



Fisheries and Marine Institute
of Memorial University of Newfoundland

MASTERS AND DOCTOR OF PHILOSOPHY DEGREES

2019 - 2020


MARINE INSTITUTE


MEMORIAL
UNIVERSITY

TABLE OF CONTENTS

As part of Memorial University, the Marine Institute provides you with credentials that are recognized around the world. As the largest oceans institute of its kind in Canada, the Marine Institute offers a suite of graduate programs that are found nowhere else in the country.

Master of Marine Studies (Fisheries Resource Management)

Gain a multidisciplinary graduate degree in the entire range of fisheries management issues **6**

Master of Marine Studies (Marine Spatial Planning and Management)

Influence, lead and provide decision making support for the management and planning of coastal and marine spaces **8**

Master of Maritime Management

Train for a leading role in maritime-based organizations **10**

Master of Science in Fisheries Science (Fisheries Science and Technology)

Plan and execute studies to collect new data, informing and influencing the management of marine fisheries **12**

Master of Science in Fisheries Science (Stock Assessment)

Develop and apply expert mathematical and statistical skills, vital to the sustainable management of marine industries **14**

Master of Technology Management (Engineering and Applied Science Technology)

Understand and manage processes in technology-based organizations **16**

Doctor of Philosophy (Ph.D.) in Fisheries Science

Conduct and translate world class fisheries research through quantitative techniques, study design, and science communications **18**

Graduate Resources **20**

Next Steps **22**

Connect **23**



FIND YOUR PATH. CHANGE YOUR WORLD.

Welcome to the Marine Institute.

Located on the edge of the Atlantic Ocean, we are the world-leading centre for marine and ocean-related career education and research.

As a campus of Memorial University of Newfoundland, the Marine Institute is a dynamic, comprehensive institution where education and research are multidisciplinary, applied, and linked closely to what is happening in industry.

Our graduate programs are designed to explore issues facing fisheries management, aquaculture, engineering technology and applied science, and oceans and coastal zone management. You will be able to offer real-world solutions with insight, experience, and data.

Whether you want to pursue your professional development or conduct research, you'll be supported by leading educators and researchers from our School of Fisheries, School of Maritime Studies and School of Ocean Technology — and by our diverse research centres and student support units.

A graduate degree with the Marine Institute opens a world of opportunities to explore, lead and make an impact in your field.

Join us. We'll help you
find your path and **change your world.**

MARINE STUDIES

(FISHERIES RESOURCE MANAGEMENT)

PROGRAM DESCRIPTION

The Master of Marine Studies (Fisheries Resource Management) is a multi-disciplinary program of study that provides exposure to all dimensions of modern fisheries resource management. This online program provides an understanding of relevant concepts in ecology, resource assessment, economics, business, technology, as well as fisheries policy and planning. While focused primarily on the North Atlantic, the program also deals with major world fisheries including a range of inter-jurisdictional issues.

PROGRAM STRUCTURE

Participants will complete course work offered by the Fisheries and Marine Institute, Memorial University.

Option 1 requires five core courses (15 credit hours), three elective courses (9 credit hours - 1 from Category A, 1 from Category B, and 1 from Category A or B), and a major report.

Option 2 requires five core courses (15 credit hours), five elective courses (15 credit hours - 2 from Category A, 1 from Category B, and 2 to be chosen from either Category A or B)

PROGRAM AT A GLANCE

Full Time - 2 Years		
START DATE September, January, May		
PROGRAM OPTIONS Option 1: 8 courses + major report Option 2: 10 courses		
PLACE OF STUDY Online only		
Learn More: www.mi.mun.ca/mms		
DEADLINES TO APPLY		
Fall Admission	Winter Admission	Spring Admission
June 15	October 15	February 15

COURSE SELECTION CHART

	MAJOR REPORT OPTION	COURSE ROUTE
CORE COURSES	COMPLETE 5	COMPLETE 5
MSTM 6001 - Fisheries Ecology	✓	✓
MSTM 6002 - Fisheries Resource Assessment Strategies	✓	✓
MSTM 6003 - Fisheries Economics	✓	✓
MSTM 6004 - Fisheries Policy and Planning	✓	✓
MSTM 6005 - Overview of World Fisheries	✓	✓
ELECTIVES	COMPLETE 3	COMPLETE 5
ELECTIVE COURSES: CATEGORY A	CHOOSE AT LEAST 1	CHOOSE AT LEAST 2
MSTM 6006 - Business Management for Fisheries		
MSTM 6007 - Fisheries Technology		
MSTM 6008 - Social and Philosophical Issues of Fisheries Management		
MSTM 6009 - Current Issues for Sustainable Fisheries		
MSTM 6010 - Legal Aspects of Fisheries Resource Management		



