FISHERIES AND MARINE INSTITUTE

FISHERIES AND MARINE INSTITUTE

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School of Maritime Studies

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School of Ocean Technology

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School of Fisheries

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Bonnell, C., B.Sc. *Memorial*, Adv. Dip. *Marine Institute*
Bonnell, L., B.Sc., M.Sc. *Memorial*
Blundon, J., B.Sc., B.Ed. *Memori*al, Grad.Dip.Tech. *Marine Institute*, M.M.S. *Memorial*
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Durnford, E., Dip.Tech. *Marine Institute*, B.Sc., B.Ed., M.Sc. *Memorial*
Dwyer, C., Dip. of Food Technology *Marine Institute*
Fortune,S., B.Sc., B.Ed. (Post-Secondary) *Memorial*, Adv. Dip. Food Safety, *Marine Institute*
Gibbons, R.C., B.A., M.M.S. *Memorial*, F.M.1
Grant, S., B.Sc. *Wilfred Laurier*, M.Sc. Trent, Ph.D. *Memorial*
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Halfyard, L., B.Sc., B.Ed., *Memorial,* M.Sc., Ph.D. *Sterling*
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Hayter, R., Dip.Tech. *College of Fisheries*, B.Tech. *Memorial*
Hyde, R., Voc.Cert. *Marine Institute*, B.Voc.Ed. *Memorial*, Tech.Cert. *Marine Institute*, C.B.Ad. *Memorial*
Kennedy, E., Dip.Tech. *College of Fisheries*, B.Tech. *Memorial*
Mercer, K.B., B.Sc. *Dalhousie*, Adv.Dip. *Marine Institute*
Milley, N., B. A., B.Ed., M.M.S. *Memorial*
Morris, P., FM1
Onodenalore, C., B.Sc., M.Sc. *University of Benin*, B.Ed, M.Sc, Ph.D. *Memorial*
Patel, J., M.S. *TWU, USA*, Ph.D. *State University of NY, USA*
Perry, J., B.Sc. (Nutrition), B.Ed. {Post-Secondary) *Memorial*, Adv. Dip. Food Safety *Marine Institute*
Perry, R.A., B.A. (Ed.), B.A., M.A., M.B.A. *Memorial*
Pippy, M.C., B.Sc., B.Ed., M.A.Sc. *Memorial*
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Rideout, K., B.Sc. *Memori*al, Graduate Diploma *Marine Institute*, M.M.S. *Memorial*
Robertson, K., B.Sc., Adv.Dip., B.Ed., M.A.Sc. *Memorial*
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Strickland, J., Dip. Tech. *Marine Institute*, B.Sc., M.B.A. *Memorial*
Trenholm, R., Dip. Ag. Eng. *NSAC*, B.Eng. *TUNS*, M.Sc. *Memorial*
Whiteway, G., Dip.Tech. *College of Fisheries*, B.Sc., B.Voc.Ed., M.Sc. *Memorial*

