

FISHERIES AND MARINE INSTITUTE

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1 School Description

The Fisheries and Marine Institute was established in 1964 as the College of Fisheries, Navigation, Marine Engineering and Electronics. It became affiliated with the University in 1992 and since then has continued to grow as a world-class centre of marine technology and education. The official name is the Fisheries and Marine Institute of Memorial University of Newfoundland, but it is commonly known as the Marine Institute.

The main campus of the Marine Institute overlooks the city of St. John's from within Pippy Park, which has extensive hiking trails and recreational facilities. This building houses a flume tank, a seafood processing plant, freshwater aquaculture research and development facilities, and extensive marine simulation facilities. The Dr. C. R. Barrett Library, located at this campus, houses one of Canada's largest marine-related collections. In addition, the Institute manages the Offshore Safety and Survival Centre in Foxtrap and Stephenville and a marine base on the south side of St. John's harbour.

The Marine Institute provides a full range of programs focusing on fisheries and marine science and technology. In addition to undergraduate and graduate degrees, the Institute offers advanced diplomas, diplomas of technology, and technical and vocational certificates. The Institute also runs a variety of short courses and industrial response programs. Many courses, including most courses in degree programs, are available through the Marine Institute Learning Services (MILES) website, www.mi.mun.ca/miles.

All programs and courses are designed to provide students with the knowledge and skills required for success in the workforce. The Institute seeks the advice of industrial program advisory committees in the ongoing development and review of programs. Whenever appropriate, it submits programs for national accreditation, providing graduates with mobility in professional employment.

2 Description of Degree Programs

Students must meet all regulations of the Fisheries and Marine Institute in addition to those stated in the University's general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (undergraduate), refer to **UNIVERSITY REGULATIONS**.

For information about non-degree programs and upgrading opportunities, refer to the Marine Institute's website www.mi.mun.ca.

2.1 General Degrees

The Marine Institute offers two undergraduate degrees. For specific details on each degree refer to the appropriate **Degree Program Regulations**. The courses in the programs are available on campus and by distance delivery.

2.1.1 Bachelor of Maritime Studies

The Bachelor of Maritime Studies program prepares graduates for career advancement in the maritime and related industries. It is designed for students who have graduated from accredited, or Transport Canada approved, diploma of technology programs in the marine fields. The program is also available to professional mariners and certain Canadian Forces (Naval Operations) personnel. Courses in the program provide the student with an introduction to human resource and business management concepts, and the social contexts in which their careers will be based. The program consists of 39 credit hours in addition to work completed in a diploma program and can be taken on a full-time or part-time basis.

2.1.2 Bachelor of Technology

The Bachelor of Technology program prepares graduates for career advancement in health science technology or engineering/applied science technology industries. It is designed for students who have graduated from an accredited diploma of technology program that is applicable to one of two optional areas. Courses in the program provide the student with an introduction to human resource and business management concepts, and the social contexts in which their careers will be based. The program consists of 39 credit hours in addition to work completed in a diploma program and can be taken on a full-time or part-time basis.

The optional areas are:

- Engineering and Applied Science Technology Option, which is normally chosen by students who have an engineering/applied science technology diploma.
- Health Sciences Technology Option, which is normally chosen by students who have a health sciences technology diploma.

3 Admission/Readmission Regulations for Degree Programs

In addition to meeting the admission/readmission requirements for the University students must also meet the admission/readmission requirements for the Marine Institute. See **UNIVERSITY REGULATIONS Admission/Readmission to the University (Undergraduate)** for University requirements.

3.1 General Information

1. All application forms must be submitted to the Admissions Office, Office of the Registrar, Memorial University of Newfoundland, St. John's, NL, A1C 5S7.
2. Students who want to take University courses concurrently with diploma courses should check either Pre-Bachelor of Maritime Studies or Pre-Bachelor of Technology on the Memorial University of Newfoundland application for admission/readmission form.