ELECTIVE COURSES: CATEGORY B	CHOOSE AT LEAST 1	CHOOSE AT LEAST 1
MSTM 6022 - Communication and Conflict Resolution in a Technical Environment		
MSTM 6023 - Strategic Planning, Policy, Participation and Management in Technical Operations		
MSTM 6033 - Quality Systems		
MSTM 6034 - Project Management in the Offshore, Health, Fisheries and Engineering Technology Environments		
MSTM 6039 - Sustainability and Environmental Responsibility		
MSTM 6044 - Marine Environment Law and Pollution Control		
MSTM 6056 - Management for International Development		
MSTM 6071 - Management of Aquaculture Technology		
MAJOR REPORT OPTION	COMPLETE	DO NOT COMPLETE
Major Report completed in accordance with General Regulation Theses and Reports of the School of Graduate Studies	✓	N/A

This chart is for reference only.
 Follow the University Calendar for course descriptions and regulations for your program.
 The information provided here is subject to change.
 The University Calendar is the final authority on university and program regulations.

ADMISSION REQUIREMENTS

Applicants must meet Memorial University School of Graduate Studies' admission requirements: www.mun.ca/regoff/calendar

Admission to the program is on a competitive basis. To be considered for admission to the program an applicant must normally have an undergraduate degree with a minimum of a high second class standing from an institution recognized by the Senate.

In addition to the academic requirements above, applicants will normally have a demonstrated commitment to fisheries through employment or experience in a sector of the fishery, in a regulatory agency or government department connected to fisheries, in a non-governmental agency, or through self-employment or consulting activities related to fisheries.

MARINE STUDIES

(MARINE SPATIAL PLANNING AND MANAGEMENT)

PROGRAM DESCRIPTION

The Master of Marine Studies (Marine Spatial Planning and Management) focuses on the governance, bio-ecological, socio-economic, cultural and technological elements of sustainable ocean and coastal zone development, planning and management.

PROGRAM OBJECTIVE

Graduates will be equipped with a clear understanding of integrated coastal and ocean management and marine spatial planning concepts/processes and their relationship to ecosystem-based management approaches.

Graduates will also enter the sector with:

- A broad level of understanding of governance, policy/legislative, ecological, social, cultural and economic elements of coastal and ocean areas;
- Technical capabilities/skills and knowledge necessary to make technology-supported management decisions and recommendations incorporating consideration of these elements.
- Strong communication, conflict management and facilitation skills to effectively engage coastal and ocean regulators and stakeholders; and
- The ability to apply coastal and marine spatial planning knowledge and skills to provide decision support and analysis and bridge the technical and theoretical aspects of Integrated Coastal and Ocean Management and Marine Spatial Planning.

PROGRAM STRUCTURE

This program is available primarily online with some on campus electives and one course offered during the six-week Spring intercession requiring 3 weeks in-house residency in St. John's. This program includes options for an internship or research project.

The program is structured to provide a balance between conceptual/theoretical background and practical applied skills. As such, students will develop a broad level understanding of planning processes and the governance, policy/legislative, ecological, social, cultural and economic elements of coastal and ocean areas complemented by practical and applied skills for stakeholder engagement, project management and utilization of geospatial technology to support planning efforts. Throughout the program, courses will be structured to introduce theoretical concepts and then examine real world examples of their application.

Students will complete seven core courses, an internship (MSTM 6019) or research project, and choose one of three options for elective course selection:

- Two category A electives plus one Category B Elective
- Two category B electives plus one Category A Elective
- Two category C electives plus one Category A or B Elective.

ADMISSION REQUIREMENTS

Admission to the program is on a limited and competitive basis.

