those who are to be given further consideration.

#### 2. In-Course Scholarships

##### *Dalhousie University Dental Scholarships*

A scholarship will be awarded to the student entering the Second Year of Dentistry who attained the highest and second highest scholastic standing in the first year of Dentistry at Dalhousie, provided that his/her grade point average was not less than 3.0 with no subject below a grade of "C". A scholarship will be awarded to the student entering the Third Year of Dentistry who attained the highest and second highest scholastic standing in the second year of Dentistry at Dalhousie, provided that his/her grade point average was not less than 3.0 with no subject below a grade of "C."

##### *The Gaum-Brayton Endodontic Scholarship*

An endowment has been established to fund the Gaum-Brayton Endodontic Scholarship to be awarded to the student in third year, who has demonstrated the greatest proficiency in endodontics, provided that an overall grade point average of 3.0 has been achieved that year. The scholarship is tenable in fourth year.

##### *The Dr. Noel H. Andrews Memorial Scholarship*

An endowment has been established to fund the Dr. Noel H. Andrews Memorial Scholarship to be awarded to the student in third year, who has demonstrated outstanding performance and interest in Periodontics, and displays exceptional patient management skills, provided that an overall grade point average of 3.0 has been achieved in that year, with no mark less than a C throughout their studies at the Faculty of Dentistry. The scholarship is tenable in the fourth year.

##### *The Dr. J.D. McLean Scholarship*

An endowment has been established to fund the J.D. McLean Scholarship for student(s) in any year of dental study at Dalhousie provided that his/her grade point average is not less than 3.0, no subject below a grade of "C" and who, in the opinion of the Academic Awards Committee, merits the scholarship.

##### *The Dr. Terry Ingham Memorial Scholarship and Auxiliary Fund*

This fund was established to honour a very special and unique member of the Dalhousie Faculty of Dentistry: Dr. Terry Ingham. A scholarship may be awarded annually to a deserving dental student(s) based on academic performance and financial need and who exemplifies those strong ethical and humanitarian principles demonstrated by Dr. Ingham during his lifetime.

##### *The Dr. I.K. Lubetsky Scholarship*

An endowment has been established to fund the I.K. Lubetsky Scholarship for the student in third-year who has demonstrated the greatest proficiency in the practice of Clinical Oral Surgery, provided an overall grade point average of 3.0 has been achieved consecutively. The scholarship is tenable in the fourth year.

##### *The Dr. William MacInnis Scholarship*

An endowment has been established to be known as the Dr. Bill MacInnis Scholarship, to be awarded to a member of the graduating class who, in the opinion of his/her classmates and instructors, has demonstrated a strong commitment to the ethical practice of dentistry; recognizing an individual who has inspired trust, confidence, optimism and enthusiasm in his or her dental colleagues by combining outstanding qualities of skill and personal character.

##### *Dr. Don Stephenson Memorial Scholarship*

This scholarship has been established in memory of Dr. Don Stephenson and is to be awarded to a student(s) entering fourth year, who has achieved academic excellence over the last three years of study and who demonstrated outstanding abilities to treat his/her patient family.

##### *Dr. Kathleen Stack-McColough Scholarship in Dentistry*

This scholarship is to be presented to a female student, based on academic standing, who is entering the 4th year of the DDS program at the Faculty of Dentistry.

## B. Prizes and Medals in Dentistry

### Graduate Program in Oral and Maxillofacial Surgery

#### *John P. Laba Memorial Research Award*

This award is provided through a fund established in memory of John P. Laba by family, friends, patients and colleagues, and may be given annually. The recipient is to be the dentist accepted in the Graduate Program in Oral and Maxillofacial Surgery, and is intended 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.

#### **Doctor of Dental Surgery Program**

Students who are repeating an academic year will be ineligible for prizes and awards in that academic year.

In order to be eligible for academic awards whose sole criterion is the academic achievement in the overall curriculum for a given year of a program, normally the student must have completed 80 percent of the scheduled test/examinations at the time such tests/examinations are scheduled and completed by the class. That is, the student must not have received a formal rescheduling of 20 percent or more of that year's tests/examination for any reason.

In order to be eligible for an academic award whose sole criterion is a student's achievement in a single course, the student must have completed all major course requirements as scheduled in the course outline. Normally, a student will not be eligible for an academic award in a course in which the student received a formal rescheduling of test(s)/examination(s) worth 15 per cent or more towards the final course grade.

## 1. Fourth Year Students

### *University Medal in Dentistry*

This Medal in Dentistry will be awarded to the graduating student who has met the requirements for Graduation with Distinction and who in the opinion of the Faculty merits this award.

### *The American Academy of Craniofacial Pain Award*

A one-year subscription to the Journal of Craniomandibular Practice. The TMD Diary, the Journal of the AACP and a one-year membership in the AACP will be awarded to the senior student who has shown an interest in learning about craniofacial pain, has asked significant questions, has scored high grades in related courses, and has shown clinical diagnostic skills.

### *The American Association of Endodontists Prize*

For exceptional ability in Endodontics, the Association sponsors an annual prize consisting of a one-year subscription to Oral Surgery, Oral Medicine and Oral Pathology, and a one-year Student Membership in the American Association of Endodontists.

### *The American Academy of Oral Medicine Prize*

This prize, given for the greatest proficiency in Oral Medicine, Pathology and Radiology, consists of a certificate, one-year membership and subscription.

### *The American Academy of Pediatric Dentistry Predoctoral Student Award*

A membership in the Society and a one-year subscription to the AAPD Journal of Dentistry for Children constitute the annual prize which the Society sponsors to recognize an outstanding student in dentistry for children.

### *American College of Dentists Outstanding Student Leader Award*

The award is given to a senior dental student with a record of strong scholastic achievement and obvious ethical and compassionate patient care and who has demonstrated strong leadership as evidenced by direct involvement in student government and similar leadership endeavours.

### *CDA Student Leadership Award*

Awarded to the graduating student who over the 4 years of his/her program has shown outstanding qualities of leadership and character, and who may be expected to become a leader in the dental profession, the dental community, and society.

### *The Canadian Academy of Periodontology Prize*

This book/cash prize is awarded to the student who has demonstrated the greatest proficiency in Periodontics.

### *Dr. Mary Foley Memorial Prize*

A cash prize is awarded to the student who has shown the most professional and compassionate treatment of his/her patient family.

### *HANAU Best of The Best Prosthodontic Award*

Awarded to a graduating student in the DDS program at Dalhousie University who excels in the study and clinical application of prosthodontics.

### *The Quintessence Award*

A one-year subscription to the Quintessence Journal is awarded to the student with the greatest proficiency in Restorative Dentistry.

### *The Quintessence Award*

A one-year subscription to the Quintessence Journal is awarded for excellence in Clinical Achievement in Periodontics.

### *Quintessence Award for Research Achievement*

A one-year subscription to the Quintessence Journal is awarded to the student who has demonstrated exceptional interest and research abilities during his/her four years of dental studies.

### *Sunstar Canada Inc, Graduation Program Award*

A cash and product award is given to a graduating student in the DDS program who has demonstrated interest and high achievement in Public Health and outreach programs.

### *The Dr. Frank Woodbury Memorial Prize*

This book/cash prize is awarded to the student who has attained the highest academic standing.

### *The Dr. Frank Woodbury Memorial Prize*

This book/cash prize is awarded to the student who has attained the second-highest academic standing.

### *The Dr. Frank Woodbury Memorial Prize*

A book/cash prize is awarded to the student demonstrating the greatest proficiency in Comprehensive Care.

### *The Dr. William W. Woodbury Memorial Prize*

A cash prize is awarded for exceptional ability in Orthodontics on the third and fourth-year aggregate and on demonstrated interest in the specialty of Orthodontics.

### *3M ESPE Canada Student Clinical Award*

A certificate and cash prize of \$1,000.00 is awarded to the student who has demonstrated excellence and superior aptitude in the use of conservative restorative materials in the final year of the clinical undergraduate program.

## 2. Fourth and Third Year Students

### *The Prince Edward Island Dental Association Prize*

Each year the Association sponsors a prize for the student who has demonstrated the greatest proficiency and interest in Hospital Dentistry. The prize is paid externally.

## 3. Third Year Students

### *Atlantic Orthodontic Society Prize*

The Society sponsors a book/cash prize to be awarded to the student who has shown the greatest proficiency in theoretical orthodontics.

### *The Dr. J. Stanley Bagnall Memorial Prize*

This prize, in the form of books is awarded to the student who has achieved the highest academic standing in all subjects.

### *The Dr. W.H.H. Beckwith Prize*

This book prize is awarded to the student who has achieved the greatest proficiency in Clinical Operative Dentistry.

### *CDA/Dentistry Student Clinician Award*

The Best Table Clinic Presentation Winner receives an expenses paid trip to the national convention of the Canadian Dental Association where the student will present his/her table clinic in a national competition, with entries from all Canadian Faculties of Dentistry.

### *Dr. Bruce N. Fergusson Prize*

This cash prize is given to the Best Table Clinic Presentation and is donated by the Halifax County Dental Society.

### *The Dr. Bruce N. Fergusson Memorial Award*

This award is made possible through a fund provided by family, friends, and colleagues, and may be awarded annually. The recipient will be a student entering the fourth year of Dental Studies who has demonstrated exceptional leadership, character, scholarship, and personal qualities during his/her first three years of Dental Study.

### *Hallmark Dental Table Clinic Prize*

A cash prize awarded to first, second, third, and fourth place winners of Dentistry Table Clinics.

**Henry Shein Ash Arcona**

A cash prize for first, second, and third place winners for Dentistry Table Clinics.

**Patterson Dental Table Clinic Prize (Dentistry)**

A cash prize awarded to first, second, third, and fourth place winners of the Dentistry Table Clinics.

**United Dental Learning Centre Table Clinic Award**

A cash prize is given for the Best Table Clinic Presentation.

**United Dental Learning Centre Table Clinic Awards**

Cash prizes are awarded for second and third best table clinic presentations.

**The Dr. F.A. Godsoe Prize**

The New Brunswick Dental Society sponsors this cash prize which is awarded to the student who has demonstrated the greatest proficiency in Foundation Sciences in Clinical Practice.

**The Halifax County Dental Society Prize**

Cash prizes are awarded for the second and third best table clinic presentation.

**The International College of Dentists (Canadian a: Section) Award**

The College sponsors a cash award to the student who best combines scholastic achievement, general character and participation in extracurricular activities during the third year. The College pays the award directly to the student.

**United Dental Laboratory Prize**

A prize book is awarded for greatest proficiency in Clinical Removable Prosthodontics.

**Nova Scotia Dental Association Prizes**

For the second highest academic standing in all subjects, books with the approximate value of \$200.

**Dr. James P. Craft Prize**

A cash award is given to the student who makes the fourth best presentation in Table Clinic.

**Third Year Comprehensive Patient Care III Prize**

For the greatest proficiency in Clinical Comprehensive Patient Care III in the third year, a prize is awarded in the form of either cash or books.

**Elsevier Science Prize**

A gift certificate is awarded for the most significant improvement in third-year.

**The Dr. D.E. Williams Prize**

This book prize is awarded for the greatest proficiency in Clinical Pediatric Dentistry.

**4. Second Year Students****The Atlantic Society of Periodontology**

A Periodontics textbook or atlas is awarded for the greatest proficiency in Periodontics.

**The Charles Bell Memorial Prize**

This prize, in the form of one or more books, is awarded to the student who has attained the highest academic standing in all subjects.

**The Charles Bell Memorial Prize**

This prize, in the form of one or more books, is awarded to the student who has attained the second highest academic standing in all subjects.

**Dr. David Manuel Memorial Prize**

This book prize is awarded for the greatest proficiency in removable prosthodontics.

**The Dr. David Manuel Memorial Prize**

This book prize is awarded to the student who has attained the greatest proficiency in Patient Care II.

**The Louis Nief Award**

Cash prize awarded to the student in Patient Care II who has demonstrated the greatest proficiency in dental anaesthesia.

**The Nova Scotia Dental Association Prize**

The Association sponsors a book prize with the approximate value of \$200 for the student who has attained the greatest proficiency in Cariology II.

**Nova Scotia Dental Association Prize**

The Association sponsors a book prize with the approximate value of \$200 for the student who has demonstrated the greatest proficiency in Growth and Development II.