3.2 Admission Requirements for Applicants to the Bachelor of Maritime Studies Program

1. An applicant must submit a form for admission/readmission to the University. This application must include all required documentation including proof of the diploma or certificate required for admission in a specific category.
2. **Categories for admission to the Bachelor of Maritime Studies**
Applicants must meet the general admission/readmission requirements of the University and be eligible for admission to the Bachelor of Maritime Studies program in one of the following categories:
 - Category A: applicants holding a diploma from the Marine Institute in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology or marine engineering technology,
 - Category B: applicants holding a Canadian Technology Accreditation Board accredited, or Transport Canada approved, diploma in marine engineering technology or nautical science,
 - Category C: applicants holding a Canadian or non-Canadian diploma similar to an accredited or Transport Canada approved Marine Institute diploma in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology,
 - Category D: applicants holding a Transport Canada Certificate of Competency at the Master Mariner or Engineering First Class level or equivalent,
 - Category E: applicants holding a Transport Canada Certificate of Competency at the Master, Intermediate Voyage level or equivalent,
 - Category F: applicants holding a Transport Canada Certificate of Competency at the Engineering Second Class level or equivalent,
 - Category G: applicants who have Canadian Forces (Naval Operations) training of a type and at a level acceptable to the Admissions Committee.
3. Applications to the program will be considered by the appropriate admissions committee(s).

3.3 Admission Requirements for Applicants to the Bachelor of Technology Program

1. An applicant must submit a form for admission/readmission to the University. This application must include all required documentation including proof of the diploma or certificate required for admission in a specific category.
2. **Categories for admission to the Bachelor of Technology Program**
Applicants must meet the regular admission requirements of the University and be eligible for admission in one of the following categories:
 - Category A: applicants holding a diploma of technology accredited by the Canadian Medical Association (CMA),
 - Category B: applicants holding a diploma of technology in engineering/applied science technology accredited by the Canadian Technology Accreditation Board (CTAB),
 - Category C: applicants holding a diploma of technology comparable to a Marine Institute or College of the North Atlantic three-year CTAB accredited diploma in engineering/applied science technology,
 - Category D: applicants holding a diploma of technology comparable to a College of the North Atlantic three-year CMA accredited diploma.
3. Upon acceptance into the program, students will be admitted to one of the two options: the Engineering and Applied Science Technology Option or the Health Sciences Technology Option. Students may be permitted to change their option with the approval of the Marine Institute Committee on Undergraduate Studies.
4. Applications to the program will be considered by the appropriate admissions committee(s).

4 Degree Program Regulations

4.1 Bachelor of Maritime Studies

- Students must complete 39 credit hours in addition to the work which was required under their category of admission.
- The required and elective courses are listed in **Table 1 Bachelor of Maritime Studies - Course Requirements For All Students**. These courses may have prerequisites which have to be met.
- Students admitted to the program in certain categories may have to complete additional requirements. These are listed in **Table 2 Bachelor of Maritime Studies - Additional Requirements Based on Category of Admission**.
- When transfer credit has been granted for a course(s) taken to satisfy the requirements for admission students must take an additional elective University course(s).
- To meet the academic requirements for a Bachelor of Maritime Studies a candidate shall successfully complete the following program with a minimum overall average of 60% and a minimum numeric grade of 50% in each course required for the degree.
- Students must take 39 credit hours with 21 credit hours from the required courses and 18 credit hours from the electives.
- At least one elective must be chosen from each of the groups A and B.

Table 1 Bachelor of Maritime Studies - Course Requirements for All Students

Required Courses	Group A Electives	Group B Electives
Business 1000 Business 2301 English - 3 credit hours at the 1000 level MSTM 4001 MSTM 4004 MSTM 4060 MSTM 4100 MSTM 4200	Business 1201 Business 2102 Business 3320 Business 4000 Business 4320 Business 5301 Business 6320 Business 7302 MSTM 4002 MSTM 4003 MSTM 4005 MSTM 4020 MSTM 4040 MSTM 4050 Statistics 2500	Economics 2010 Economics 2020 Economics 3030 Economics 3360 Geography 3510 Geography 4410 MSTM 4030 Political Science 3210 Political Science 4200 Sociology 2120 Sociology 3120 Sociology/Anthropology 3317 Sociology/Anthropology 4091

Table 2 Bachelor of Maritime Studies - Additional Requirements Based on Category of Admission