PROGRAM AT A GLANCE

Full Time / Part Time

START DATE

September

PROGRAM OPTIONS

Option 1: 10 courses + research project

Option 2: 10 courses + internship

PLACE OF STUDY

Online + 3 week residency at

Marine Institute Campus

Learn More:

www.mi.mun.ca/msp

DEADLINES TO APPLY

Fall Admission

May 15



To be considered for admission to the program, an applicant will normally possess a relevant second class or better undergraduate degree from a university of recognized standing. Students intending to undertake electives in Decision Support / Geospatial Analysis (Category C) are required to have a background in mathematics, statistics and geographic information systems.

COURSE SELECTION CHART	INTERNSHIP OPTION	RESEARCH PROJECT OPTION
CORE COURSES	COMPLETE 7	
MSTM 6011 - Introduction to Integrated Coastal and Ocean Management / Marine Spatial Planning	✓	✓
MSTM 6012 - Fundamentals of Geospatial Analysis	✓	✓
MSTM 6013 - Resource/Natural Environment and Ocean Use Characterization	✓	✓
*MSTM 6014 - Geospatial Analysis for Marine Spatial Planning	✓	✓
MSTM 6022 - Communication and Conflict Resolution in a Technical Environment	✓	✓
MSTM 6027 - Coastal and Ocean Environmental Policies	✓	✓
MSTM 6034 - Project Management in the Offshore, Health, Fisheries and Engineering Technology Environments	✓	✓
ELECTIVES	CHOOSE 1 OF 3 ELECTIVE OPTIONS	
ELECTIVE COURSES CATEGORY A: NATURAL ENVIRONMENT	2 CATEGORY A ELECTIVES PLUS 1 CATEGORY B ELECTIVE	
ENVE/ENVS 6001 - Earth and Ocean Systems		
MSTM 6001 - Fisheries Ecology		
MSTM 6015 - Marine Protected Areas		
MSTM 6016 - Coastal Geomorphology / Oceanography		
ELECTIVE COURSES CATEGORY B: HUMAN ENVIRONMENT	2 CATEGORY B ELECTIVES PLUS 1 CATEGORY A ELECTIVE	
MSTM 6008 - Social and Philosophical Issues in Sustainable Fisheries		
MSTM 6017 - Social and Cultural Aspects of Coastal Communities		
MSTM 6018 - Coastal and Ocean Economics		
ELECTIVE COURSES CATEGORY C: DECISION SUPPORT / GEOSPATIAL ANALYSIS	2 CATEGORY C ELECTIVES PLUS 1 CATEGORY A OR B ELECTIVE	
GEOG 6120 - Geospatial Modelling and Analysis		
GEOG 6821 - Advanced Computer Modelling/Habitat Mapping		
PROGRAM OPTIONS	COMPLETE	
MSTM 6019 - Internship	✓	N/A
Research Paper	N/A	✓

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* Pre-requisites required

MARITIME MANAGEMENT

PROGRAM DESCRIPTION

The Master of Maritime Management (MMM) is an innovative program, the first of its kind in Canada, providing professional development opportunities for working, career-minded professionals. The online program helps provide the skills and knowledge necessary to effectively manage the diversity of operations found in the challenging maritime sector.

This program is offered fully online, and applicants from the global community are invited to apply.

PROGRAM OBJECTIVE

The Master of Maritime Management program will help provide graduates with strategic planning and decision making skills in the context of maritime organizations. Graduates will gain a deep understanding of the nature, structure and operation of maritime activities, and the factors that influence business decisions and the success of maritime-oriented organizations.

The program enhances career development opportunities for entry-level managers or those looking to become managerial professionals.

This program provides professionals with a number of career paths, including:

- Managers in maritime organizations
- Marine surveyors and consultants
- Maritime regulators and policy makers
- Entrepreneurs in maritime ventures

PROGRAM STRUCTURE

Option 1 requires 2 core courses (6 credit hours), 6 elective courses (18 credit hours, at least 1 from Category A, at least 3 from Category B), and a project in Maritime Management (6 credit hours)

Option 2 requires two core courses (6 credit hours), 8 elective courses (24 credit hours, at least 1 from Category A, at least four from Category B)

ADMISSION REQUIREMENTS

Admission to the program is on a competitive basis.

Applicants must meet Memorial University School of Graduate Studies' admission requirements.