**Nova Scotia Dental Association Prize**

The Association sponsors a book prize with the approximate value of \$200 for the student who has demonstrated the greatest proficiency in Pharmacology.

**Nova Scotia Dental Association Prize**

The Association sponsors a book prize valued at approximately \$200 for greatest proficiency in Dental Biomaterials.

**5. First Year Students****The Charles Bell Memorial Prize**

This prize, in the form of one or more books, is awarded to the student who has attained the highest academic standing in all subjects.

**The Charles Bell Memorial Prize**

This prize, in the form of one or more books, is awarded to the student who has attained the second highest academic standing in all subjects.

**The Dr. John W. Dobson Memorial Prize**

This book or cash prize is awarded to the student who has demonstrated the greatest proficiency in Periodontics.

**The Dr. F.A. Godsoe Prize**

The New Brunswick Dental Society sponsors a cash award for the student who has shown the greatest proficiency in Patient Care I.

**The Dr. F.A. Godsoe Prize**

The New Brunswick Dental Society sponsors a cash award for the student who has shown the greatest proficiency in Cariology I.

**The Leonard Goldfarb Prize**

This book prize is awarded to the student who has demonstrated the greatest proficiency in Infectious Diseases.

**Newfoundland/Labrador Dental Association Award**

The Association sponsors an award for the student who is a Newfoundland resident; who is a graduate from a Newfoundland School, College, or University; in the first year DDS; has the highest grade point average amongst the eligible applicants; and is a student in good standing. The recipient will receive \$100 and a plaque announcing the award.

**Nova Scotia Dental Association Prize**

This book prize valued at approximately \$200 is awarded to the student who has demonstrated the greatest proficiency in Anatomy.

**Nova Scotia Dental Association Prize**

The Association sponsors a book prize of approximately \$200 in value for the student who has demonstrated the greatest proficiency in Histology.

**Nova Scotia Dental Association Prize**

The Association sponsors a book prize of approximately \$200 in value for the student who has demonstrated the greatest proficiency in Occlusion and Neuromuscular Function I.

**Elsevier Science Prize**

Sponsors a gift certificate for greatest proficiency in Biochemistry.

**C. Bursaries in Dentistry**

This subsection should be read with reference to the general bursary portion of the Financial Aid section.

**Aurum Ceramic Dental Laboratories Bursary**

An annual bursary to a full-time dentistry student entering third or fourth year who is in need of financial assistance.

### ***The Sidney D. Campbell Memorial Bursary***

This bursary will be awarded annually out of the income generated by this fund. The award will go to the third-year dental student who has demonstrated financial need and who, by scholarship and character, appears deserving of this assistance.

### ***The Elias Bursary***

This endowment has been established to provide an annual bursary to a qualifying dental student beyond first year. Academic achievement of 70% is also required. This bursary will be of particular interest to a married student.

### ***The Glengarry Bursary***

A bursary may be awarded annually from a donation from the Glengarry Foundation. The bursary is to be given to a Dentistry student who has demonstrated financial need and satisfactory academic progress. Preference will be given to a resident of Nova Scotia.

### ***The Dr. I.K. Lubetsky Memorial Bursary***

Friends and colleagues of the late Dr. I.K. Lubetsky established an endowment to provide a bursary to a qualifying second-year dental student who has demonstrated financial need and who by scholarship and character appears deserving of this assistance.

### ***The Dr. D. Brendan MacNeil Bursary***

The family of the late Dr. Donald Brendan MacNeil established an endowment at the University to provide an annual memorial bursary to a fourth-year student in the School of Dentistry.

### ***Arrabelle MacKenzie McCallum Bursary***

Under the Will of the late Emelyn L. MacKenzie the University has been given a bequest for the purpose of funding a bursary to one or more students. The recipient must be a bona fide resident of and domiciled in, the County of Victoria (as defined by the boundaries then extant in AD 1900), Nova Scotia. Character and need are the main criteria.

### ***The Dr. F.L. Miller Memorial Bursary***

The Fredericton Dental Society in 1979 endowed funds in memory of this distinguished graduate of Dalhousie who contributed so much to the community. A bursary from the annual income of the fund is to be awarded to a second-year dental student who has demonstrated financial need. Preference will be given to, but will not be strictly limited to, a New Brunswick student.

### ***The Sunstar Bursary***

This bursary is presented to a Dentistry student who has completed the first year, is considered a good student, and is in financial need.

## **II. School of Dental Hygiene**

### **A. Scholarships in Dental Hygiene**

#### **1. Entrance Scholarship**

##### ***Colgate-Palmolive Dental Hygiene Admission Scholarship***

Awarded to a student with superior academic achievement entering the first year of Dental Hygiene at Dalhousie University and who has demonstrated financial need.

#### **2. In-Course Scholarships in Dental Hygiene**

##### **Dalhousie University Scholarships**

Continuing students in the Dental Hygiene program are eligible for in-course scholarships.

##### ***The Dr. Jane Pickersgill Memorial Scholarship***

Awarded to the second year dental hygiene student with the highest GPA, who participated in the Grenfell clinical experience. Scholarship amount \$150.00 Awarded by the Newfoundland Dental Hygiene Association.

### **B. Prizes and Awards**

Students in the Dental Hygiene program must complete at least 80% of the full course load in that academic year to be eligible for prizes and awards.

## **1. Second Year Dental Hygiene Students**

### ***Nova Scotia Dental Hygienists Association Prize***

A cash prize is awarded for the highest academic standing in all subjects.

### ***Newfoundland Dental Hygienists Association Prize***

For the second highest academic standing in all subjects there is a cash award.

### ***Columbia Dentoform Prize***

For demonstrating the greatest proficiency in patient management and patient education, a Columbia Dentoform Model is awarded to the successful student.

### ***United Dental Learning Centre Table Clinic Prize***

A cash prize is given for the best table clinic presentation.

### ***Dental Hygiene Student Society***

Sponsors cash award for the best table clinic presentation.

### ***Hallmark Table Clinic Prize***

A cash prize awarded to first, second, third, and fourth place winners of Dental Hygiene Table Clinics.

### ***Nova Scotia Dental Hygienists' Association Prize***

The association sponsors cash awards for the second and third best Table Clinic presentations, respectively (or half of these amounts in the case of two students working together)

### ***Patterson Dental Table Clinics Prize (Dental Hygiene)***

A cash prize awarded to first, second, third and fourth place winners of Dental Hygiene Table Clinics.

### ***Sunstar Canada Inc. Dental Hygiene Graduation Program Award***

A cash award given to a graduating student in the School of Dental Hygiene who demonstrated interest in patient education and proficiency in patient management.

### ***United Dental Learning Centre Table Clinic Prizes***

Cash prizes are awarded for second and third best table clinic presentations.

### ***Anne Rafuse Memorial Prize***

There is a cash prize for the greatest academic and social contribution to the class.

### ***Alice Hartlen Memorial Prize***

There is a cash award for the student demonstrating the greatest proficiency and creativity in community health.

### ***Halifax County Dental Society Prize***

For the student demonstrating the greatest proficiency in Clinical Dental Hygiene, there is a cash award.

### ***Andrea Brennan Memorial Award***

A cash award is given to the student chosen as Valedictorian.

## **2. First Year Dental Hygiene**

### ***Katie Lubetzki Memorial Prize***

A cash prize is awarded for the highest academic standing in all subjects.

### ***Prince Edward Island and New Brunswick Dental Hygienist Association Prize***

A cash award is available to the student who achieves the second highest academic standing in all subjects.

### ***Newfoundland/Labrador Dental Association Award***

The Association sponsors an award for the student who is a Newfoundland resident; who is a graduate from a Newfoundland School, college, or University; in the first year of dental hygiene; has the highest grade point average amongst the eligible applicants; and is a student in good standing. The recipient will receive \$100 and a plaque announcing the award.

### ***Nova Scotia Dental Association Prize***

A cash award is awarded to the student who demonstrates the greatest proficiency in Pre-Clinical Dental Hygiene.

### ***Lisa Van Alphen Memorial Award***

A cash award is presented in recognition of sound standing and professional excellence, in tribute to a person of integrity and sincerity.

## **C. Bursaries Open to Students in Dental Hygiene**

Students who are requesting consideration for any of the following funds are to apply to the "Undergraduate Bursary Program" form. The application can be found at <http://www.moneymatters.dal.ca>.

### ***University Bursaries***

The university has a number of funds from which bursaries may be awarded to undergraduates, including Dental Hygiene students. Please check program dates at <http://www.moneymatters.dal.ca>.

### ***Kate MacDonald Bursary***

The income from this fund will be used to provide a bursary to a first year Dental Hygiene student who has demonstrated financial need. Deadline October 15.

### ***The Sunstar Bursary***

This bursary is presented to a Dental Hygiene student who has completed the first year, is considered a good student, and is in financial need.

### ***The Jennifer Wright Memorial Bursary***

The income from this fund may be awarded annually to a second year Dental Hygiene student who has demonstrated financial need. Deadline October 15.

## **III. Faculty of Law**

### **A. Scholarships in Law**

Several entrance scholarships are available to students with superior academic qualifications. Application for the pure scholarships is not required, except for those of the Law Foundation of Nova Scotia (see entry below) the Arthur Allister MacBain Memorial Scholarship, and the Godsoe Scholarship (see entry below).

Please note that it is University policy to credit scholarships automatically to fees. If this should result in an overpayment of fees, the portion in excess will be rebated to the students. Students must enroll at Schulich School Of Law in order to receive a scholarship.

#### **1. Entrance Scholarships (Deadline for application: November 30)**

##### ***The Francis Hugh Bell Entrance Scholarship in Law***

The purpose of the fund is to provide an annual scholarship to a student entering the first year of the program leading to the Bachelor of Laws degree (LLB) at Dalhousie University. The fund was established to honour the memory of Francis Hugh Bell through a bequest from his daughter, Barbara Bell.

##### ***Blake, Cassels & Graydon Entrance Scholarship***

The Toronto law firm of Blake, Cassels and Graydon sponsors an annual award for a first year student (or two students) who has shown both academic proficiency and financial need.

##### ***The Law Foundation of Nova Scotia Scholarships***

The Foundation sponsors five scholarships, each in the amount of \$13,000, which are open to exceptionally capable students who are applying to the first year of the Bachelor of Laws degree at Dalhousie. Scholarships are renewable in each subsequent year if the recipient maintains an "A" average or places within the top 15 students in the class. An application is required, available from the Admissions Office, Faculty of Law, Dalhousie University, Halifax, NS, B3H 4H9.

##### ***The J. Gerald Godsoe Scholarships***

Established in memory of Gerry Godsoe, a Dalhousie law alumnus who contributed greatly to public policy issues in Canada, these scholarships are awarded to scholars accepted to the LLB program at the Schulich School Of Law who have demonstrated a particular interest in Canadian public policy issues. The scholarships are in the amount of \$10,000, and are renewable if the student maintains a superior academic average in law

school. An application is required, available from the Admissions Office, Faculty of Law, Dalhousie University, Halifax, NS, B3H 4H9.

##### ***The Alistair Fraser Scholarships in Law***

A generous bequest from the Estate of the Honourable Alistair Fraser endowed a fund to provide several \$1,000 scholarships to the Faculty of Law, Dalhousie University.

##### ***The Arthur Allister MacBain Memorial Scholarship***

The Arthur Allister MacBain Memorial Scholarship was established by John H. MacBain, in memory of his father, Arthur Allister MacBain (LL.B. Dalhousie, 1951). This \$20,000 renewable scholarship is awarded annually to a student entering first year at the Schulich School Of Law who has achieved academic excellence and has demonstrated significant involvement in extracurricular and community activities. An application is required, available from the Admissions Office, Faculty of Law, Dalhousie University, Halifax, NS, B3H 4H9.

##### ***Miller Thomson LLP National Entrance Scholarship***

Established in 2003, the Miller Thomson LLP National Entrance Scholarship is awarded to a first year student who has a high academic achievement, has financial need and is involved with their community as well as extra-curricular activities.

##### ***Schulich Entrance Scholarships***

In 2009 philanthropist Seymour Schulich generously donated \$20 million to Dalhousie Law School in recognition of the excellence of the education offered at the institution since 1883. In recognition of Mr. Schulich's support, Dalhousie Law School was renamed the Schulich School of Law. Students are the major beneficiaries of the donation. The greatest portion of the Schulich gift is dedicated to new scholarships, including 12 annual entrance scholarships valued at \$12,000 - \$15,000. Students must apply and be accepted to the LL.B program at Dalhousie University. The selection committee will evaluate each applicant on two of the following criteria: academic excellence, community involvement / public service, and financial need. Students must indicate in their application the two criteria that they wish to be considered, and supply the requested documentation relevant to those criteria on the Schulich School of Law Scholarship Application Form. Deadline: November 30th.

