

## ***Appendix C: Current Programming, Enrollments and Classes at Dalhousie University***

### **C.1 - Sustainability Related Programming at Dalhousie University**

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#### **Overview**

The following summarizes Dalhousie's programming offerings related to environment and sustainability at the undergraduate and graduate level. Dalhousie's Interdisciplinary PhD program has also been included. This document makes clear that Dalhousie University has a significant strength in programming related to environment and sustainability across the disciplines.

Each section lists degree options, enrollment and briefly summarizes the program. Program summaries are derived from information on program websites and course calendars. The document concludes with enrollment numbers listed in tabular form for comparative purposes.

This document is a work in progress. If you feel that we've missed anything, or feel a specific program is missing and should be added, please contact Jared Kolb at [jared.kolb@dal.ca](mailto:jared.kolb@dal.ca).

#### ***Faculty of Architecture and Planning***

##### Architecture

*Bachelor of Environmental Design (BEDS)*  
*Enrollment: 109 students*

BEDS is a senior undergraduate program that is preceded by at least two years of university studies in other subjects. It consists of two years of required architectural courses in design, representation, humanities, technology, and professional practice, plus a four-month co-op workterm. It concludes at the end of the winter term, in April. BEDS graduates then may be admitted to the Master of Architecture program.

*Master of Architecture (MArch)*  
*Enrollment: 87 students*

The two-year MArch program is the final part of the School's professional program. It is preceded by two years of general (non-architecture) studies at any university and two years of architecture in Dalhousie's pre-professional Bachelor of Environmental Design Studies program. The MArch program consists of four academic terms and an eight-month co-op work term. It includes seven courses in architectural design, humanities, technology, and professional practice, plus six electives and a design thesis.

##### Planning

*Bachelor of Community Design (BCD) (Honours, General or Double Major)*  
*Enrollment: 128 students*

Community design studies the shape, patterns, processes, and issues in human and natural communities. It explores the world as a system of interconnected and mutually-embedded communities linked by cultural and natural processes.

The study of community design at Dalhousie is distinguished by an emphasis on design and a focus on reasoned, creative, and practical outcomes. The Bachelor of Community Design is a program for students interested in understanding how communities work and the principles that designers use in creating communities.

*Master of Planning (MPlan)*  
*Enrollment: 35 students*

The School of Planning provides a professional planning education at the graduate level. The program is recognized by the Canadian Institute of Planners. Many graduates of the program become professional planners working for private firms or for government.

The program involves twenty months of study, with a work term during the summer semester. Mandatory courses cover the principal elements of history, theory, law, and practice. Elective courses offer considerable depth in environmental planning, design, history, theory, and economics. We also provide a range of courses in the key areas of planning, including transportation, housing, land development, and regional planning.

***Faculty of Arts and Social Science***  
International Development Studies

*Bachelor of Arts (BA) (Honours, Major, Double Major, Combined Honours or Concentration)*  
*Enrollment: 234 students*

The BA in International Development Studies is a four year interdisciplinary degree. The program allows students to tailor their degree around subjects of biology, comparative religion, economics, language study, political science, sociology and social anthropology. Students are encouraged to study abroad. The department has forged links with educational programs in Uganda, Kenya and Cuba.

*Master of Arts (MA)*  
*Enrollment: 27 students*

This degree, available on a full or part-time basis, is an interdisciplinary program of study drawing on courses in economics, history, political science, sociology and social anthropology. Students study theory, research methods and design, development practice and write a thesis. They must satisfy thesis readers from at least two departments and one of the three-member thesis supervisory committee may come from IDS at Saint Mary's University or elsewhere.

Full-time students are able to complete their MA in twelve months, but it typically takes between eighteen and twenty-four months.

***Faculty of Engineering***  
Department of Environmental Engineering

*Bachelor of Engineering in Environmental Engineering (BEng) (Co-op Available)*  
*Enrollment: 57 students*

Environmental Engineering is a rapidly growing discipline within the engineering profession. The four year programme is intended to satisfy the needs of interested students and the environmental industry. The curriculum is designed to train professionals in multidisciplinary approaches to environmentally-based design, waste management, water and soil quality, energy conservation and renewables, and air quality. Students take a common first year with other engineering students and move into the Environmental Engineering curriculum in their second year.