In addition, to be considered for admission to the program an applicant will normally possess a second class or better undergraduate degree from a university of recognized standing and will normally have:

- A Memorial University Bachelor of Maritime Studies or Bachelor of Technology, or a comparable undergraduate degree with appropriate maritime sector and business management course work; and
- Appropriate technical knowledge and relevant marine sector employment experience.

PROGRAM AT A GLANCE

Full Time / Part Time

START DATE

September, January, May

PROGRAM OPTIONS

Option 1: 8 courses + project
Option 2: 10 courses

PLACE OF STUDY

Online only

Learn More:

www.mi.mun.ca/mmm

DEADLINES TO APPLY

Fall Admission	Winter Admission	Spring Admission
May 15	September 15	January 15



COURSE SELECTION CHART

COURSE SELECTION CHART	PROJECT OPTION (8 COURSES + PROJECT)	COURSE ROUTE (10 COURSES)
CORE COURSES	COMPLETE 2	COMPLETE 2
MSTM 6041 - Marine Policy	✓	✓
MSTM 6042 - Business of Shipping/Transportation of Goods	✓	✓
ELECTIVE COURSES: CATEGORY A	CHOOSE AT LEAST 1	CHOOSE AT LEAST 2
MSTM 6022 - Communication and Conflict Resolution in a Technical Environment		
MSTM 6023 - Strategic Planning, Policy, Participation and Management in Technical Operations		
MSTM 6030 - Principles of Management for Engineering Technology Enterprises		
MSTM 6034 - Project Management in the Offshore, Health, Fisheries and Engineering Technology Environments		
MSTM 6039 - Sustainability and Environmental Responsibility		
MSTM 6052 - Management of Intellectual Property		
MSTM 6054 - Technology Assessment		
ELECTIVE COURSES: CATEGORY B	CHOOSE AT LEAST 3	CHOOSE AT LEAST 4
MSTM 6027 - Coastal and Ocean Environmental Policies		
MSTM 6043 - Marine Law		
MSTM 6044 - Marine Environment Law and Pollution Control		
MSTM 6045 - Port Operations and Management		
MSTM 6046 - Information Systems in the Marine Environment		
MSTM 6047 - Maritime Security and Event Investigation		
MSTM 6048 - Emerging Issues in International Marine Transportation		
MSTM 6049 - Maritime Risk Analysis and Management		
MSTM 6050 - Maritime Health, Safety, Environment and Quality		
MSTM 6051 - International Maritime Compliance and Business Continuity Planning		
PROJECT OPTION	COMPLETE	DO NOT COMPLETE
MSTM 6101 - Project in Maritime Management (6 credit hours)	✓	N/A

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FISHERIES SCIENCE

(FISHERIES SCIENCE AND TECHNOLOGY)

PROGRAM DESCRIPTION

The degree of Master of Science in Fisheries Science (Fisheries Science and Technology) is a full-time, research-focused Master's degree offered by the Marine Institute's School of Fisheries. This program is for students who aim to pursue a career in fisheries science and includes skills training that will empower students to conduct publication-quality research in any aspect of fisheries science.

PROGRAM OBJECTIVE

To train world-class researchers that are capable of conceiving and executing rigorous scientific studies, and communicating the results and implications of those studies to the scientific community and beyond.

Graduates of this program will be able to:

- Conduct original research
- Collect, manage and analyze data
- Display and interpret qualitative information
- Demonstrate adherence to the principles of scientific integrity
- Effectively communicate their research
 - Through peer-reviewed publications in reputable science journals
 - In oral and poster-based presentations at scientific conferences and meetings
 - In formats accessible to stakeholders, including media, industry publications and in other relevant venues
- Explain how their research fits with the broader policy environment of fisheries at local, national and international scales

PROGRAM REQUIREMENTS

The program's courses are designed to develop proficiencies in quantitative techniques, study design, and science communication that are necessary to be effective at fisheries research.

Students must complete 12 credit hours of course work.

PROGRAM AT A GLANCE

Full Time - 2 Years		
START DATE September, January, May		
PROGRAM 12 credits hours + thesis		
PLACE OF STUDY Marine Institute Campus		
Learn More: www.mi.mun.ca/fsft		
DEADLINES TO APPLY		
Fall Admission	Winter Admission	Spring Admission
May 15	September 15	January 15



COURSE

FISH 6000	Science Communication for Fisheries
FISH 6001	Ecology, Management, and Practice of North Atlantic Fisheries
FISH 6002	Data Collection, Management, and Display
FISH 6003	Statistics and Study Design for Fisheries Science

Students must also complete a thesis composed of at least one chapter of original research. Prior to submitting their thesis for examination, students must complete a public presentation on their work. Students will normally complete their thesis within two years (six semesters) of enrolling in the program.