##### ***Blake, Cassels & Graydon LLP, Blakes Scholar***

The scholarship at Dalhousie is part of a national scholarship program which the law firm of Blake, Cassels & Graydon LLP has initiated at law schools across Canada. One second year student is eligible to be a "Blakes Scholar" in an academic year. The scholarship will be awarded to a second year student who has demonstrated academic excellence in the first year of his or her law studies. To be eligible, a student has obtained an academic standing in the top 10% of the first year law school class. Financial need, membership in an historically disadvantaged group as delineated by the Nova Scotia Human Rights Act, involvement in the community, extra-curricular activities at Dalhousie, and the existence of multiple responsibilities and/or limited support, may also be considered in the selection of the Blakes Scholar. The Scholarship is renewable in third year, provided that the recipient has an academic standing in the top 20% of the second year class.

##### ***Frank M. Covert Scholarship***

Established in 1988, this scholarship is named after the late Frank M. Covert. Mr. Covert practised with the firm of Stewart MacKeen and Covert (now Stewart McKelvey). Monies for the scholarship(s) have been made available by individuals and companies who had an association with Mr. Covert and by his law firm and his estate. This scholarship is awarded to a student (or two students) in Second Year at Schulich School Of Law. It is open to students who have achieved a high academic performance in first year. This is defined by the terms of the scholarship as being in the 'top ten' students in the first year class. The award is to be made 'largely, but not exclusively, on the basis of academic performance.' Extra-curricular performance, bearing, speaking skills and such other factors deemed relevant by the committee may also be considered. The committee may deem it relevant to consider the extent to which a candidate possesses exceptional qualities exhibited or esteemed by Frank Covert. Financial need or the holding of other scholarships are not to be taken into account. The scholarship is renewable in third year provided that the recipient has maintained an "A" average in his or her second year.

## 2. Graduate Scholarships in Law

Graduate students are eligible for scholarships available to all students registered in the Faculty of Graduate Studies at the University, and for the Sir James Dunn Post-Graduate Scholarship available in the Faculty of Law.

### *The Roy A. Jodrey Scholarship in Law*

The will of the late Roy A. Jodrey established a fund, the income of which is to be awarded as an annual scholarship, for post-graduate study at Schulich School Of Law to a student deemed by the faculty to be outstanding.

### *Law Foundation of Nova Scotia Graduate Millennium Scholarship*

The Law Foundation of Nova Scotia established the Graduate Millennium Scholarship in the year 2000.

### *The Ronald St. John Macdonald Memorial Scholarship*

The fund was established to provide a scholarship for an LLM or JSD student working in the area of international and/or international human rights law.

### *Schulich Scholarships in Law*

The fund provides annual scholarships to LLM and JSD students.

### *Fielding Sherwood Memorial Fund*

The fund provides a bursary which is to be awarded to an LLM or JSD student whose work concerns the environment, or relates in some way to fisheries or ocean research studies. The intent is that the bursary be directed toward travel or research. The student will be selected by the Dean, on the advice of Faculty members in the areas concerned. The annual amount is to be determined by him/her. One award may be made annually. The fund will be self-perpetuating.

### *The George C. Thompson Fellowship in Law*

Mr. George C. Thompson established a fund to provide a graduate fellowship for a student enrolled in the Master of Laws (LLM) program at Dalhousie. The fellowship should preferably be awarded to an LLB graduate from Dalhousie with preference given to students who combine scholarly achievement and athletic involvement throughout the candidate's university career.

### *The H.A.J. Wedderburn Scholarship in Law*

The fund provides an annual scholarship to a Black Nova Scotian enrolled in a graduate program (LLM or JSD) in the Faculty of Law, Dalhousie University.

## B. Prizes and Medals

### 1. Third Year Students

#### *Robert E. Bamford Memorial Award*

The friends, colleagues and classmates of the late Robert E. Bamford, a graduate of the Class of 1975, have established this memorial prize in his honour. Robert Bamford was formerly the treasurer and president of the Dalhousie Law Students' Society and, at the time of his death, was a doctoral student in law at the University of Edinburgh. The prize is awarded to the third-year student who best combines academic excellence with a commitment to the Law School community.

#### *The Eunice W. Beeson Memorial Prize*

This prize is to be awarded at the discretion of the Faculty to the qualifying woman student in the Law School who seems worthy on the basis of her academic performance in the School, qualities of personality and character, and financial need. The prize was established by Mrs. Mary Beeson Mobley and friends in memory of Miss Eunice W. Beeson, the first professional Librarian in the Law School, Sir James Dunn Law Librarian and Associate Professor, 1959-66.

#### *The Edna Chambers Class of '77 Judicial Remedies Prize*

Established by the Class of '77 to honour the memory of Edna Chambers, and awarded to a third year student who has achieved the highest standing in the Judicial Remedies class.

#### *Graduating Class of 2008 Book Prize*

The Graduating Class of 2008 is sponsoring a Book Prize to be awarded to the graduating student who best exemplifies the camaraderie at Dal Law

(making their fellow students smile just from being in their presence). The book to be awarded is the current edition of the Black's Law Dictionary in hard cover.

#### *The A. William Cox Memorial Award*

The family and friends of the late A. William Cox, a graduate of the Class of 1949, established this memorial prize in his honour. This annual prize is awarded to a graduating student who is from Atlantic Canada, has demonstrated scholastic merit and financial need and who has registered for, or participated in, the Dalhousie Legal Aid Clinical program or who has demonstrated a high level of community commitment and service.

#### *Dawn Russell Community Commitment Award (Discretionary Award)*

This annual award recognizes and encourages student commitment to legal careers in public service. It is awarded to graduating students who have taken an interest in public service throughout Law School and who have demonstrated an intention to pursue a career path devoted to public service.

#### *The Donald Marshall Jr. Memorial Award*

This annual award commemorates Donald Marshall Junior's contributions to challenging and reforming aspects of the Canadian Criminal Justice System and to the recognition of Aboriginal Treaty Rights. The award recipient will be a graduating student who has a proven commitment to raising awareness and working for social justice and criminal law reform with respect to Aboriginal peoples.

#### *Muriel Duckworth Award*

Awarded annually to a woman or women in the graduating class who best exemplifies the qualities of Muriel Duckworth by raising consciousness of women's issues and feminism in the legal community. The successful candidate shall be chosen by the Discretionary Awards Committee along with the Professor teaching Women and the Law, and a representative chosen by the Schulich School Of Law Association of Women and the Law.

#### *G.O. Forsyth Prize (Discretionary Award)*

This prize is awarded to the student whom the Faculty deems to be the most deserving in the sense of combining the qualities of scholarship, character and need.

#### *William Johnston Grant Q.C. Memorial Award (Discretionary Award)*

Awarded annually to a graduating law student who has demonstrated financial need, demonstrated a contribution to both academic and extra curricular life at Schulich School Of Law, and has achieved a good and healthy balance between academic and social pursuits. Patterson Palmer LLP sponsors this award in honour of Mr. Grant, one of the firm's founding members.

#### *Health Law Institute Prize*

This prize is awarded annually to the third year law student graduating in the Health Law Specialization Program having the highest grade point average in health law courses counted toward the specialization.

#### *The Honourable W.A. Henry Prize*

Awarded to the graduating student who has achieved the highest standing in Constitutional Law subjects chosen by the faculty.

#### *Jenkins Marzban Logan LLP Prize*

Awarded to a third year student who has completed (or is enrolled) in the Dalhousie Legal Aid Clinical Law Program and who has the highest overall standing in the graduating class among clinic students.

#### *David M. Jones Memorial Award*

Awarded to a third year student whose character has been a source of inspiration and optimism to his or her classmates and the Law School community.

#### *Robert W. Kerr Labour Law Prize*

Awarded to the graduating student who has achieved the highest standing in the Labour Law subject - Collective Agreement.

### ***The Leonard A. Kitz, QC Prize***

A book prize, valued at \$250, donated by Leonard A. Kitz, QC, will be awarded annually for skill in oral legal argument, in moot courts or as otherwise determined by the faculty.

### ***LexisNexis Canada Prize in Environmental Law***

A book prize, valued at \$250, will be awarded to the LLB student who attains the highest mark in Environmental Law I.

### ***Maritime Law Book Company Prize***

Three book prizes of \$150 will be awarded to the student who has attained the highest mark in each section of The Legal Profession and Professional Responsibility.

### ***The Sarah MacWalker MacKenzie Clinical Law Award***

The Dalhousie Legal Aid Service established a prize, awarded at the discretion of the Director and staff, in recognition of the contributions and exemplary service of Sarah MacKenzie. The prize is open to a third-year student who has successfully completed the Clinical Law Program at Dalhousie Legal Aid and who has made an outstanding contribution toward the DLAS goals of education, service, community development and law reform.

### ***Elizabeth May Award for Environmental Service***

Awarded annually to a student in the graduating class who has been involved in promoting environmental awareness in the law school and broader community. Elizabeth May is an environmentalist, writer, activist, lawyer and graduate of Schulich School Of Law ('83). Elizabeth May has exemplified a long and inspiring commitment to environmentalism and this award recognizes students who are also making a significant contribution to environmental issues and environmental law. The successful candidate shall be chosen by the Discretionary Awards Committee along with Professors from the Law School's Marine and Environmental Law Institute (MELI).

### ***Arthur R. Moreira, Q.C. Memorial Prize***

Awarded to the third year student who has demonstrated excellence in Equity and Trusts.

### ***NSBS Presidents' Leadership Award***

Awarded to a student who intends to article in Nova Scotia and who has exemplified consistent leadership qualities.

### ***The William D. Outhit Prize in Administrative Law***

Awarded to the graduating student who has attained the highest standing in Administrative Law.

### ***The A.S. Pattillo Prize for Advocacy***

The Toronto firm of Blake, Cassels and Graydon LLP sponsor this prize in memory of Mr. Arthur Pattillo, a renowned advocate. The prize is to be shared by the winners of the annual Smith Shield Moot Court competition.

### ***Judge Fran Potts Award (Discretionary Award)***

Awarded to a graduating student who has achieved academic excellence and who has shown a commitment to the overall spirit of Dalhousie as well as a contribution to the Law School.

### ***Francois-Michael Proulx Memorial Prize***

Awarded to the visiting civil law student who has made a significant contribution in enriching the life of the Schulich School Of Law.

### ***The Honourable H.G. Puddester Prize***

This annual prize of \$250 is funded by the St. John's law firm Orsborn, Benson, Myles, in memory of The Honourable Harold G. Puddester, a Dalhousie Law School graduate, and former Deputy Minister of Justice of Newfoundland and Justice of the Supreme Court of that Province. The recipient shall be either a permanent resident of Newfoundland or have the evident intention to practice law in Newfoundland. The award will be made considering (a) demonstrated academic ability in public law; (b) leadership ability; and (c) extra-curricular activities beneficial to the law school and/or the legal profession. Preference will be given to a third year student, with the prize being based on performance over all three years. Failing a suitable third year student, preference will be given to a second year student based on the student's performance in First and Second years. Failing a suitable second year student, preference will be given to a first year student based on performance in First Year only.

### ***The Horace E. Read Award***

Awarded to a third year student who has made the greatest overall contribution to scholarship and student life.

### ***The Henry B. Rhude Memorial Prize***

In 1985 the law firm of Stewart, MacKeen and Covert (now Stewart McKelvey) set up this prize which is to be awarded to a student who attains the highest mark in Secured Transactions.

### ***The George Isaac Smith Memorial Award***

An award of \$500 is available to the student in any year of Law who has shown academic excellence by attaining a high scholastic average, and who has demonstrated in the opinion of Faculty the most promise of achieving exemplary standards of professional and public service.

### ***R.A. Smith Advocacy Prize***

An annual prize of \$500 will be awarded to the graduating student who has achieved the highest standing in the combination of Civil Procedure, Civil Trial Practice and Insurance Law.

### ***University Medal in Law***

This medal may be awarded on graduation to the student who has achieved the highest cumulative average of those attaining First Class distinction in the studies of Third Year, and who has achieved a very high standard of excellence. (Please note that eligibility will be determined solely on the basis of law classes.)