Category of Admission	Additional Requirements
A: Students holding a diploma from the Marine Institute in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology.	No additional requirements.
B: Students holding a Canadian Technology Accreditation Board accredited, or Transport Canada approved, diploma in marine engineering technology or nautical science.	No additional requirements, with the possible exception of course prerequisites.
C: Students holding a Canadian or non-Canadian diploma similar to an accredited or Transport Canada approved Marine Institute diploma in nautical science, marine engineering technology, naval architecture technology or marine engineering systems design technology.	May have to complete additional requirements.
D: Students holding a Transport Canada Certificate of Competency at the Master Mariner or Engineering First Class level or equivalent.	No additional requirements, with the possible exception of course prerequisites.
E: Students holding a Transport Canada Certificate of Competency at the Master, Intermediate Voyage level or equivalent.	Either: <ul style="list-style-type: none"> • Transport Canada - Ship management 093 (Master Mariner) or • Both of: Marine Institute Business and Organizational Management 3114 and Marine Institute Business and Organizational Management 3204. The prerequisite(s) for Business and Organizational Management 3204 will be waived.
F: Students holding a Transport Canada Certificate of Competency at the Engineering Second Class level or equivalent.	Transport Canada - Applied Mechanics (1st Class) Transport Canada - Thermodynamics (1st Class) Transport Canada - Electrotechnology (1st Class)
G: Students who have Canadian Forces (Naval Operations) training of a type and at a level acceptable to the Admissions Committee.	May have to complete additional requirements.

4.2 Bachelor of Technology

Students must complete 39 credit hours in addition to the work which was required under their category of admission.

The required and elective courses are listed in **Table 3 Bachelor of Technology - Engineering and Applied Science Technology Option** and **Table 4 Bachelor of Technology - Health Science Technology Option**. These courses may have prerequisites which have to be met.

When transfer credit has been granted for a course(s) taken to satisfy the requirements for admission, students must take an additional elective(s) in the Bachelor of Technology program.

To meet the academic requirements for a Bachelor of Technology a candidate shall successfully complete the program with a minimum overall average of 60% and a minimum numeric grade of 50% in each course required for the degree.

4.2.1 Bachelor of Technology - Engineering and Applied Science Technology Option

- Students must take 39 credit hours with 24 credit hours from the required courses and 15 credit hours from the electives.
- At least one elective must be chosen from each of the groups A and B.

Table 3 Bachelor of Technology - Engineering and Applied Science Technology Option

Required Courses	Group A Electives	Group B Electives
Business 1000 Business 2301 Engineering 4102 or MSTM 4020 English - 6 credit hours at the 1000 level MSTM 4010 MSTM 4060 MSTM 4100 MSTM 4200 Statistics 2500	Business 1201 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4003 MSTM 4005 MSTM 4040 MSTM 4050 MSTM 4070	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 Religious Studies 3830 Sociology 2120 Sociology 4206

4.2.2 Bachelor of Technology - Health Sciences Technology Option

- Students must take 39 credit hours with 21 credit hours from the required courses and 18 credit hours from the electives.
- At least one elective must be chosen from each of the groups A, B, and C.

Table 4 Bachelor of Technology - Health Science Technology Option

Required Courses	Group A Electives	Group B Electives	Group C Electives
Business 1000 Business 2301 English - 6 credit hours at the 1000 level MSTM 4060 MSTM 4100 MSTM 4200 Nursing 4002 Nursing 5210	Business 1201 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4003 MSTM 4040 MSTM 4050	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 Religious Studies 3830 Sociology 2120 Sociology 4107 or Women's Studies 4107 Sociology 4206	Biology 2040 or Biology 2041 Nursing 3023 Nursing 4701 Psychology 2010 or Psychology 2011 or Psychology 2012 Psychology 2800 Sociology 2110

5 Waiver of Degree Program Regulations

Students requesting waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**. Every student also has the right to request waiver of degree program regulations.

5.1 General Information

- The Marine Institute reserves the right in special circumstances to modify, alter, or waive any Marine Institute regulation in its application to individual students where merit and equity so warrant, in the judgement of the Committee on Undergraduate Studies of the Marine Institute.
- Students requesting a waiver of a Marine Institute regulation must submit their request in writing to the head of the program who will forward a recommendation to the Chair of the Committee on Undergraduate Studies of the Marine Institute. Medical and/or other documentation to substantiate the request must be provided.
- Any waiver granted does not reduce the total number of credit hours required for the degree.

6 Appeal of Regulations

Any student whose request for waiver of Marine Institute regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Regulations**.

7 Course Descriptions

All courses of the Marine Institute degree programs are designated as MSTM (Maritime Studies/Technology Management).

4001 The Organization and Issues of Shipping will provide students with knowledge of the economic shipping environment with respect to Canada. The course will develop an understanding of basic trade theory, patterns of trade and sea routes, commodities traded by sea, and the organizational structure of shipping companies.