PROGRAM STRUCTURE

This program recognizes that fisheries science is a broad discipline that is applied in nature and requires proficiency in quantitative and communication skills. Students will gain practical skills through coursework while developing their theoretical understanding through supervised research and through their interactions as an active participant within the scientific community. Students will also be exposed to the depth of the field of fisheries science through lab meetings, reading groups and guest lectures.

ADMISSION REQUIREMENTS

Admission to the program is on a limited and competitive basis. To be considered for admission to the program, an applicant will normally possess a high second class Honours degree or an M.D. degree, or the equivalent of either, both in achievement and depth of study from an institution of recognized standing.

Applicants will need to have identified a supervisor, who must be either a research scientist with the Marine Institute's School of Fisheries, a cross-appointed or adjunct faculty with the School or an actively-publishing researcher within the School who holds a Ph.D. Students will also need a supervisory committee.

Any other applicant may be considered for admission provided that:

- a) The applicant's undergraduate record after the first year shows an average of at least Grade B in courses in the proposed field of specialization;
- b) The applicant's overall undergraduate record after the first year shows an average of at least Grade B in all courses taken; and
- c) The applicant demonstrates a commitment and passion for aquatic science, ideally in fisheries, through employment or experience in field schools, research programs, the fishing industry, regulatory agencies or government departments, non-governmental organizations, consulting activities, or other relevant activities.

FISHERIES SCIENCE

(STOCK ASSESSMENT)

PROGRAM DESCRIPTION

The degree of Master of Science in Fisheries Science (Stock Assessment) is a full-time, research-focused Master's degree offered by the Marine Institute's School of Fisheries. This program is for students who aim to pursue a career in stock assessment, a discipline within fisheries science. Stock assessment professionals use data derived from many sources to construct models that inform us about biomass of organisms in the ocean and how many we can catch sustainably. While stock assessment professionals must have many of the same proficiencies as other fisheries scientists, they have an additional requirement of being experts on the mathematics and statistics that underpin this heavily quantitative field.

PROGRAM OBJECTIVE

To train world-class researchers with a specialization in statistical stock assessment, capable of analyzing fisheries data and communicating the results and implications of their research to the scientific community and beyond.

Graduates of this program will be able to:

- Conduct original research
- Collect, manage and analyze data
- Display and interpret qualitative information
- Demonstrate adherence to the principles of scientific integrity
- Effectively communicate their research
 - Through peer-reviewed publications in reputable science journals
 - In oral and poster-based presentations at scientific conferences and meetings
 - In formats accessible to stakeholders, including media, industry publications and in other relevant venues
- Explain how their research fits with the broader policy environment of fisheries at local, national and international scales
- Demonstrate an advanced understanding of quantitative stock assessment

PROGRAM REQUIREMENTS

The program's courses are designed to develop proficiencies in quantitative techniques, study design, and science communication that are necessary to be effective at fisheries research.

Students must complete 12 credit hours of course work.

PROGRAM AT A GLANCE

Full Time - 2 Years		
START DATE September, January, May		
PROGRAM 12 credits hours + thesis		
PLACE OF STUDY Marine Institute Campus		
Learn More: www.mi.mun.ca/fssa		
DEADLINES TO APPLY		
Fall Admission	Winter Admission	Spring Admission
May 15	September 15	January 15



COURSE

- FISH 6000** Science Communication for Fisheries
- FISH 6001** Ecology, Management, and Practice of North Atlantic Fisheries
- FISH 6004** Overview of Statistical Stock Assessment
- FISH 6005** Advanced Statistical Stock Assessment

Students must also complete a thesis composed of at least one chapter of original research, which should include content of direct relevance to the practice of quantitative stock assessment. Prior to submitting their thesis for examination, students must complete a public presentation on their work.

Students will normally complete their thesis within two years (six semesters) of enrolling in the program.