## **2. Second or Third Year Students**

### ***Robert Batt Memorial Award***

Friends and associates of the late Robert John Batt (Class of 1936) have established a fund which provides a prize to the student who achieves excellent standing in the subject area of Constitutional Law.

### ***Bennett Jones LLP Prize in Intellectual Property II***

The law firm of Bennett Jones LLP sponsors an annual prize of \$500 to the student who has attained the highest standing in Intellectual Property Law II.

### ***Bereskin and Parr Prize***

Awarded to the student who achieves the highest mark in the Intellectual Property Law class.

### ***The Blake, Cassels and Graydon LLP Prize***

The law firm of Blake, Cassels and Graydon LLP sponsors an annual prize of \$500 to the student who has attained the highest standing in Business Associations.

### ***Canada Law Book Company Conflict of Laws Prize***

A book prize will be awarded to the student who receives the highest mark in Conflict of Laws.

### ***Canada Law Book Company Prize in Family Law***

A book prize will be awarded to the student who attains the highest mark in Family Law.

### ***Canadian Energy Law Foundation Prize***

A prize in the amount of \$2,500 to be awarded to the student who has demonstrated outstanding performance in the Oil and Gas Law class.

### ***The Lorne O. Clarke Prize in Dispute Resolution***

The Nova Scotia Barristers' Society, the Canadian Bar Association, the Judiciary of Nova Scotia and Schulich School Of Law established this prize to honour the distinguished career of Lorne O. Clarke, former Chief Justice of Nova Scotia. This prize will be awarded to the student who achieves the highest standing in Dispute Resolution.

### ***Cox & Palmer Corporate Taxation Prize***

The law firm of Cox & Palmer sponsors a prize in the amount of \$500 to the student achieving the highest mark in Taxation of Corporations.

### ***Davies, Ward, Phillips & Vineberg LLP Prize***

A prize of \$1,000 donated by the Toronto law firm of Davies, Ward & Vineberg LLP is to be awarded to the second or third year student who has achieved the highest combined mark in Business Associations, Commercial Law and Taxation I.

#### ***The Robert T. Donald Memorial Prize***

Former students, colleagues and friends of the late Robert T. Donald, a teacher at the Law School and Dean from 1969 until his death in 1971, established an endowment fund. A portion of the net annual income is expended as a prize to the student who has achieved the highest standing in Corporate Transactions.

#### ***Robert T. Donald Prize in Insurance***

The Carswell Company and colleagues of the late Dean Donald have established a fund to provide for an annual prize to recognize the achievement of that student who has attained the highest mark in Insurance.

#### ***The Milton and Carole Ehrlich Prize***

Awarded in memory of the late Richard Weiner who was actively involved with the United Nations, this prize is given to recognize the student who has achieved the highest standing in Law of the Sea subjects.

#### ***The Edward Charles Foley Prize***

Awarded to the student who is enrolled in the MELP certificate program who has obtained a weighted average of not less than B and has demonstrated a commitment to public/community service in the environmental or related area.

#### ***G.O. Forsyth Essay Prize***

Awarded to the student who submits the best essay on a legal topic, to be selected by the faculty.

#### ***The H. Carl Goldenberg, QC, Prize***

An annual prize of \$100 is given to the student with the highest standing in Public Law subjects designated by the faculty.

#### ***Gowlings Law and Technology Prize***

The law firm of Gowlings, Toronto sponsors a prize in the amount of \$500 to the student achieving the highest mark in Law and Technology.

#### ***James Hendry Memorial Prize in Law***

The family of James Hendry LLB' 47 sponsors an annual prize to be awarded to the student who has demonstrated academic excellence in the area of International Law.

#### ***The J.S.D. Tory Writing Awards***

The fund was established by the law firm of Tory, Tory, DesLauriers & Binnington in memory of the late J.S.D. Tory, to provide annually one or more awards to full-time students in the Faculty of Law to reward legal writing excellence, to encourage legal scholarship, and to provide the recipients with the financial ability to do additional research and writing on an outstanding piece of written work.

#### ***Donald A. Kerr Memorial Prize***

The Eastern Admiralty Law Association sponsors an annual prize to be awarded to the student who has achieved high standing in the subject area of Maritime Law.

#### ***Stuart Clarke Lane Memorial Prize***

The Class of 1940 established an endowment fund in memory of their classmate. In 1978 the fund was supplemented by a generous bequest from the Estate of Pauline H. Lane in memory of her son. This annual prize is awarded to the student who has achieved the highest mark in Administrative Law.

#### ***Professor Ronald St. John Macdonald Prize in Public International Law***

An endowment was established by the distinguished former Dean of Law to provide an annual prize awarded to the student who attains the highest mark in Public International Law.

#### ***The McInnes Cooper Commercial Law Prize***

This prize of \$500 is sponsored annually by the law firm of McInnes Cooper and is awarded to the student who achieves the highest mark in Commercial Law.

#### ***The McInnes Cooper Internet Media Law Prize***

This prize of \$300 is sponsored by the law firm of McInnes Cooper and is awarded to the student who achieves the highest grade in Internet and Media Law.

#### ***The McInnes Cooper Labour Law Group Prize***

This prize of \$500 is sponsored annually by the law firm of McInnes Cooper and is awarded to the student who achieves the highest mark in Labour Law.

#### ***The McInnes Cooper Trade Law Seminar Prize***

A prize of \$500 to be awarded to the student with the highest mark in International Trade Law.

#### ***McMillan LLP Prize***

The sum of \$500 is awarded to the student who attains the highest mark in the three private law courses of Torts, Contracts and Property.

#### ***The R. Graham Murray Prize***

The Class of 1954 established an endowment in honour of Professor R. Graham Murray, QC, a distinguished teacher at the Law School. The prize is awarded to a deserving student in a subject to be designated by the Faculty.

#### ***Osgoode Society Book Prize in Legal History***

Awarded annually to a student having demonstrated superior ability in legal history through the writing of a major paper.

#### ***Osler, Hoskin and Harcourt LLP Prize***

This prize of \$500 is sponsored annually by the Toronto firm of Osler, Hoskin and Harcourt LLP and is awarded to the student who achieves the highest mark in Securities Regulations.

#### ***Justice Ronald N. Pugsley Trial Advocacy Award***

The fund was established by the family of Justice Ronald N. Pugsley to honour his distinguished career, and will provide an annual prize for a second or third year student or students at Schulich School Of Law who has (have) achieved excellence in trial court or appellate court advocacy in a competitive trial or moot court competition.

#### ***The Elkanah Rafuse Prize in Admiralty Law***

An endowment was established in memory of the late Elkanah Rafuse of Halifax to provide an annual prize to the student who achieves the highest standing in Maritime Law and Practice.

#### ***The Horace E. Read Legislation Prize***

The establishment of a fund in memory of the late Dean Horace Read provides an annual prize to the student who attains the highest mark in Legislation.

#### ***Professor Robert A. Samek Memorial Prize***

The establishment of a memorial fund by family, relatives and friends of the late Professor Robert A. Samek makes possible a book prize for the student who achieves the highest mark in General Jurisprudence.

#### ***W.A. Tomblin Memorial Prize***

A prize awarded to the second or third year student with the highest mark in Bankruptcy.

### **3. Second Year Students**

#### ***Canada Law Book Company Civil Procedure Prize***

A book prize is awarded to the student who achieves the highest mark in Civil Procedure.

#### ***The Honourable Richard B. Hanson Prize***

Established by Mrs. R.B. Hanson, this endowment provides for an annual prize to the student who achieves the highest mark in Constitutional Law. The prize is in memory of a distinguished graduate of Dalhousie, lawyer and public servant.

#### ***Robert B. MacLellan Memorial Prize in Business Law***

This award was established in memory of Robert B. MacLellan and is awarded to a student who has registered to complete the Business Law Specialization; has completed 10 of the 23 credits required (7 of which must be in courses which are mandatory for the Specialization) and has attained the highest grade point average in second year law among those students registered in the Specialization.

#### ***Mr. Justice Vincent C. MacDonald Prize***

A prize will be awarded to the student who, in the opinion of faculty, has shown the most satisfactory progress during second year and who has attained at least second-class standing.

### **4. First or Second Year Students**

#### ***The John V. O'Dea Prize***

A prize of \$150 is to be awarded annually to a student who was admitted as a special status or a mature applicant. The prize is to be awarded after the student has completed either first or second year on the combined basis of good academic standing and contribution to the Schulich School Of Law.

### **5. First Year Students**

#### ***The Craig Bauer Memorial Law Prize***

Awarded to a first year Schulich School Of Law student who achieves high standing in first year Tort Law and who best exemplifies the traits that made Craig Bauer a special person, specifically, outstanding academic achievement and excellence in intramural sports.

#### ***Borden Ladner Gervais Professional Excellence Award***

The law firm of Borden Ladner Gervais awards an annual prize in the amount of \$2,500 to a first year student who has achieved academic excellence and has displayed qualities that reflect the Borden Ladner Gervais core values, which include integrity, excellence, teamwork and commitment. If more than one qualified student applies, it is possible that two smaller awards will be made in some years.

#### ***Boyne Clarke Prize***

The law firm of Boyne Clarke awards a prize annually in the amount of \$1,000 to the first year student from Nova Scotia who has demonstrated excellence through a combination of academic achievement, participation and contribution to the law school and the broader community.

#### ***CCH Canadian Limited Prize in Legal Research and Writing***

The company sponsors an annual prize which is to be awarded to the student who achieves the highest mark in the legal research and writing program.

#### ***The Class of 1958 Prize***

An endowment fund, the gift of the Law Class of 1958, provides a prize which is to be awarded to the student who achieves the highest mark in Criminal Justice: The Individual and the State.

#### ***Fasken Martineau DuMoulin Prize***

Awarded to the student from Ontario who achieves the highest standing in first year.

#### ***G.O. Forsyth Essay Prize***

Awarded to the student who submits the best essay on a legal topic in Legal Research and Writing (Assignments 2/3).

#### ***The W. Donald Goodfellow, QC, Prize***

This Calgary lawyer, a graduate of the Law School, sponsors an annual prize of \$200 to be awarded to the student who achieves the second highest standing among those in the first-year class.

#### ***The Lang Michener LLP Prize***

This Toronto law firm sponsors an annual prize of \$300 to be awarded to the student who achieves the highest mark in Judicial Rule-making and the Law of Contracts.

#### ***The Honourable Angus L. Macdonald Prize***

This prize is awarded to the student who has attained the highest mark in the class Tort Law and Damage Compensation.

#### ***The W.S. O'Hara Prize in Criminal Law***

A prize from the income of a fund established in memory of W.S. O'Hara is to be awarded to the student who has attained the highest academic standing in Criminal Law.

#### ***The Clyde W. Sperry Prize***

A prize from the income of a fund established in memory of Clyde W. Sperry is to be awarded to the student who has attained the highest mark in the class Property in its Historical Perspective.

### **C. Bursaries and Scholarships**

This subsection should be read with reference to the general bursary portion of the Financial Aid section.

#### ***Mary Bailey Memorial Bursary***

To be awarded annually to a law student in financial need, who has demonstrated an interest in Family Law.

#### ***The Blake Cassels & Graydon Scholarship***

Scholarship monies have been donated by the Toronto law firm of Blake Cassels & Graydon. The amount is awarded annually to a first-year student in need of financial assistance who has a superior academic record.

#### ***The Est. Ethelind A. Bligh Scholarship***

A scholarship will be awarded to the student of the first year who, having made a high scholastic average, in the opinion of the Faculty shows the most promise of achieving high standards of professional and public service.

#### ***Canadian Bar Association (NS Branch) Scholarship***

Through its more than 32,000 members the Canadian Bar Association is one of the Country's most prestigious and rapidly growing national professional associations. The objectives of the Association are to promote the administration of justice, encourage a high standard of legal education and training; uphold the honour of the profession; advance the science of jurisprudence; and foster harmonious relations and co-operation among law societies, and bench, and members of the Association. An annual scholarship of \$1,000 will be awarded on completion of second year to the student who has shown academic excellence by attaining a high scholastic average and who demonstrates, in the opinion of the faculty, the most promise of achieving the objects of the Association described above.