School of Maritime Studies

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Anastasiadi, A., Dip.Eng. *Batumi Marine College USSR*, Marine Engineer (2nd Class)
Anstey, F.A., B.A., B.Voc.Ed., Cert.Bus.Adm., M.Ed. *Memorial*, Master Intermediate Voyage
Azizan, H., Dip.Tech. *College of Fisheries*, B.Voc.Ed., M.Ed., M.M.S. *Memorial*, M.M.M. *Dalhousie*, M.Sc. *Plymouth*, Master Mariner
Bae, C., B.Eng., M.Eng. *Inha University*
Baker, K., Dip.Tech. *College of Fisheries*
Barron, R., Dip. Tech. Nautical Science *Marine Institute*, Watchkeeping Mate
Bartlett, D., IFSTA *Oklahoma State University*, Fire Instructor I & II; Fire Inspector I & II; Officer I & II; Fire Cause Determination; Hazardous Material Identification/Response; NFPA II
Blackmore, D., B.Voc.Ed. *Memorial*, F.M.1
Brake, D. J., B.Sc., B.Ed., B.A., M.Ed. *Memorial*
Brazil, D., Dip.Tech. *Marine Institute*, Master Intermediate Voyage
Budgell, D. B.Sc., B.A., B.Ed., M.Ed.(Post Secondary), M.Ed. *Memorial*
Callahan, C., B.Sc., B.Ed. *Memorial*
Clarke, C., Dip. Tech. *Marine Institute*, Master Intermediate Voyage
Clouter-Gergen, E., B.A., B.Ed. *Memorial*, M.Ed. *College of St. Scholastica*
Courage, A., B.Eng., M.A.Sc., P.Eng.
Cross, J., Dip. Tech. *Georgian*, B.Sc. *Queens*, M.Eng. *Memorial*, P.Eng. O.N.II
Curtis, S.L., Dip.Tech. *Marine Institute*, Dip.Voc.Ed. *Memorial* C.E.T.
Dalley, C., B.A., B.A.(Ed.), M.Ed. *Memorial*
Dohey, P., B.Ed. *Memorial*, M.Sc. *University of Lester*
Donnelly, D., Master Mariner
Doyle, T., NFPA 472, NFPA 1001 Level 1 & II, NFPA 1002, NFPA 1003, NFPA 1041 Level 1 & II
Drake, S., Master Mariner
Dunphy, L., Cert.Adv. Instructor Methodology *St. Mary's*
Dwyer, D., Diploma of Nautical Science, Master Intermediate Voyage
Ennis, J., Dip. Tech. *College of Fisheries*, Master Mariner
Fewer, J., Restricted Watch Keeping, FM III, Marine Diesel Mechanic Engine Room Rating Certification, NFPA 472, NFPA 1001 Level I & II
Fiander, G. R., Dip.Tech. *Marine Institute*, Master Intermediate Voyage
Francis, D., Dip. Post Secondary Ed., B.M.S, B.Ed. *Memorial*, Diploma Marine Surveying *Lloyds*, Marine Engineer (1st Class)
Freeborn, A., Marine Engineer (1st class)
Gallant, T., NFPA. 472, NFPA 1001 Level I-III, NFPA 1002, NFPA 1003, NFPA 1041 Level I & II
Goulding-Harnum, S., B.Ed. *Memorial*, NFPA 472, NFPA 1001 Level I & II, NFPA 1041 Level I & II, NFPA 1021 Level I - IV
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Hargreaves, B., Fishing Master I, Master Mariner, Cert. Post-Secondary Education *Memorial*
Harvey, G.