PROGRAM STRUCTURE

This program recognizes that fisheries science is a broad discipline that is applied in nature and requires proficiency in quantitative and communication skills. Students will gain practical skills through coursework while developing their theoretical understanding through supervised research and through their interactions as an active participant within the scientific community. Students will also be exposed to the depth of the field of fisheries science through lab meetings, reading groups and guest lectures.

ADMISSION REQUIREMENTS

To be considered for admission to the program, an applicant will normally possess a high second class Honours degree or an M.D. degree, or the equivalent of either, both in achievement and depth of study from an institution of recognized standing.

Applicants must be able to demonstrate a satisfactory knowledge of mathematics, statistics and scientific computing.

Applicants will need to have identified a supervisor, who must be either a research scientist with the Marine Institute's School of Fisheries, a cross-appointed or adjunct faculty with the School or an actively-publishing researcher within the School who holds a Ph.D. Students will also need a supervisory committee.

Any other applicant may be considered for admission provided that:

- a) The applicant's undergraduate record after the first year shows an average of at least Grade B in courses in the proposed field of specialization;
- b) The applicant's overall undergraduate record after the first year shows an average of at least Grade B in all courses taken; and
- c) The applicant demonstrates a commitment and passion for mathematics or statistics, through employment or experience in field schools, research programs, regulatory agencies or government departments, non-governmental organizations, consulting activities, or other relevant activities.

TECHNOLOGY MANAGEMENT

(ENGINEERING AND APPLIED SCIENCE TECHNOLOGY)

PROGRAM DESCRIPTION

The Master of Technology Management (Engineering and Applied Science Technology) is an innovative program, the first of its kind in Canada. This online program provides professional development opportunities for busy, working professionals engaged in a variety of engineering technology and other technical and non-technical professions.

The program provides the knowledge and skills necessary to effectively manage complex technical operations, deal with the challenges and dynamics of innovation-driven industries, and strategically consider issues encompassing the management of engineering technology.

PROGRAM OBJECTIVE

The Master of Technology Management program will provide graduates with strategic planning and decision making skills in the context of engineering technology-based organizations. Graduates will gain insight into the nature, structure and operation of technical operations, and the factors that influence their success.

The program enhances career development opportunities for entry-level and mid-career managers or those looking to become managerial professionals in the field of engineering technology.

PROGRAM STRUCTURE

Participants will complete course work offered by the Fisheries and Marine Institute of Memorial University.

Option 1 requires 2 core courses (6 credit hours), 6 elective courses, and a project in Engineering Technology Management (6 credit hours)

Option 2 requires two core courses (6 credit hours), 8 elective courses (24 credit hours)

ADMISSION REQUIREMENTS

Admission to the program is on a competitive basis.

Applicants must meet Memorial University School of Graduate Studies' admission requirements.

In addition, to be considered for admission to the Engineering and Applied Science Technology Program an applicant will normally possess a second class or better undergraduate degree from a university of recognized standing and will normally have:

- A Memorial University Bachelor of Technology, Bachelor of Maritime Studies, or a comparable undergraduate degree with appropriate technology sector and business management course work; and
- A minimum of two (2) years' relevant employment experience.

PROGRAM AT A GLANCE

Full Time / Part Time

START DATE

September, January

PROGRAM OPTIONS

Option 1: 8 courses + project

Option 2: 10 courses

PLACE OF STUDY

Online

Learn More:

www.mi.mun.ca/mtm

DEADLINES TO APPLY

Fall Admission
May 15

Winter Admission
September 15



COURSE SELECTION CHART

	COURSE OPTION	PROJECT OPTION
CORE COURSES	COMPLETE 2	COMPLETE 2
MSTM 6031 - Overview of Technical Operations	✓	✓
MSTM 6032 - Managing Technological Innovation	✓	✓
ELECTIVE COURSES	CHOOSE 8	CHOOSE 6
MSTM 6022 - Communication and Conflict Resolution in a Technical Environment		
MSTM 6023 - Strategic Planning, Policy, Participation and Management in Technical Operations		
MSTM 6030 - Principles of Management for Engineering Technology Enterprises		
MSTM 6033 - Quality Systems		
MSTM 6034 - Project Management in the Offshore, Health, Fisheries and Engineering Technology Environments		
MSTM 6035 - Information Technology Applications in the Health and Engineering Technology Environments		
MSTM 6036 - Supply Chain Management and Advanced Engineering Technology Operations		
MSTM 6037 - Risk Analysis and Operations in the Engineering Technology Sector		
MSTM 6038 - Manufacturing and Engineering Technology Management		
MSTM 6039 - Sustainability and Environmental Responsibility		
MSTM 6052 - Management of Intellectual Property		
MSTM 6054 - Technology Assessment		
MSTM 6056 - Management of International Development		
PROJECT OPTION		COMPLETE
MSTM 6100 - Project in Engineering and Applied Science Technology Management	N/A	✓