#### ***Cape Breton Barristers' Society Scholarship***

Beginning in 1965 the Cape Breton Barristers' Society instituted an annual scholarship which is to be awarded, at the discretion of the Dean, to a student (or two students) from Cape Breton County, on a combined basis of academic performance and financial need.

#### ***Dugald Christie Memorial Bursary in Law***

This bursary was established by colleagues and friends in memory of Dugald Christie, a graduate of the class of 1966. His life work was championing the rights of the impoverished and those without access to legal counsel. The recipient of this award will be registered (or participated) in the Dalhousie Legal Aid Program, has demonstrated financial need; has satisfactory academic standing and demonstrated a commitment to community service.

#### ***Class of 58 Gift to the Dalhousie Law School (Bursary)***

This bursary was established by the Class of 1958, Dalhousie Law School. Recipient will be regular full-time law student of any year who demonstrates financial need.

#### ***Class of 96 Bursary***

This bursary was established by the Class of 1996, Dalhousie Law School. Recipient will be regular full-time law student of any year who demonstrates financial need and has satisfactory academic standing.

#### ***The Law Class of 2000***

The Law Class of 2000 committed monies to Dalhousie University to establish the above named fund at the university. The fund is to provide bursaries to law students who need financial support. This award will go to a student who is in any year of study, has demonstrated financial need and has demonstrated a commitment to the Schulich School of Law, campus, or local communities.

#### ***The Mary C. Cleyle Bursary***

The family, friends, colleagues and classmates of the late Mary C. Cleyle, a graduate of the class of 1972, established in 1976 a bursary fund in her memory. The accrued annual interest of the fund is used as a bursary to assist students in their second or third year of studies who are in need of financial assistance.

### ***The Athena Bell Colpitts Scholarship***

This Scholarship was established in June 2003 to provide an endowment for an annual scholarship program for worthy Indigenous Black, Aboriginal, and Inuit law students. The award will go to students in any year of study who demonstrate financial need and are either Indigenous Black; or Aboriginal; or Inuit.

### ***The D.S. and F.L. Coombes Bursary Awards***

This Bursary Fund was established in 2004 by the Estate of Douglas Coombes. Douglas Coombes graduated from Dalhousie University in 1936 with a Bachelor of Commerce degree. After serving as a Flight Lieutenant in the RCAF from 1942 to 1946, he worked with the Royal Bank of Canada. Prior to his retirement, Douglas Coombes was a Vice President at the RBC. The income from the trust created is to be used to assist a deserving student or students in the final year of studies in each of the faculties of law and medicine and is to be distributed such that the award shall alternate from year to year between men and women students. Exercising the discretion given to it, the Law School has determined that: financial need is to be the basis of determining the recipients of the Coombes Bursary, more than one Award will normally be made annually, and the criteria for determining financial need will be the same as that provided for in the General Bursary Application process.

### ***The R.T. Donald Memorial Bursary***

An endowment fund was established to provide bursaries (and a prize) in memory of the late Robert T. Donald, a former dean of the Law School. Bursaries are available to students in any year who have demonstrated financial need.

### ***The J. Gordon Fogo Bursary***

This bursary was established in 1979 by James G. Fogo, as a memorial to his father James Gordon Fogo. The fund will be used to provide financial assistance to one or more Law student(s) who have demonstrated financial need while pursuing his/her Law Degree (LLB).

### ***The Edward C. Foley Memorial Scholarship***

This scholarship is in memory of the late Edward (Ted) C. Foley, LLB 1980. While at law school, Mr. Foley was particularly interested in marine, international and environmental law and was President of the John E. Read International Society. He was also active in provincial politics and in Amnesty International. The scholarship is to be awarded, on recommendation of the Dean, to a second or third year student who has completed at least two classes in the international, marine and environmental areas, and who has achieved an overall average of more than B. Consideration will also be given to the personal qualities of the candidate including leadership roles assumed at law school and community involvement. This scholarship was established by donations from friends of Mr. Foley, from both inside and outside the Law School.

### ***Professor Arthur L. Foote, QC, Memorial Bursary***

This bursary honours the memory of Arthur L. Foote, Q.C., one of the great professors of the Law School. His commitment to academic excellence and to the interests of the socially disadvantaged was matched only by his deep concern for students and their personal or academic problems. Awarded to students who show demonstrated financial need and satisfactory academic standing, the successful candidate should exhibit, if possible, characteristics exemplified by Professor Foote, including curiosity, sensitivity, generosity, sense of humour and be hard-working, people-oriented and have high academic standards. Preference will be given to a First Year student who is a resident of Pictou County.

### ***The George O. Forsyth Bursary***

Awarded to student(s) deemed by the faculty to be deserving in the sense of combining the qualities of scholarship, character, and economic need.

### ***The Elloriant, Donald and Hugh Fraser Memorial Scholarship***

The Fraser family has established a fund in memory of their parents, to provide an annual award to an undergraduate law student in any year of study who has been a resident anywhere in Yarmouth County for at least seven years prior to the receipt of the award. The recipient will be the student who, in the opinion of the Faculty, is the most capable student and resident in that county.

### ***The Constance R. Glube Bursary***

The Constance R. Glube Bursary Fund will assist law students at Dalhousie. The Fund was established by the Nova Scotia Barristers Society and Dalhousie Law School out of the proceeds from a symposium held in honour of Justice Constance R. Glube, former Chief Justice of Nova Scotia, to honour her distinguished career. The award will go to an Atlantic Canadian, Second or Third Year Law Student who has demonstrated financial need, high academic achievement, and leadership in the advancement of women in the legal profession.

### ***The John Wilfred Godfrey Scholarship***

Established by Joan Godfrey Mackenzie in memory of her father, a former lecturer at Dalhousie Law School and member of the Nova Scotia Bar, to reward merit as well as assist need.

### ***The Donald G. Grant Bursary Fund***

This fund was established through a bequest from Donald G. Grant BA 30, LLB 32 in memory of Dr. Sidney Earle Smith, Dean of the Law School from 1929-34 to support an annual bursary for a second or third year student enrolled full time in the Bachelor of Laws degree (LLB) program at Dalhousie University. Donald Gordon Grant graduated from Dalhousie with a Bachelor of Arts in 1930 and Bachelor of Laws in 1932. While at Dalhousie, he was active in student affairs, played varsity hockey and was a member of the intercollegiate debating team. He practiced law in Halifax before joining the Canadian army where he served in the Judge Advocate General Branch. He joined the Nova Scotia Trust Company becoming General Manager and later President and CEO, a position he held until his retirement in 1971.

### ***Reg Hamm Memorial Bursary***

An endowment fund was established to provide an annual bursary in memory of Reginald Hamm, the warm-hearted and dedicated custodian of the Weldon Law Building. The bursary is open to students in Second and Third year who have demonstrated financial need.

### ***The David M. Jones Memorial Bursary***

Awarded on the basis of financial need and satisfactory academic standing, to a student who exemplifies the character of David Jones while he was at the Law School.

### ***The Anderson & Clarence Lockerby Scholarship***

This endowed award is in memory of Clarence Lockerby and his uncle, Anderson Lockerby, who perished in World War I. This award will provide funds for a first-year law student who has proven academic excellence and financial need.

### ***The James A. MacDonald Award***

This endowed award is in memory of James Alexander MacDonald, a graduate of Dalhousie Law School. This award will go to a student who is in any year, has a satisfactory academic record and has demonstrated financial need.

### ***The MacIntosh Bursaries***

The fund is established by A.J. MacIntosh in memory of his parents Mr. Ross MacIntosh and Mrs. Katherine MacIntosh. It is to be used to assist students who are experiencing financial difficulty. The principal criterion for any award shall be the needs of the student, rather than the achievement of academic excellence. Preference will be given to any candidate who has demonstrated a significant interest in public affairs.

### ***Emelyn L. MacKenzie Bursary***

The University was given a generous bequest under the Will of the late Emelyn L. MacKenzie to benefit students in Arts & Science, Dentistry and Law equally. Applicants are to be bona fide residents of Victoria County, Cape Breton (as defined by the boundaries then extant in AD 1900). Financial need and character are the main criteria.

### ***The R. Graham Murray Bursary***

In commemoration of their 25th anniversary the Law Class of 1954 established an endowment in honour of Professor R. Graham Murray, QC, a distinguished teacher in the Faculty of Law. A portion of the annual income is awarded as a prize to a deserving student and the remainder is allocated as financial assistance to students who have shown financial need.

#### ***The Nova Scotia Barristers' Society***

Given in honour of the Law School's 100th birthday, the Nova Scotia Barristers' Society bursary is awarded to those students in financial need.

#### ***Prince Edward Island Law Foundation Scholarship***

The PEI Law Foundation in 1985 donated the sum of \$20,000 to establish an endowment from which the annual income will provide a major scholarship. This scholarship is tenable by a student who is entering Second or Third Year of study in law, who is ordinarily a resident of Prince Edward Island, is in financial need, and has achieved a good academic record in the Law School.

#### ***The Jack and Barbara Prince Bursary***

This bursary fund was set up in 1977 by Jack and Barbara Prince of Halifax. The income of this fund is awarded annually by the Law School to a needy student, normally resident in the Province of Nova Scotia who has been accepted into the first year of the LLB program. The bursary may be renewable, depending on the financial position of the holder of the award. Preference in awarding the bursary will be given to black students.

#### ***Frances Stanfield Robertson Bursary***

This bursary is awarded to a mature female student in Second or Third Year of Law School, who has achieved a satisfactory academic standing and engaged in extracurricular activities at Law School.

#### ***The George W.W. Ross Memorial Scholarship***

This endowed scholarship, established in memory of the late George W.W. Ross by his family, is awarded annually by the Faculty of Law to a law student entering second year who has placed in the top third of his or her class and who, in the opinion of the Faculty, is deserving of financial assistance.

#### ***Schulich Scholarships - For Students in their 2nd or 3rd year of study***

In 2009 philanthropist Seymour Schulich generously donated \$20 million to Dalhousie Law School in recognition of the excellence of the education offered at the institution since 1883. In recognition of Mr. Schulich's support, Dalhousie Law School was renamed the Schulich School of Law. Students are major beneficiaries of the donation. The greatest portion of the Schulich gift is dedicated to new scholarships, including 24 annual scholarships averaging \$12,000 each. Students will be asked to apply annually in the fall. Each applicant will be evaluated on two of the following criteria: academic merit, financial need, and community service/entrepreneurial talent. Students must indicate in their application the two criteria for which they wish to be considered, and supply the requested documentation relevant to those criteria on the Schulich School of Law Scholarship Application Form.

#### ***The James Spurr Environmental Law Bursary***

James Spurr, an alumnus of Dalhousie University, donated \$25,000 to establish a Bursary in his name at the Schulich School Of Law. The Bursary is to provide one or more annual bursaries to undergraduate law students whose focus is in the area of environmental law. The award may go to a Second or Third year student who demonstrates financial need.

#### ***The Gordon S. and Mary C. Walker Memorial Bursary***

An endowment fund was established to provide financial assistance from the net annual income to one or more students. The fund is a gift from the Estates of Gordon S. and Mary C. Walker. The late Mr. Walker was the owner of Walker Financial Company, the last privately owned bank in Canada, situated in Port Hawkesbury, N.S.

#### ***The Grace Wambolt Scholarship***

This award is open to a person born in Nova Scotia to assist one or more students in any year of law at Dalhousie. The assessment criteria consist of academic performance and financial need. A winner may be reconsidered in subsequent years of the law program. Where two students qualify equally and one is a woman, preference is to be given to the woman. The fund was established in 1978 by Grace Wambolt, the fifth woman to have graduated from the Faculty of Law at Dalhousie University. She was the first woman to have been elected to the Council of the Nova Scotia Barristers' Society and the first woman to be awarded a certificate for 50 years of active service at the Bar of Nova Scotia.

#### ***The Prudence Watson Memorial Bursary in Law***

The Prudence Watson Memorial Bursary was established by Blake, Cassels & Graydon LLP in Toronto to honour the contribution and memory of Prudence Watson, who was an exceptional lawyer and person. The award will go to a mature law student who has demonstrated financial need and academic achievement.

## **IV. Faculty of Medicine**

### **A. Scholarships**

The Medical Admissions Committee is responsible for the selection of entering scholars. The prescribed application form will be made available by the Admissions and Student Affairs Office, to all accepted applicants. The Scholarships & Awards Committee of the Faculty of Medicine is responsible for the selection of in-course scholars. Applications are made available to students in early August each year.