Hopkins, C., Dip.Tech. *Marine Institute*, B.M.S. *Memorial*, NFPA 1001 Fire Fighter 2, First Mate Intermediate Voyage
Hye-Knudsen, K., Master Mariner
Kalra, C.S., Master Mariner, M.C.S.E., Cert. Post-Secondary Education *Memorial*
Kavanagh, T., Dip.Tech. *Marine Institute*, Marine Engineer, (3rd class motor, 4th class steam, 4th class power)
Kearney, G., Dip. Tech. *Marine Institute*, Dynamic Positioning Certificate *Nautical Institute*, Master Mariner
Kennedy, J., Master Mariner
Kiash, R. S., Dip.Voc.Ed. *Memorial*, C.Eng., Marine Engineer (1st class motor & steam), C.E.T.
Lacour, D., B.Comm. *Memorial*, NFPA Level 2 Firefighting Cert. *University of Oklahoma*, Paramedic I
Lambert, F., Dip. Tech *Marine Institute*, Master Mariner, Cert. Post-Secondary Education *Memorial*
Lawlor, G., NFPA II
Marshall, M., B.Eng., M.Eng., Ph.D. *Memorial*, P.Eng.
Martin, P., Master Mariner
McCulloch, C., B.A. *St. Francis Xavier*, M.A., DPW *Memorial*
Meadus, F., CD, Communications Specialist, Dip. Post Secondary Ed. *Memorial*, Cert. Occupational Health & Safety *College of the North Atlantic*
Mercer, R., B.Voc.Ed., M.Ed. *Memorial*, Master Mariner
Molloy, G.
Mueller, U., Master Mariner
Norris, M., Dip. Tech. Technical Marine Engineering *Marine Institute*, Third Class Marine Engineer
Noseworthy, D., Red Seal Certification (Machinist & Millwright)
O'Brien, I., Dip. Tech. *Marine Institute*
O'Keefe, T., Dip. Tech. *Marine Institute*, B.Tech., B.Ed., M.Ed. *Memorial*
Oliver, J., Primary Care Paramedic, Emergency Medical Responder Instructor Trainer
O'Quinn, B., N.F.P.A 472, N.F.P.A 1001 Level I & II, N.F.P.A. 1002, N.F.P.A. 1003, N.F.P.A. 1041 Level 1
Parsons, J.R., Dip. Tech. *College of Fisheries*, B.M.S., Cert. Business Administration, B.Ed. *Memorial*, M.Sc. *Maine Maritime*, Ph.D. *Plymouth*, FCIP, CRM; Master Mariner
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Pelley, J., B.Sc., B.Ed. *Memorial*
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Pond, J., B.Eng., Cert. Post-Secondary Education *Memorial*
Pynn, W., Dip. Tech. *Marine Institute*, MBA *University of Warwick*
Rees, J., Journeyman Welder Certificate with Interprovincial Red Seal *SAIT*, Cert. Post-Secondary Education *Memorial*
Ryan, J. C., B.P.E., B.Ed., B.Sc., B.A. *Memorial*
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Simoes Ré, J.M., Curso Elementar de Pilotagem *ENIDH-Lislon*, Curso Complementar de Piolotagem *ENIDH-Lisbon*, Capitao Marinha Mercante, Master Mariner
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Small, G., B.Sc., B.Ed. *Memorial*
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Tucker, J., B.Eng., M.Eng. *Memorial*, P.Eng.
Turpin, D., Marine Engineer (2nd Class Steam), Power Engineer (4th Class)
Ward, E., Dip.Voc.Ed. *Memorial*
Wareham, M., Dip. Tech. (MESD), Dip. Tech. (NA) *Marine Institute*, B.Eng. *Memorial*
Webber, K., Heavy Oil Operations Technician Certificate, 4th Class Power Engineer, Gas Processing Operations *Lakeland College*
White, A., Dip.Tech. *College of Fisheries*, B.Tech., B.M.S. *Memorial*, Marine Engineer (1st Class Motor, 4th Class Steam)
Williams, G., Dip. Tech. *College of Fisheries*, Master Mariner
Woolridge, D., B.Sc., B.Ed., M.Ed. *Memorial*
Young, J., Voc.Cert. *Marine Institute*, NFPA-Level 3 Firefighting Cert. *Virginia Fire Programs*, NFPA Level 3 Cert. *University of Oaklahoma*, NFPA Fire Officer 1, NFPA Fire Instructor 1, High Angle Rescue Instructor, Confined Space Rescue Instructor, Certified Registered Safety Professional (CRSP)

School of Ocean Technology

www.mi.mun.ca/sot/people/

Howse, D., B.Eng., M.Eng., M.B.A. *Memorial*, P.Eng. (School Head)
Brett, P., B.Sc., B.Ed., M.Sc. *Memorial*
Chaulk, C., B. Eng., B.Ed., M.Ed. *Memorial*
Coronado, C., B.Eng. *Monterrey*, M.Sc. *Chalmers*, Ph.D. *École Polytechnique*
Elliott, P., B.Sc., B.Ed., Dip. Tech. Ed., M.Ed. *Memorial*
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Haynes, D., Dip. Tech. *College of Trades and Technology*, B.Eng. *Memorial*, P.Eng.
Keats, C., Dip. Tech. *Marine Institute*, B. Tech., M.Env.Sci. *Memorial*
Matchem, J., B. Eng., B.Ed. *Memorial*
Matchim, R., B.Eng. *Memorial*
Mekeever, T.J., B.Sc., M.Sc. *Memorial*, Graduate Diploma *Marine Institute*
Piercey, V., B.Eng *Memorial*, P.Eng.
Ragunathan, J., B.Eng. *Madurai Kamaraj University India*, M.Eng. *Bharathidasan University India*, Ph.D. *Memorial*
Roche, R., B.Eng. *Memorial*
Ryan, P., Dip Tech., B. Eng. *College Militaire Royale du Canada*, B.Ed., M.E.M. *Memorial*, P. Eng., CD
Sekaran, K., B.E. *University of Madras*, M.Eng. *Memorial*
Smith, W., Cert. Red Seal, Dip. Tech. *College of Fisheries*, B. Tech, Cert. Voc. Ed. *Memorial*, C.E.T.
VanderVoort, R., B.Sc. *Windsor*
Venkatraman, S., B.Eng. *Bharathidasa*, M.Eng. *Sastra*
Way, B., B.Eng., M.B.A., M.Ed. *Memorial*, P.Eng.
Wells, D., D. Tech, B. Eng., B.Ed. (Post-Secondary), *Memorial*, P.Eng.
Wu, L., B.Eng. *Northwestern Polytech University*, M.Eng. *Memorial*