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FISHERIES SCIENCE

PROGRAM DESCRIPTION

The Doctor of Philosophy in Fisheries Science is offered by the Marine Institute’s School of Fisheries to full time and part-time students. This program is aimed at those who want to participate in the development of new fisheries science knowledge. Fisheries researchers will be equipped with a skill set that focuses on quantitative analysis, science communication and knowledge in the management and practice of North Atlantic fisheries.

PROGRAM OBJECTIVE

To train world-class researchers that are capable of working at the forefront of fisheries science and advancing the science and practice of fisheries.

Graduates of this program will be able to:

- Conduct original research
- Collect, manage and analyze data
- Display and interpret qualitative information
- Demonstrate adherence to the principles of scientific integrity
- Effectively communicate their research
- Through peer-reviewed publications in reputable science journals
- In oral and poster-based presentations at scientific conferences and meetings
- In formats accessible to stakeholders, including media, industry publications and in other relevant venues
- Explain how their research fits with the broader policy environment of fisheries at local, national and international scales
- Craft impactful research questions that advance their discipline
- Lead the planning and execution of a research program

PROGRAM AT A GLANCE

Full Time / Part Time		
START DATE September, January, May		
PROGRAM 4 courses + thesis		
PLACE OF STUDY Marine Institute Campus		
Learn More: www.mi.mun.ca/fsphd		
DEADLINES TO APPLY		
Fall Admission	Winter Admission	Spring Admission
May 15	September 15	January 15

PROGRAM REQUIREMENTS

The program’s courses are designed to develop proficiencies in quantitative techniques, study design, and science communication that are necessary to be effective at fisheries research.

PhD students will normally take FISH 6000 and 6001 unless they are so proficient in the subject matter that their supervisory committee deems taking the courses unnecessary. PhD students will also normally be required to complete at least two of 6002, 6003, 6004 and 6005. Exceptions may be made for those students who have already taken these (or equivalent) courses as part of a Master of Science program or if their supervisory committee determines they are extremely proficient in quantitative statistics.



COURSE

FISH 6000	Science Communication for Fisheries
FISH 6001	Ecology, Management, and Practice of North Atlantic Fisheries
FISH 6002	Data Collection, Management, and Display
FISH 6003	Statistics and Study Design for Fisheries Science
FISH 6004	Overview of Statistical Stock Assessment
FISH 6005	Advanced Statistical Stock Assessment

Students must also complete a thesis containing three or more chapters of original research, as approved by their supervisory committee.

Students must meet with their supervisory committee within the first three months of their program and submit a research proposal. They will also complete a written and oral comprehensive examination.

Students will normally complete their thesis within four years (12 semesters) of enrolling in the program.

PROGRAM STRUCTURE

This program recognizes that fisheries science is a broad discipline that is applied in nature and requires proficiency in quantitative and communication skills. Students will gain practical skills through coursework while developing their theoretical understanding through supervised research and through their interactions as an active participant within the scientific community. Students will also be exposed to the depth of the field of fisheries science through lab meetings, reading groups and guest lectures.

ADMISSION REQUIREMENTS

Admission into the Ph.D. program in Fisheries Science is normally restricted to candidates holding a Master's degree or its equivalent. In exceptional circumstances, a candidate with a Bachelor of Science degree who has spent not less than 12 months in a Master of Science program may be recommended for transfer into a Ph.D. program. For this transfer to be accepted, the candidate must demonstrate their ability to pursue research at the doctoral level.

Applicants will need to have identified a supervisor, who must be either a research scientist with the Marine Institute's School of Fisheries, a cross-appointed or adjunct faculty with the School or an actively-publishing researcher within the School that holds a Ph.D. Students will also need a supervisory committee.