### **B. Entrance Scholarships and Bursaries**

A variety of scholarships and bursaries are offered to all students who have been offered a place in Medicine. There are varying residence requirements. While selection depends primarily upon scholastic ability, the Admissions Committee may go beyond this in making bursary awards. The deadline to submit entrance scholarship applications will be posted on the Admissions website by the end of June each year.

The awards are made in early October, subject to the acceptance of the applicant by the University for admission to the first year of the medical class in the year of award, and her/his registration as a student at the regular date in August.

### **1. Scholarships/Bursaries Limited to or Preference Given to Residents of the Three Maritime Provinces**

#### ***The A.R. Mearle Smith Bursary***

A bursary or bursaries to be presented to a student(s) who has or have graduated from Bathurst High School who, having completed the first year in the Faculty of Medicine, is or are enrolled on a full-time basis in the second or a subsequent year in the faculty.

#### ***Dr. R.M. Pendrigh Scholarship***

The income from an endowment to be awarded to the student from New Brunswick who, in the opinion of the University, has demonstrated need and merit with preference given to students who reside in West Saint John, New Brunswick

#### ***James A. Wardrope Entrance Scholarship***

This scholarship was endowed by the late Dr. M.J. Wardrope in memory of his son. The scholarship is to be awarded to a student of high standing entering the first year of Medicine at Dalhousie University.

#### ***The Dr. A. Gaum Bursary***

This bursary, in memory of Dr. A. Gaum of Sydney, Cape Breton is to be awarded to an entering medical student who has demonstrated financial need, with preference to be given to residents of Cape Breton.

#### ***Jogindar Majhail Memorial Bursary***

A bursary to provide financial assistance to a first year medical student who has demonstrated financial need and satisfactory academic standing. This bursary will be renewable as long as the recipient continues to meet those criteria through four consecutive years of his/her MD degree.

#### ***Dr. J.J. Carroll Scholarships***

In memory of Dr. J.J. Carroll, the earnings from the fund will be used annually to provide entrance scholarship(s) to students enrolled in the Faculty of Medicine at Dalhousie University. These scholarships will be renewable at the same rate for years two and three of study in the MD program provided that the recipient(s) maintains satisfactory academic standing. Preference will be given to applicants who are residents of Eastern Nova Scotia.

### ***The Alan Tarshis and Nancy Goodman Scholarship in Medicine***

A scholarship for an entering student who has demonstrated all round excellence in both academic and non-academic pursuits and demonstrates financial need.

### ***John Stewart Memorial Scholarship***

To provide an entrance scholarship to a Nova Scotia student from the Indigenous Black or First Nations communities who has been offered admission to the Faculty of Medicine.

### ***Dr. D.A. Gillis Entrance Scholarship***

This scholarship in honour of Dr. D.A. Gillis was established by Faculty members of the Department of Surgery, Dalhousie University. This award is to be given to a student from the Maritime Provinces on the basis of all-round excellence of the candidate, including both academic and non-academic factors.

### ***Leslie Ann Campbell Entrance Scholarship***

This memorial award will be given annually to a resident of Nova Scotia. The recipient will have demonstrated satisfactory academic standing and financial need. The award will be renewable for years two through four of the academic program, provided the recipient maintains satisfactory academic standing and demonstrates continued financial need. While this award is being held on a continuing basis, it will not be available as an entrance scholarship.

### ***Krishan Parkash Gopal Memorial Bursary***

A bursary to provide financial assistance to a first year medical student who has demonstrated financial need and satisfactory academic standing. This bursary will be renewable as long as the recipient continues to meet those criteria through four consecutive years of his/her MD degree.

### ***Dr. John Quinlan Memorial Bursary***

This fund has been established in memory of Dr. John J. Quinlan and is to be awarded to a student(s) from the Maritime Provinces entering Dalhousie University Medical School. The recipient(s) will have demonstrated financial need and satisfactory academic standing. The recipient may retain the bursary in year two of the program leading to the degree of Doctor of Medicine.

### ***The Barbara L. Blauvelt Entrance Bursary***

This bursary, in honour of Barbara L. Blauvelt, a forty-five year employee of Dalhousie, is to be awarded to a student from the Maritime Provinces in financial need. The award is to go to the student who is not in the top 25% of the applicants accepted into the program.

### ***Canaport LNG Bursary DMNB***

To provide a renewable bursary for an undergraduate medical student to complete four years of study while enrolled in the DMNB Medical Education Program located on the UNBST campus. The intention of the bursary is to assist the student in covering the costs of tuition. Student fees are well as the average cost of rooms and board. The recipient may retain the bursary in years two, three and four of the program.

### ***Dalhousie University Entrance Scholarships***

Limited funding is also available annually for disbursement by the Committee to deserving students.

### ***Hannah and Thomas Casey Memorial Bursary***

A bursary to support one or more annual bursaries for students enrolled in the Doctor of Medicine (MD) Program. They must demonstrate financial need and first priority will be given to students from Glace Bay and other areas of Industrial Cape Breton.

### ***Max & Etta Epstein Memorial Bursary***

To provide one or more bursaries for full-time undergraduate medical students who demonstrate financial need and satisfactory academic standing. First preference will be given to students from Cape Breton.

## **2. Scholarships/Bursaries Open to All Entering Students**

### ***Etta and Frederick Ross Memorial Bursary***

A fund has been established by Dr. James F. Ross in memory of his parents, the income of which is to be used to enable a deserving student to attend the Faculty of Medicine at Dalhousie University.

### ***Dalhousie Medical Alumni Association Entrance Scholarship***

This scholarship, established by the Dalhousie Medical Alumni Association, is to be awarded to an entering student on the basis of all-round excellence both academic and non-academic.

### ***Florence Fear Davies, R.N. Memorial Scholarship***

To provide an annual scholarship in the faculty of Medicine for a first year medical student, with preference given to a female student. Applications for extension of this award beyond the first year may be considered if the student has maintained satisfactory academic standing and has shown qualities of dedication and compassion. The scholarship may be renewed if the student has maintained satisfactory academic standing and may be in financial need.

### ***Joseph Fear Memorial Scholarship***

To provide an annual scholarship in the Faculty of Medicine for a first year Medical student. The Scholarship may be renewed if the student has maintained satisfactory academic standing and has shown qualities of dedication and compassion and may be in financial need.

### ***Dr. E. James Gordon Scholarship***

This fund, in memory of Dr. E. James Gordon who graduated from Dalhousie in 1941, will be used annually to provide an entrance scholarship to a student enrolled in the Faculty of Medicine. The recipient will have demonstrated all-round excellence in both academic and non-academic factors.

### ***Halifax Medical Society Entrance Scholarship***

Through the generosity and support of the physicians in the Halifax Medical Society, an Entrance Scholarship was established to recognize academic excellence, extracurricular activities, leadership and personal qualities. Need will also be one of the elements that may be considered along with the qualities of excellence.

### ***Dr. R.C. Robb Memorial Scholarship***

This fund is to be used annually to provide a scholarship for a student entering the program leading to the Doctor of Medicine degree. The recipient will have demonstrated high academic standing.

### ***Karen B. Sheehan Scholarship***

To provide one or more scholarships annually for deserving medical students enrolled in the Doctor of Medicine program

## **C. Medals, Prizes and In-Course Scholarships**

### ***Bessie S. Stewart Scholarship***

A scholarship to a student attending Dalhousie Medical School who intends to become a medical missionary and who in the opinion of the Faculty of Medicine shows the attributes of human concern and academic ability.

### ***Ernest Albert Mills Bursary***

A bursary to be awarded to a student who is a resident of Annapolis County, Nova Scotia and who demonstrated financial need and satisfactory academic progress.

### ***Dr. C.B. Stewart Gold Medal in Medicine***

This medal is awarded annually, on graduation, to the student standing highest in the regular medical class who has reached the high standard set by the Faculty for that purpose.

### ***MD with Distinction***

This honour is awarded to students who have, on graduation, reached a high standard set by the Faculty for that purpose.

### ***The A.B. Wiswell Scholarship***

This scholarship, established by the late Dr. A.B. Wiswell of Halifax, is to be awarded to a student completing the first year of the regular medical

class. Character and financial need are to be considered, but the standing of the candidate in his class is the primary consideration.

#### ***Dr. Clara Olding Prize***

This prize, the interest of an endowment, given by the late Dr. A.M. Hebb, of Dartmouth, as a memorial to his wife, is awarded annually to the graduating student achieving the highest standing in the clinical years, character and previous scholarship being taken into consideration.

#### ***Dr. John F. Black Prize***

This prize, from the income of a bequest by the late Dr. John B. Black, a former Professor of Surgery, is awarded at the completion of the fourth year to the student who reaches the highest standing in Surgery.

#### ***Kidney Foundation of Canada, Dr. Allan D. Cohen Memorial Prize in Nephrology***

Awarded annually to the member of the graduating class who has shown the greatest aptitude in clinical nephrology during his or her medical education.

#### ***The Dr. Mark J. Cohen Prize in Ophthalmology***

The recipient shall be selected based on the student who, in the opinion of the Division of Ophthalmology, shows the most promise to be an outstanding clinician. The Recipient shall be the highest ranked student pursuing Ophthalmology, as per the criteria of the resident selection committee that interviews Ophthalmology applicants.

#### ***Andrew James Cowie, MD Memorial Medal***

This medal, founded by the late Miss Florence J. Cowie in memory of her father, is awarded each year to the member of the fourth-year class having the highest standing in Obstetrics, provided his/her standing in other subjects is sufficiently high to justify an award.

#### ***The Dr. J. Donald Hatcher Award***

Through funds donated in honour of Dr. J. Donald Hatcher on his retirement as Dean of the Faculty of Medicine, an endowment fund has been established to finance an annual award to the final year undergraduate medical student, who at graduation is considered to have carried out the most meritorious and significant research project during the undergraduate program including summer electives.

#### ***Dr. Richard B. Goldbloom Award in Paediatrics***

The award consisting of a medal and a monetary prize is to be given annually to the graduating medical student "who shows the most outstanding combination and balance of scientific medical knowledge, clinical skill and sensitivity to the social and emotional needs of children and their families".

#### ***Hunter Humanities Award***

This award, is to be awarded to a senior student who has successfully completed all the requirements for the degree of Doctor of Medicine, and has made an outstanding contribution in the area of medical humanities, and demonstrated the humanistic qualities of caring and compassion in his/her care of patients.

#### ***The Dr. Juan A. Embil Award for Excellence in Infectious Diseases Research***

This prize is awarded to the graduating student who has completed the best research project in Infectious Diseases during his/her four years of medicine. The goal of the prize is to stimulate and encourage interest and excellence in Infectious diseases and Medical Research.

#### ***The Dr. Lourdes I. Embil Award for Cardiovascular Research***

Awarded to a graduating student who has completed the best research project in cardiovascular diseases during his/her years in the MD program.

#### ***Dr. J.C. Wickwire Award***

This award, established by Dr. J.C. Wickwire, is to be awarded to the graduating student who has displayed high competence in Patient Contact over the four year class.

#### ***Poulenc Prize***

A prize, given by Poulenc Limited, will be awarded to the graduating student standing highest in the final examination in Psychiatry in the fourth year.

#### ***Dr. Robert C. Dickson Prize***

A prize is awarded to the student at the completion of fourth year who has had the highest standing in all examinations in Medicine in Second, Third and Fourth Years.

#### ***The Dr. N.N. Isa Achievement Award***

Awarded to the graduating student who excels during his/her core rotation in the Department of Obstetrics & Gynecology at the Saint John, NB location.

#### ***Dr. John W. Merritt Prize***

A prize given by Mrs. Merritt in memory of her husband, Dr. John W. Merritt, Associate Professor of Surgery. This prize is offered to the student standing highest in Surgery throughout the four years in medicine.

#### ***The Dr. Morris Jacobson Prize***

Awarded to a graduating student who has demonstrated a strong aptitude and interest in rural Family Medicine.

#### ***The Dr. R.O. Jones Prize in Psychiatry***

This prize in memory of Dr. R.O. Jones is to be awarded to the new graduate who has achieved the highest grade in Psychiatry for the four years in medical school.

#### ***Dr. Leo Horowitz Prize in Diagnostic Radiology***

A prize, established by Dr. Leo Horowitz, is to be presented at graduation to the fourth year student judged by the Department of Radiology, to have shown the greatest interest and greatest degree of inclination towards the study of Radiology.