1 The Memorial University of Newfoundland Code

The attention of all members of the University Community is drawn to the section of the University Calendar titled **The Memorial University of Newfoundland Code**, which articulates the University's commitment to maintaining the highest standards of academic integrity.

2 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, the Safety and Emergency Response Training (SERT) Centre in Stephenville and a marine base on the south side of St. John's harbour.

The Marine Institute provides a full range of programs focussing 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.

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.

2.1 The Marine Institute Students' Union (MISU)

The Marine Institute Students' Union (MISU) was incorporated in 1991. It is committed to the provision of services to students as well as representing the student body at the national, provincial and institute levels in matters affecting the quality of student life.

The MISU is a prominent member of The Canadian Federation of Students (CFS). The CFS provides a voice for students at over 70 universities, colleges, and technical institutes across Canada including more than 32,000 students in Newfoundland and Labrador. The national body has a strong presence in Ottawa and ensures students' opinions are known on Parliament Hill. Services provided by CFS include the National Student Health Network, student saver cards, Student Work Abroad Program (SWAP), International Student Identity Cards (ISIC), and Travel Cuts. The CFS Newfoundland and Labrador (CFS-NL) ensures student's opinions are know in the Provincial House of Assembly. The MISU takes part in the CFS bi-annual conferences to discuss and form policies on behalf of students.

Within the Institute, the MISU has representation on a number of committees, including the Marine Institute Industry Advisory committee and the Academic Council, where the Union members ensure that student well-being is at the forefront in all policies affecting student life. The MISU provides the student health plan. Many social and recreational activities are planned and sponsored by the MISU including Winter Carnival held during the last week of January. Profits from the social activities are returned to the students in the form of scholarships. The MISU manages and maintains the student lounge -The Mariner's Lounge.

3 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 www.mi.mun.ca.

3.1 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.

3.1.1 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, professional fish harvesters 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.

3.1.2 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.

4 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.

4.1 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. For the purpose of satisfying the requirements of ***UNIVERSITY REGULATIONS*** **- Year of Degree and Departmental Regulations - All Other Faculties and Schools**, Pre-Bachelor of Maritime Studies and Pre-Bachelor of Technology students will normally follow regulations in effect in the academic year in which the student first completes a course(s) in the Bachelor of Maritime Studies or Bachelor of Technology program as a Pre-Bachelor of Maritime Studies or Pre-Bachelor of Technology student. However, the student may elect to follow subsequent regulations introduced during the student’s tenure in a program.
4. Students may not obtain both a Bachelor of Maritime Studies and a Bachelor of Technology degree based upon completion of the same diploma of technology.

4.2 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,
   - 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, Fishing Master First Class 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).
4. In accordance with the ***UNIVERSITY REGULATIONS* - Residence Requirements - Second Degree**, students completing the Bachelor of Maritime Studies program, as a second degree, must complete a minimum of an additional 9 credit hours beyond a first degree and the work completed as required for admission to this degree.

4.3 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).
5. In accordance with the ***UNIVERSITY REGULATIONS* - Residence Requirements - Second Degree**, students completing the Bachelor of Technology program, as a second degree, must complete a minimum of an additional 9 credit hours beyond a first degree and the work completed as required for admission to this degree.

5 Degree Program Regulations

5.1 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 3 credit hours in English at the 1000 level MSTM 4001 MSTM 4004 MSTM 4040 MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4100 MSTM 4200	Business 1101 or 2102 Business 4000 MSTM 4002 MSTM 4005 MSTM 4011 MSTM 4012 MSTM 4013 MSTM 4020 MSTM 4050 MSTM 4080 Statistics 2500	Economics 2010 Economics 2020 Economics 3030 Economics 3360 Geography 3510 Geography 4410 MSTM 4030 Philosophy 2801 Political Science 3210 Political Science 4200 Sociology 2120 Sociology 3120

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, Fishing Master First Class 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: • 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.