CR: the former Engineering 8065; Maritime Studies 4001

4002 The Business of Shipping will provide students with an understanding of financial statements, costs, revenues and financial performance of shipping companies as well as computing, voyage and annual cashflows. The course will develop an understanding of marine insurance and forecasting, and risk management.

PR: MSTM 4001

4003 Environmental Management System for Technologists will provide students with a knowledge and understanding of international standards for environmental management. The course will develop an understanding of the ISO 14000 standard, its requirements and the process for establishing an environment management system (EMS). The course will include a consideration of the documentation and other requirements for ISO 14000 registration.

CO: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

4004 Marine Environmental Management will introduce students to the requirements for the safe management of the marine environment. The course will introduce major environmental problems and identify the major threats to the marine environment. It will provide a working knowledge of these threats and consider the possible counter measures that may be employed by employees in the marine industry.

CO: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

4005 Trends and Issues in International Shipping will provide students with an understanding of how regulatory bodies and their legislation have evolved to affect the modern seafarer trading internationally. This course will develop an understanding of the various rules and regulations dealing with Classification, ISM, MAPROL, SOLAS and SIRE inspections which have to be dealt with on a daily basis at sea.

4010 Assessment and Implementation of Technology (formerly Technology 4010) examines the effects of technology on the physical, socio-economic, historic, cultural and aesthetic environments. The course also addresses relevant legislation, the generation and evaluation of project/product alternatives, and the prediction, verification and mitigation of technological effects.

CR: Technology 4010

4020 Economic Management for Technologists (formerly Technology 4020) provides an introduction to the economics of technological projects. Students will study the mathematics of money, cost composition, and project

evaluation, including cost comparison. They will also learn to analyze projects for decision making, including risk assessment and replacement analysis. In addition, they will learn to use suitable criteria for project selection, and to conduct sensitivity analysis.

CR: Engineering 4102; Technology 4020

4030 Technology in the Human Context (formerly Technology 4030) examines technology in the historical context and technology in the modern era. Students will discuss human insights, innovation, the interactions between development and technology transfer, ethics and professionalism and how to develop a technology value system.

CR: Technology 4030

4040 Project Management for Technologists (formerly Technology 4040) will introduce the student to the interdisciplinary field of project management. The course covers the interpersonal skills necessary to successfully lead or work effectively within a project team as well as providing an overview of certain planning and scheduling tools and techniques necessary for the planning and monitoring of projects.

CR: Technology 4040

4050 Introduction to Quality Management (formerly Technology 4050) will provide students with an understanding of the philosophy and concepts involved in the total quality approach to quality management. The course covers the various tools and techniques used in quality management as well as providing an overview of the role of management.

CR: Technology 4050

4060 Advanced Technical Communications will enhance the technical communication skills of students. The course content examines technical writing fundamentals; information gathering, analysis, and documentation; proposal preparation; technical document applications; technical report preparation; graphics preparation; and technical presentations. The course will provide students with the knowledge and skills necessary to develop proposals, reports, and presentations for technical projects.

4070 Special Topics in Technology will provide the opportunity for students to maintain technical currency through a review of recent advances in technology and their application to particular technical areas.

PR: Admission to the Bachelor of Technology Program and MSTM 4060

4100 Technical Project and Report I (formerly Maritime Studies 4000 and Technology 4000) requires the student to identify a research topic in a specialty area, write a concept paper and develop a proposal to be carried out in MSTM 4200. In addition, the course offers an opportunity to improve time management, critical thinking, project management, problem solving, and reading/writing skills as related to the research process.

CH: 1

CR: Maritime Studies 4000; Technology 4000

4200 Technical Project and Report II (formerly Maritime Studies 4000 and Technology 4000) provides a link between the other courses of the program and the technical component from the diploma program. Students will carry out an in-depth study of the topic identified in MSTM 4100. Students will fully document and present their findings through the writing of a formal technical report.

CH: 2

CR: Maritime Studies 4000; Technology 4000

PR: MSTM 4100

8 Maritime Studies/Technology Management (MSTM) Courses Available to Students not Enrolled in a Degree Program Offered by the Fisheries and Marine Institute

Students not in a degree program offered by the Marine Institute may register in courses from the following list if space is available.

- 4030 Technology in the Human Context
- 4040 Project Management for Technologists
- 4050 Introduction to Quality Management