GRADUATE RESOURCES

School of Graduate Studies

In addition to the many on-campus support for graduate students, the Marine Institute works closely with Memorial University's School of Graduate Studies (SGS), which is the central academic support unit for approximately 3,800 graduate students enrolled in over 100 graduate diploma, and master's, and doctoral degree programs.

SGS aspires to provide best-in-Canada supports for graduate students at all stages of their programs, from admissions and orientation to progress and completion, and beyond. Through its network of academic and service unit partners, SGS is also responsible for graduate enrollment management, graduate student services and skills training, internationalization, faculty supervisor training and supports, administration of graduate student funding and awards, timely completion of graduate programs, and preparation for life and success after graduate school.

Office of Research and Development

A variety of resources are available through the Marine Institute's Office of Research and Development to support graduate student research, including proposal development, identifying funding opportunities and completing ethics applications to help you get your research career off to the right start.

Research Supervisors

Graduate students in research-intensive programs (i.e., one that requires a thesis) will often need a research supervisor. We strongly encourage you to check your graduate program to see if a supervisor is needed, and find a supervisor at the time of application if necessary. This will increase your chances at admission and allow for a better and more productive graduate student experience. There are a few ways you can find a supervisor:

- Consult www.mi.mun.ca/researchsupervisors/ for the current list of eligible supervisors, and their research areas of interest.
- Do a search using www.yaffle.ca using the key words that best describe your research interests. The search results should yield several names of faculty members in your area of interest along with their contact information.
- Contact our Graduate Recruitment Officer for suggestions on research supervisors who might be looking for students.
- When contacting potential supervisors, it is important to make a good first impression. We suggest you take the following steps:
 - Review the researcher's information online and become familiar with his/her research.
 - Write a concise email to the faculty member you would like to work with. Introduce yourself, your academic credentials (GPA, academic awards, research experience, etc.), and the kind of research you would like to pursue and the reason for it.
 - Advise them you have applied for a graduate program at Memorial University, note the intended start date, and ask if they might be interested in serving as your supervisor for a program.

Tuition and Fees

Graduate tuition fees at Memorial University are charged on a semester-by-semester basis and reflect the cost of the graduate program not the number of required courses. Memorial has three semesters per academic year: Fall (September - December), Winter (January - April), and Spring (May - August). Program fees are to be paid each semester. For information about tuition and fees, please refer to www.mun.ca/become/graduate

Graduate Funding

Memorial University offers competitive funding packages to academically eligible full-time graduate students, both Canadian and International, in all eligible research programs. Student funding can come from multiple sources in the form of supervisor research grants, internal and external scholarships School of Graduate Studies fellowships, and assistantships. For information about funding opportunities, please refer to www.mun.ca/become/graduate

Centre for Innovation in Teaching and Learning - Online Courses

Online course delivery is fully supported by Memorial University's Centre for Innovation in Teaching and Learning (CITL). Brightspace is the virtual learning platform used as the main content delivery method and provides a virtual classroom for each course in a program.

Students can avail of all the services and support offered by the Marine Institute and Memorial University including access to the extensive University Library System resources and to Help Desk support available through CITL for technical issues related to Brightspace.

Internships

Internships may be a part of any student's research program, provided the supervisor and supervisory committee approve. The Marine Institute's Office of Career Integrated Learning is a resource that could be available to students or they can seek internships themselves with the support of their mentorship team.

NEXT STEPS

1. Get to Know our Programs and Requirements

Visit us online www.mun.ca/become/graduate for complete details and more resources to help successfully apply for our programs.

2. Connect

Speak with our graduate recruitment officer to discuss your application or find a researcher supervisor.

3. Apply Online

Choose the semester you would like to start your studies and check the deadlines to apply. Identify and collect all required application materials. Submit your application online to Memorial University's School of Graduate Studies at www.mun.ca/become/graduate/apply

CONNECT WITH THE FISHERIES AND MARINE INSTITUTE

GRADUATE STUDENT RECRUITMENT OFFICER

Student Affairs

Fisheries and Marine Institute of
Memorial University of Newfoundland
Telephone: 709.778.0395
Toll-free: 1.800.563.5799, ext. 0395

recruitment@mi.mun.ca

www.mi.mun.ca

www.mun.ca/become/graduate

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