5.2 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.

5.2.1 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
3 credit hours in English at the 1000 level MSTM 4010 MSTM 4020 MSTM 4040 MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4090 MSTM 4100 MSTM 4200 Statistics 1510 or 2500	Business 1000 Business 1101 or 2102 Business 4000 Economics 3360 MSTM 4011 MSTM 4012 MSTM 4013 MSTM 4050 MSTM 4070 MSTM 4080	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4014 MSTM 4030 Philosophy 1100 Philosophy 2571 Religious Studies 3830 Sociology 2120

5.2.2 Bachelor of Technology - Health Science Technology Option

- Students must take 39 credit hours with 18 credit hours from the required courses and 21 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
3 credit hours in English at the 1000 level MSTM 4040 MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4090 MSTM 4100 MSTM 4200 Nursing 5210	Business 1000 Business 1101 or 2102 Business 4000 Economics 3360 MSTM 4011 MSTM 4012 MSTM 4013 MSTM 4050 MSTM 4080	Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4014 MSTM 4030 Philosophy 1100 Philosophy 2551 or 2552 or 2553 Philosophy 2571 Religious Studies 3830 Sociology 2120	Biology 2040 or 2041 Nursing 3023 Nursing 4002 Nursing 4701 Psychology 2010 or 2011 or 2012 Psychology 2800 Sociology 2110

6 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.

6.1 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.

7 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**.

8 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

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.
PR: Admission to 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.
PR: Admission to the Bachelor of Maritime Studies program

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: the former Technology 4010

4011 Introduction to Intellectual Property and its Management is an introductory course to the management of Intellectual Property Rights (IPRs). This course will cover the philosophical rationale for intellectual property rights, its technical and legal considerations, its implications to the development of science and technology and its economic impact in society.
PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

4012 Occupational Health and Safety Legislation and Management is an introduction to occupational health and safety issues in a technical/industrial context. Students will gain a knowledge and understanding of the legislative framework surrounding occupational health and safety, the assignment of responsibilities in the workplace, the management of occupational health and safety in the workplace and the importance of establishing a positive safety culture.
PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

4013 Structure and Functions of Technology-based Organizations focuses on the emergence of technology-based companies with an emphasis on how we can implement methods to increase their organizational effectiveness. This course will concentrate on the integration of three basic frameworks that are integral to production and performance in the 21st century. It will introduce students to the concepts and processes materializing in a technological milieu. This course also deals with the study of technological economics, organizational progression, structural configurations and operations, and universal and contemporary approaches to organizational design. In addition it will examine the challenges of change that face highly dynamic industries: individual & organizational change, technological change, and national & global change. This course will also examine specialized topics in structure evolution for technology-based organizations with an emphasis on the need for adaptability, innovation & global communications.
PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

4014 Technology and the Environment will help students critically examine technology and the environment and how the two are linked. Topics may include how technology is both the cause of and solution to many environmental problems, the greenhouse effect, renewable energy vs. fossil fuels, recycling vs. landfills, the efficiency paradox, geo-engineering, and other select current topics.
PR: Admission to the Bachelor of Technology program

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 analyse 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; the former Technology 4020
PR: Admission to the Bachelor of Technology or the Bachelor of Maritime Studies program

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: the former 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: the former 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: the former 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

4080 Environmental Management System (formerly MSTM 4003) 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.
CR: the former MSTM 4003

4090 Introduction to Technology will provide a broad survey of practices critical to operating a technology-based business. Topics covered may include an introduction to technology management, historical developments in the management of technology, the functions of technology management, and select current topics that are relevant to operating technology-based businesses.
PR: Admission to the Bachelor of Technology program

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
CO: MSTM 4060 or second English course at the 1000 level
CR: the former Maritime Studies 4000; the former Technology 4000
PR: MSTM 4060 or second English course at the 1000 level

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: the former Maritime Studies 4000; the former Technology 4000
PR: MSTM 4100

9 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.

- 4001 The Organization and Issues of Shipping
- 4010 Assessment and Implementation of Technology
- 4030 Technology in the Human Context
- 4040 Project Management for Technologists
- 4050 Introduction to Quality Management
- 4060 Advanced Technical Communications
- 4080 Environmental Management System