#### ***Dr. W.H. Hattie Prize in Medicine***

A prize presented in memory of the late Dr. Hattie, will be awarded at the completion of fourth year to the student who achieves the highest standing in Medicine.

#### ***Dr. Frank G. Mack Prize in Urology***

An annual prize presented in memory of the late Frank G. Mack, Professor of Urology (1922-1950). The prize is to be awarded by the Department of Urology to the fourth-year student achieving excellence in Urology.

#### ***Dr. Lawrence Max Green Memorial Award***

This award to be presented to the student who, during his/her clerkship in obstetrics and gynecology, has best displayed the characteristics of compassion and clinical competence. Selection of this student is the responsibility of the Department of Obstetrics and Gynecology.

#### ***Dr. S.G. Burke Fullerton Award***

An award to be given to the graduating medical student who shows the greatest promise in Family Medicine.

#### ***Dr. Harold Ross McKean Award in Ophthalmology***

This prize, in memory of Dr. Harold Ross McKean, is to be awarded annually to a fourth year medical student, who has demonstrated the highest skills in Ophthalmology Clerkship.

#### ***Dr. Ram Singari Boodoosingh Memorial Prize***

An annual book prize awarded to a graduating medical student who with clinical skill and a sense of humour, most brings art to the practice of medicine.

#### ***Dr. Robert F. Scharf Award in Emergency Medicine***

Awarded annually to a graduating student who had demonstrated an outstanding combination of clinical ability, motivation and professionalism in Emergency Medicine throughout the undergraduate curriculum.

#### ***Department of Surgery Prize***

A prize is awarded to the student at the end of fourth year with the highest standing in the final examinations in surgery.

#### ***Dr. Michael Brothers Memorial Prize in Neuroscience***

An annual prize to a student graduating from the Dalhousie Medical School who has demonstrated an aptitude in the Neurosciences.

#### ***Albert A. Schwartz Prize in Orthopedics***

An annual prize awarded to a graduating medical student who has demonstrated aptitude and excellence in Orthopedics.

***The Emerson Amos Moffitt Research Prize for Undergraduate Research in Anaesthesia***

Awarded to a graduating student who has completed a research project in Anaesthesia which was considered meritorious by the Executive Council of Dalhousie University Department of Anaesthesia.

***Esther Strug Memorial Scholarship***

Established by Morris Strug, in memory of his wife, Esther Strug to support an annual scholarship for a student entering third or fourth year of the Doctor of Medicine (MD) Program.

***Guggisberg Memorial Bursary in Medicine***

To provide named bursaries to encourage MicMac and/or Maliseet students to study Medicine. Awards will be made on the basis of the CANDO principled: Character, Ability, Need, Determination, Others, concern for.

***Dr. Oswald Avery Award in Medicine***

This award has been established to honour the accomplishments of Dr. Avery by supporting an annual prize to a resident, medical student or graduate student who is judged to have produced an outstanding paper related to genetics research.

***Dr. I.M. Szulzer Award for Excellence in Undergraduate Internal Medicine***

This award, in memory of Dr. Irene Szulzer, is to be given to a 4th year student, who during their 3rd year of clerkship in Internal Medicine during their MTU rotation best demonstrates personal and academic qualities exemplified by Dr. Szulzer.

***Dr. Leonard, Kay and Simon Levine Scholarship***

To provide a scholarship for a 4th year med student pursuing studies in Family Medicine.

***Dr. E.R. Ross Prize in Pediatric Surgery***

Dr. Edwin Ross was a professor Emeritus in the Department of Surgery. During his 70-year affiliation with Dalhousie, Dr. Ross was instrumental in initiating Dalhousie's continuing medical education program and played a pivotal role in planning the IWK Children's Hospital. He was the Surgeon-in-Chief of the Halifax Children's Hospital from 1957-1962. This prize recognizes a medical student or resident who illustrates an aptitude and/or interest in pediatric surgical care.

***McNee Prize in Anatomy and Neurobiology***

To provide an annual award to a graduate student requiring financial assistance with his/her research studies in the Department of Anatomy & Neurobiology. This recipient is to be chosen on the basis of academic excellence and financial need.

## **D. University Prizes**

***William Isaac MacDougall Scholarship Fund***

Under the will of the late Andrena Frances MacDougall, a fund was set up to provide "scholarships in the Medical School of the University." Further particulars of the terms and conditions of this award may be obtained from the Dean.

***Charles E. Frosst Scholarship***

This award, contributed by Charles E. Frosst and Company of Montreal, is awarded annually at the completion of the third year to a student entering the fourth year who has shown general proficiency throughout the class.

***Dr. Joan Crosby Scholarship***

A scholarship, established by a group of parents in honour of Dr. Joan Crosby for her exceptional dedication to the care of children. It is awarded to two deserving medical students in the third year of study.

***The Dr. Harry Poulos Prize***

This prize is to be awarded to the second year student in the Faculty of Medicine who has the highest standing in Psychiatry.

***The R.S. Smith Medical Scholarships***

By Deed of Gift and subsequent generous bequests, Dr. James Ross Smith and his wife, Eliza Cochran Smith, established an endowment as a memorial to their son, Ross Stewart Smith. A portion of the Fund's annual income is to be expended in the form of general scholarships to students in

the MD program upon such conditions as the Faculty of Medicine, from time to time, may prescribe.

***Harold Barnett Prize***

Dr. Harold Barnett graduated from the Faculty of Medicine at Dalhousie University in 1983. A Scholarship will be awarded annually to the student who has attained the highest standing in the Physiology component of the Metabolism & Function unit.

***Arthur F. Icton Memorial Scholarship***

This scholarship, in memory of Arthur F. Icton, is to be awarded to a student in the Faculty of Medicine who is competing in the athletic program at the varsity level. The scholarship will be renewed for a subsequent year should the recipient continue to qualify under its terms.

***Philips Award in Family Medicine***

To support a medical doctor (MD) from the Dalhousie Faculty of Medicine in his/her residency, who plans to pursue a career in rural Family Medicine and exhibits financial need. First priority will be given to applicants from Prince Edward Island, but if no one meets the criteria, other residents pursuing a career in Family Medicine and exhibiting financial need will be considered.

***Dr. Mabel E. Goudge Prize***

The prize, established by the late Dr. Mabel E. Goudge, is to be awarded to the top female medical student in each year.

***Dr. Carl K. Pearlman Prize in Urology***

An annual award presented to the student in the fourth year judged by the Department of Urology as having the greatest aptitude and interest in Urology.

***Morris and Sarah Gold Award***

This award is to be presented to an undergraduate medical student who most distinguishes himself in the field of medical literature.

***The L.B. MacPherson Memorial Award***

This prize in Medical Biochemistry is awarded to an undergraduate medical student who has shown the greatest competency in the Biochemistry component of the undergraduate medical curriculum.

***The Annie Hamilton Scholarship***

In honour of the first female graduate in medicine and Master of Surgery in Nova Scotia (MD 1894), this fund provides an annual scholarship to a second year medical student.

***Dr. J.V. Graham Prize***

A prize, the income of a bequest by the late Dr. J.V. Graham, will be awarded to a student at the end of the second year who has attained high standing in the first and second year Anatomy class.

***Dr. Forest W. Fyfe Scholarship***

Awarded annually to a student entering the second year of studies leading to the MD degree who has achieved an excellent standard of performance in first year Anatomy.

***Dr. Kenneth Hall Memorial Psychiatry Prize***

An annual prize to honour the memory of Dr. Kenneth Hall. The prize will be awarded to the third year medical student with the highest mark in Psychiatry.

***Professor John Cameron Prize in Anatomy***

This prize is the interest on an endowment given by the late Dr. John Cameron, former Professor of Anatomy. It is awarded to the student who attains the highest marks in Anatomy.

***Roberta Bond Nichols Memorial Prize***

This prize represents the interest in a fund initiated by the Nova Scotia Branch of the Federation of Medical Women of Canada as a memorial to Dr. Roberta Bond Nichols, and is awarded annually to the female medical student who achieved the highest standing in Anatomy.

***Dr. Donald S. Robb Memorial Award***

Awarded annually to a student who has completed the third year of study leading to the MD Degree and has demonstrated excellence in patient contact and satisfactory academic progress.

**Dr. Graham Gwyn Memorial Prize in Neurology**

This prize, in memory of Dr. Graham Gwyn, a distinguished Professor, and Head of the Department of Anatomy, is to be awarded to the student in fourth year who expresses interest and achieves excellence in neurology. The recipient must be recommended by the clinicians involved in teaching and supervising said student.

**Lange Book Awards**

Lange Medical Publications offers book awards to one outstanding student in either first, second or third year and one to a graduating student.

**Dalhousie Medical Students' Society Prize**

Four prizes of books are awarded annually to students of the second, and fourth years in Medicine upon application to the Dalhousie Medical Students' Society. Financial need, academic standing, and activity in student affairs are considered.

**The Dr. I. Roy Gold Endowment for Medical Journalism**

Established by Mrs. Babs Gold, widow of the late Dr. I. Roy Gold, MD 1938, this fund provides an annual stipend to the student who serves as Editor of the Dalhousie Medical Journal. Dr. Gold was the founder and first editor of the journal, established in 1936.

**The Max Forman Research Prize**

This prize awarded by the Dalhousie Medical Research Foundation recognizes excellence in medical research with the aim of promoting and encouraging its pursuit in the Faculty of Medicine, Dalhousie University. The Max Forman Research Fund honours the memory of Mr. Forman, a successful Halifax businessman and philanthropist who cared about the community in which he lived. The Max Forman (Junior) Prize, awarded every other year, is open to all junior investigators including graduate and PhD students, residents and fellows. For further information, visit the Foundation's web site at <http://www.dmr.f.ca> or contact the office at 494-3502, 5850 College St., Ste 1-A1.

**Cynthia Davis Fund in the Medical Humanities**

In honour of Mrs. Cynthia Fuller Davis, an award given to a medical student who is chosen as the best writer. It is to encourage and reward writing which illuminates the human condition in the areas of mental, physical or spiritual health or disease.

**Dr. James S. Hammerling Prize in Otolaryngology**

The award will be given to the successful medical student who engages in innovative research or participates in an important, innovative project related to Otolaryngology during the summer between the second and third year of medical school.

**The George K. Mattar Medical Research Fund**

To honour George K. Matter, to provide a Research Prize to be awarded each fall to the medical student producing the best research paper during the course of the preceding summer.

**E. Bursaries**

It is necessary to apply for these awards. Information may be obtained at the Office of the Dean of Medicine or at the Finance Office. Please refer also to the general financial section of this calendar. Bursaries are awarded in January.

**Dr. Richard Goldbloom Medical Scholarship**

Awarded annually to a first year medical student who demonstrates financial need.

**The IODE John Stewart Chapter Bursary**

A bursary awarded to a Nova Scotia student who at the completion of the second year shows proper academic standing and need of financial assistance.

**J. Randolph Murchison Memorial Bursary**

A bursary donated in memory of the late J. Randolph Murchison of Prince Edward Island is to be given to a needy medical student from Prince Edward Island.

**The Dr. Walter Templeman Bursary**

The income from this endowment is to be awarded to a needy medical student.

**The Barbara Blauvelt Bursary in Cardiovascular Studies**

This bursary, in honour of Barbara L. Blauvelt, a forty-five year employee of Dalhousie, is to be awarded to a fourth-year medical student who has excelled in Cardiovascular studies. The applicant must supply a one-page summary expressing his/her interest in the Cardiovascular system and two (2) references.

**Dr. and Mrs. Edward Murray MacDonald Bursary**

This bursary, in memory of Dr. and Mrs. Edward Murray MacDonald, is awarded to a first-year medical student who is a resident of Cape Breton. The student must demonstrate financial need.

**The Dr. Hector J. Pothier Bursary**

A bursary donated in memory of the late Dr. Hector J. Pothier of Beaver River, Nova Scotia, is to be given to a needy student in medicine who has expressed an interest in spending time as a family physician in a rural community.

**The Charles J.W. Hinman Memorial Bursary**

A bursary which was established to assist an undergraduate medical student of any year in the Faculty of Medicine who demonstrates satisfactory academic progress and who provides to the Faculty clear evidence of the need for financial assistance.

**The Dr. Elizabeth Catherine Weld Memorial Bursaries**

A bursary or bursaries awarded each year to medical students of any year with preference to be given, but not restricted to, minorities and those in need.