*Master of Engineering or Master of Applied Science in Environmental Engineering (MEng or MASc)*

*Enrollment: 14 students*

This programme is comprised of faculty from different departments in the Faculty of Engineering who have research interests in the multidisciplinary field of environmental engineering. Graduate education in environmental engineering builds upon a strong foundation in science and engineering principles which are applied to the solution of important problems related to sustainable utilization of natural resources and protection of the environment. Master of Engineering (MEng.), Master of Applied Science (M.A.Sc.) degree programmes are available for students interested in obtaining a graduate degree in Environmental Engineering.

### ***Faculty of Graduate Studies***

*Interdisciplinary PhD Program*

*Enrollment: 67 students*

The program is designed to meet the needs of an increasing number of mature, experienced students for research opportunities which cut across disciplinary boundaries. In some cases, the research incorporates the insights of two or three traditional disciplines; in others the research itself is in an interdisciplinary field focused on the environment, health, education, administration, information, etc. Each program is customized to meet the needs of the student. Students take graduate classes across the Faculty and work with faculty members in existing PhD disciplines and in other areas. The program requires at least two years of full-time study at Dalhousie.

### ***Faculty of Law***

Marine and Environmental Law Institute

*Marine and Environmental Law Specializations*

*Enrollment: 42 students*

Since its establishment in 1974 as an area of specialization for Dalhousie LLB students, the Marine & Environmental Law Programme (MELP) has provided LLB 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 twelve full and part-time faculty members currently teaching in the Programme, 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 LLB degree.

## **Faculty of Management**

### School of Resource and Environmental Management

#### *Master of Environmental Studies (MES)*

*Enrollment: 43 students*

The MES program is designed to broaden a student's perspective on natural resource and environmental issues while strengthening their research capabilities. The MES is designed as a two-year degree which includes course work and a thesis. A student will ideally finish within twenty-four months, and must pay full-time fees for six terms.

#### *Master of Marine Management (MMM)*

*Enrollment: 16 students*

The Master of Marine Management (MMM) provides a theoretical and practical basis for understanding coastal and ocean development, planning, and regulatory issues affecting the maritime industries and the sustainable use of the seas' resources. The MMM degree is a one-year, professional, interdisciplinary, non-thesis programme requiring core classes in the marine, social and management sciences as well as a choice of electives from areas such as marine science, policy and law.

#### *Master of Resource and Environmental Management (MREM)*

*Enrollment: 36 students*

This program involves intensive coursework and an applied internship during a sixteen month period. The MREM program graduates highly skilled professionals with the problem-solving tools and scientific (social and biophysical) understanding to create innovative solutions to resource and environmental issues.

The program's goal is to produce graduates who can confidently and independently address both the biophysical and sociopolitical dimensions of resource and environmental problems. The MREM degree is an advanced "professional" degree aimed at management and practical problem-solving.

## **Faculty of Science**

### Department of Biology

#### *Bachelor of Science in Biology (BSc) (Honours, Major, Double Major or Concentration) (Co-op Available)*

*Enrollment: 409 students*

Biology is a large and diverse field, and students enrol in Biology programmes with a corresponding diversity of interests and goals. The Bachelor of Science in Biology is a four year degree; students can sample broadly across the various disciplines or concentrate in one of three general areas in Biology: Ecology and Evolution, Cell and Molecular Biology or Organismal Biology.

#### *Master of Science in Biology (MSc)*

*Enrollment: 95 students*

Similar to the undergraduate program, the graduate program is divided into three streams, including Ecology and Evolution, Cellular and Molecular Biology and Organismal Biology.

Students are expected to belong to one of these streams. Within these streams, Areas of Emphasis such as "Applied Ecology and Sustainable Development" and "Marine Ecology" relate to environment and sustainability. Students are required to take at least two full credits at the graduate level. Moreover, a thesis reporting original research must be submitted and defended orally. Students are also expected to participate in weekly departmental seminars.

### Department of Economics

#### *Master of Development Economics (MDE)*

*Enrollment: 36 students*

This is a two-year professional course of study that combines graduate-level coursework in economics with a substantial amount of interdisciplinary courses and the completion of a master's thesis. The MDE focuses on economic progress in poor countries and poor regions of wealthy countries such as Canada. The MDE prepares students for professional policy-analysis in the public or private sectors in Canada or abroad.

### Environmental Programs

#### *Bachelor of Science in Environmental Science (BSc) (Major, Honours, Double Major or Combined Honours)*

*Enrollment: 71 students*

The B.Sc. in Environmental Science offers a transdisciplinary program of study that focuses on environmental science, and the ability to analyze environmental science problems. The Common Core Classes introduce students to a wide range of subjects and provide students with an appreciation of the scientific, cultural, economic, historic, legal and social aspects of environmental issues. Through the selection of courses in a chosen Area of Emphasis in a traditional science discipline, and through the selection of elective courses, students are able to equip themselves for careers that meet their own personal goals. The Area of Emphasis disciplines are: Atmospheric Science, Biology, Chemistry, Earth Sciences, Ecology, Economics, Marine Biology, Statistics, and Neuroscience.

### Department of Earth Sciences

#### *Bachelor of Science in Earth Sciences (BSc) (Major, Honours or Concentration) (Co-op Available)*

*Enrollment: 62 students*

A four year program studying Earth processes and composition. Earth Science is an intellectually exciting discipline, and its study is of enormous economic and environmental importance to Canada. Earth Sciences leads students to careers as geologists, geochemists, geophysicists, oceanographers, or teachers - and compliments other degrees, such as mining and marine engineering and environmental science.

#### *Master of Science in Earth Sciences (MSc)*

*Enrollment: 32 students*

The Earth Sciences Department welcomes students with degrees in any of the sciences or mathematics who wish to study some aspect of the earth. Students may study a variety of fields including marine geology and geophysics, Appalachian geology, isotope geology, economic geology, petrology, geochemistry and mineralogy, geophysics, sedimentology,

micropaleontology and coastal sedimentation, structural geology, metamorphism, and tectonics.

Though the degree can be completed in 12 months of full-time study, experience has shown that most students take 24 months. Part-time study is also available. Research leading to the preparation and oral defence of a thesis is required. The equivalent of five graduate classes is required, of which the thesis normally counts as three. Graduate students are expected to attend the Earth Sciences seminars.

#### Department of Marine Biology

*Bachelor of Science in Marine Biology (BSc) (Honours, Major, Double Major or Combined Honours) (Co-op Available)*

*Enrollment: 94 students*

The Marine Biology Programme is an integral part of the Biology department at Dalhousie. Students obtain a basic grounding in Biology in their first two years, and use their third and fourth years to study in greater depth the diversity, ecology, physiology, and other aspects of marine animals and plants.

#### Department of Oceanography

*Combined Bachelor of Science Double Major in Oceanography and either Marine Biology, Earth Sciences or Chemistry (BSc)*

*Enrollment: Currently unavailable*

Oceanography is an inter-disciplinary science that includes studies of tides and currents, the chemistry of sea water, plants and animals that live in the sea, and ocean bottom sediments and underlying crustal structures.

The Department of Oceanography offers undergraduate training in Oceanography as part of Combined Honours degrees with the Departments of Biology and Marine Biology, Chemistry, and Earth Sciences. Honours students in these Combined Honours programs will have an opportunity to complement their training in their chosen scientific field with a background in Oceanography, thus enhancing their career and employment opportunities. Students considering graduate study in Oceanography should also consider a Combined Honours degree.

*Master of Science in Oceanography (MSc)*

*Enrollment: 47 students*

Students enrolled in the program take a variety of core courses and seminars, spend time at sea and write a thesis. Students may specialize in Chemical, Biological, Geological or Physical Oceanography.

Department of Physics and Atmospheric Science

*Bachelor of Science in Physics (BSc) (Honours, Major, General, Joint Degree or Concentration) (Co-op Available)*

*Enrollment: 27 students*

Physics is the study of the fundamental properties of energy and matter. The Honours programme is a focused, intensive programme aimed at those intending to pursue either graduate study or professional research work either in physics or in allied sciences. The various Majors programmes provide the opportunity to pursue a broad education in both physics and other areas. Such programmes provide a suitable background for employment in industry, and for further studies in such fields as meteorology, engineering, education, law, medicine, dentistry, health sciences and business.