**Order of the Eastern Star, Halifax Chapter 7 - Medical Student Bursary**

A bursary to be awarded to medical student in financial need.

**Marion E. and Frank A. Seaman Bursary**

This bursary, in memory of the late Marion E. and Frank A. Seaman, is to be awarded to a student who has completed the first year of medicine. The primary considerations are to be need and scholastic standing.

**Georgina M. Odell Bursary Award**

This award, in memory of Georgina M. Odell, is to be awarded to a needy medical student(s) by the Financial Aid Committee of the Faculty of Medicine. In the event that all the income is not disbursed in any one year, the same may be accumulated that year or from year to year to be paid out as bursaries in subsequent years if required for that period.

**The MD Class of 1971 Memorial Bursary Fund**

Established in memory of deceased classmates, this fund provides an annual bursary to a medical student in good standing who demonstrates financial need.

**Class of 73 Silver Anniversary Fund**

To commemorate the 25th Anniversary of the MD class of 73 by establishing a fund which will support an annual bursary for one or more students enrolled in year one or two of the Doctor of Medicine degree program. The student(s) selected will have demonstrated financial need and satisfactory academic standing.

**Dr. Philip A. Cole Bursary Fund**

In honour of Dr. Philip A Cole (MD '45) to assist undergraduate students in the Faculty of Medicine who are in financial aid, and have demonstrated solid academic ability.

**Dr. Rosemary Gill Memorial Bursary**

A bursary in memory of Dr. Rosemary Gill, to provide financial assistance to students enrolled in the Faculty of Medicine who have demonstrated financial need.

**C.E. Kinley Lectureship Fund**

To honour Dr. Kinley, a bursary will be awarded annually to support a student who is Native Canadian or is of African Canadian descent, or if no such recipients in any given year, a qualified and deserving student.

**Dr. and Mrs. S.T. Laufer Bursary Fund**

To support one or more annual bursaries for students enrolled in the Doctor of Medicine (MD) Program.

**Dr. David Gaum Memorial Bursary**

A bursary honouring Dr. David Gaum to provide financial assistance to a medical student in his/her four years who has demonstrated financial need while pursuing his/her Medical Doctorate (MD) Degree.

**The DS & FL Coombes Award in Medicine**

To provide financial assistance to one or more Medical students in his/her final year who has demonstrated financial need while pursuing his/her Medical Doctorate (MD). The award will alternate annually between male and female recipients.

**Feng Chi and Yu Chuan Yoh Bursary in Medicine**

An annual bursary to be awarded to a student enrolled within the Faculty of Medicine, based on financial need.

**Dr. Ian & Marjorie MacDonald Bursary in Medicine**

A bursary established by Dr. Margaret Casey in memory of her parents, Dr. Ian and Mrs. Marjorie MacDonald to support one or more bursaries to students enrolled in the Doctor of Medicine Degree Program.

**International Health Electives Bursary**

Established by the Medical Class of '72, to support one annual bursary for students enrolled in the Doctor of Medicine (MD) Program.

**\$50 for Life Student Medical Bursary**

To provide financial support for undergraduate medical students in any year of study.

**David L. MacIntosh Bursary**

To provide on or more bursaries to first and second year undergraduate medical students enrolled in full-time studies in the Doctor of Medicine (MD) Program.

**Dr. Chester B. Stewart Memorial Bursary Fund**

To provide one or more annual bursaries for students enrolled in the Doctor of Medicine (MD) Program.

**Dr. C.T. Gillespie Bursary Fund**

To provide financial assistance to a medical student who is enrolled in the first year of the program leading to the degree of Doctor of Medicine (MD) at Dalhousie University.

**Alpha Eta of Phi Rho Sigma Bursary in Medicine**

To support two annual bursaries for students enrolled in the Doctor of Medicine (MD) Program at Dalhousie University. The fund was established by the alumni of the Alpha Eta of Phi Rho Sigma and Honorary Members Society as a tribute to the role this medical society played in the lives of generations of medical students at Dalhousie University.

**Dr. Wanita Lopeter Memorial Bursary**

To honour the memory of Dr. Wanita Lopeter by providing one or more annual bursaries to a second year medical student at Dalhousie University.

**Irwin J. Nudelman, MD, Medical Bursary**

To support a first year medical student enrolled in the Doctor of Medicine degree program at Dalhousie University. The recipient will be chosen solely on financial need.

**George and Rusina Loh Medical Bursary**

To support one or more undergraduate students enrolled in the Doctor of Medicine (MD) Program at Dalhousie University who exhibit financial need.

**Dr. Richard and Lynne Winter Bursary**

To support an annual bursary for a deserving student enrolled in the Dalhousie Medical New Brunswick Program in memory of Lynne (Lordly) Winter. Dr. Richard Winter graduated from Dalhousie Medical School in 1958. He interned at the Saint John General Hospital in 1957-58. He was a resident at the Victoria General Hospital in Halifax from 1960-63. After obtaining his FRCS(C) in 1964, he practiced Ob/Gyn at the Royal Alexandra Hospital in Edmonton, Alberta. He was an Ob/Gyn Clinical

Professor at the University of Alberta from 1964-1994 and Chief of Ob/Gyn at the Royal Alexandra Hospital from 1983-1991. Mrs. Lynne Winter was a graduate of the Victoria General Hospital School of Nursing in 1956.

**Canaport LNG Bursary DMNB**

To provide a renewable bursary valued at no less than \$35,000 per year (\$140,000 over four years) for an undergraduate Medical student to complete four years of study while enrolled in the DMNB Medical Education Program located on the UNBSJ Campus (or successor campus). The intention is the financial support will assist the student in covering the costs of tuition, student fees as well as the average cost for room and board. The first bursary will be awarded to a student entering Medical School in 2010-11.

**Amgen Canada Dalhousie Medicine New Brunswick Award**

To support students in the DMNB Medical Education Program located on the UNBSJ Campus. Students can apply for one of three scholarships, awarded as first, second and third place awards, for scholarly activity in their student elective experiences or individual initiatives in first or second year (\$3,000, \$1,500 and \$500) based on a maximum 500 word abstract submission.

**F. Financial Aid****The John George and Emily MacDougall Bursaries**

Under the terms of the will of the late Doctor John George MacDougall, formerly a senior surgeon of the Faculty of Medicine and at the Victoria General Hospital, a perpetual trust fund was established, the income from which is to be used for "such deserving persons who being undergraduates of the Medical School of Dalhousie are most entitled to assistance on the grounds of worth and necessity."

**Dr. Annie Anderson Gilchrist Dickson Bursary Fund**

This bursary is in memory of Dr. Annie A.G. Dickson, a graduate of Dalhousie University who was prominent in public health work. It is to be awarded annually to a third year female medical student at Dalhousie University who has demonstrated financial need. If, in any given year, there are no female applicants the bursary may be awarded to a third year male medical student.

**G. Faculty of Medicine Student Assistance Program**

Medical students may apply for a bursary through the Financial Aid Program. Application forms and guidelines are available through the Finance Office in the Office of the Dean of Medicine.

Bursary awards are usually issued in January of each year. A second round of applications may be accepted in January for awards in March if funding is available.

**H. Loan Funds****Maude Abbott Memorial Scholarship Loan Fund**

Information regarding these loans, to female medical students, may be obtained from: The Secretariat, Federation of Medical Women of Canada, CMA House, 1867 Alta Vista Drive, P.O. Box 9502, Ottawa, Ontario, K1G 3U2

**I. Postgraduate Fellowships & Scholarships****Dalhousie Medical Research Foundation Fellowships**

Fellowships are available to medical graduates or graduates of recognized Ph.D. programs to undertake postgraduate training at Dalhousie in basic or clinical science for a period of one to three years. The level of support will be determined by the Medical Research Council of Canada's scale of pay for MD's, based on the number of years of postgraduate training. Preference will be given to candidates who have potential to contribute to academic medicine in the Maritime provinces of Canada. Fellowship competitions are generally held in April each year but deadlines will vary. To obtain a current schedule of competitions, terms of reference and applications visit the Foundation's homepage at <http://www.dmrp.org> or contact the Dalhousie Medical Research Foundation, Sir Charles Tupper Medical Building, College Street, Halifax, Nova Scotia, B3H 4H7 or by calling (902) 494-3502.

### ***Killam/Ross Stewart Smith Fellowships/Scholarships***

Applications and regulations for the following three awards can be obtained from the Admissions Office, c/o Ms. Christine Silver Smith, Room C-126, Lower Level, Clinical Research Centre, 5849 University Avenue, Halifax, Nova Scotia, B3H 4H7 telephone number (902) 494-1885. The deadline for submission of these applications for consideration by the Scholarships and Awards Committee is November 30th.

### ***Killam Postgraduate Medical Scholarships***

These scholarships were established by the late Mrs. Izaak Walton Killam. They are awarded to postgraduate students in the third, fourth, or fifth year of training in a clinical department of the Faculty of Medicine, Dalhousie University or elsewhere. Selection by the Faculty Awards Committee is based on the recommendation of the department head that the candidate is likely to contribute to the advancement of learning or to win distinction in his/her specialty and could be recommended for appointment to the faculty of a medical school on completion of training.

### ***The Ross Stewart Smith Memorial Fellowship in Medical Research***

This Fellowship, being a portion of the income from a generous bequest to Dalhousie University, was established by Dr. James Ross Smith and his wife, the late Mrs. Eliza Cochran Smith, as a memorial to their son, Ross Stewart Smith, who died while attending Dalhousie. It is open to students of exceptional ability following graduation from the Faculty of Medicine, Dalhousie University. The research may be in clinical medicine or in the basic medical sciences.

### ***Family Medicine Fellowship***

A one year Fellowship position is available with the Department of Family Medicine for an individual completing Family Medicine residency training at Dalhousie University. The position must be initiated and designed by the incumbent to meet his/her particular requirements. Five 1/2 days per week clinical with approximately \$40,000-45,000 per year. The remaining five 1/2 days/week could be used for work in an area of special interest, i.e. Women's Health, Sports Medicine, etc. The individual must have C.C.F.P. and a full license to practice in Nova Scotia. If interested, or for further inquiries, please contact: Lynn Pope, Residency Training Coordinator (902) 473-4749 (lynn.pope@dal.ca)

### ***Dr. B.L. Jewett Memorial Prize***

The recipient will be the post graduate Resident judged to have presented the best clinical or basic science research paper on a topic related to head and neck surgery at the annual Dalhousie Residents' Research Day Competition. Eligibility would include (but not be restricted to) residents in Otolaryngology, Ophthalmology, Plastic Surgery, General Surgery, Neurosurgery, Oral Surgery, and Surgical Oncology. The selection of the recipient will be made by the judges who review and evaluate the presentations. The amount of this prize is \$500.

### ***Transfusion Medicine Fellowship***

The aim of the Transfusion Medicine Fellowship is to make available one or two years of support for physicians in Canada to acquire training in Transfusion Medicine through exposure to the work carried out in the Red Cross Blood Centres. It is intended that successful candidates will have some commitment to transfusion medicine in their future career plans. The Fellowship offers a stipend based on the current level of housestaff salaries appropriate to the level of training provided for in the provincial scale of the province in which the Fellowship is awarded, as well as a first year research and travel allowance of \$10,000. The number of awards will be no more than two in any year. Candidates must be in the final year of preparation for certifying examinations by the Royal College of Physicians and Surgeons, or should be newly qualified in a specialty of the Royal College. Priority will be given to those with interest and experience in the areas of infectious diseases, epidemiology, public health and blood utilization. Applications are available from Medicine Research Services, Room, C-202, CRC Building, 902-494-1887 (carla.ross@dal.ca).

## **J. Research Fellowships**

### ***Foundation Fellows***

These fellowships are available to medical graduates or graduates of recognized PhD programs to undertake postgraduate training at Dalhousie in basic and clinical science for a period of two to three years. Support will also be extended to postdoctoral fellows already at Dalhousie

when such support would advance research in the Faculty of Medicine and the research programs of a faculty member. Preference will be given to candidates who have potential to contribute to academic medicine in the Maritime provinces of Canada. The level of support will be determined by the number of years of training following graduation based on MRC scales for fellowships (for PhD's) or on resident scales of pay for MD's. Deadline for receipt of applications is 1 May and 1 October or as funds and circumstances permit.

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