

FISHERIES AND MARINE INSTITUTE

FISHERIES AND MARINE INSTITUTE

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(Guidance) *Memorial*Callahan, C., B.Sc., B.Ed. *Memorial*

Campbell, S., Master Intermediate Voyage

Clarke, C., Dip.Tech. *Marine Institute*, Master Intermediate VoyageClouter-Gergen, E., B.A., B.Ed. *Memorial*, M.Ed. *College of St.**Scholastica*

Cochrane, J., NFPA 1001, Levels I, II, III

Courage, A., B.Eng., M.A.Sc., Cert. Post Secondary Ed. *Memorial*, P.Eng.Cross, J., B.Sc. *Queens*, M.Eng., P.Eng. *Memorial*, First Mate Intermediate VoyageCurtis, 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*

Donnelly, D., Master Mariner

Donnelly, K., Dip. Tech. *Marine Institute*, Dip. Safety Eng. *College of the North Atlantic*, BMS *Memorial*

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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, Cert. Post Secondary Ed. *Memorial*

Fewer, J., Restricted Watchkeeping, FM III, ERR, Bridge Watch

Fiander, G. R., Dip.Tech. *Marine Institute*, Master Intermediate VoyageFrancis, D., Marine Engineer (1st Class), Dip. Post Secondary Ed. *Memorial*

Freeborn, A., Marine Engineer (1st class)

Gallant, T., N.F.P.A. 1001 Level I/II/III, N.F.P.A. 1003

Goulding-Harnum, S., B.Ed. *Memorial*, N.F.P.A. 1001 Level I/II, N.F.P.A. 472

Hargreaves, B., Fishing Master I and Master Mariner

Harnum, C., N.F.P.A. 1003 & N.F.P.A. 1001 Level II

Harris, C., B.Eng., M.Eng. *Memorial*

Harvey, G.

Hopkins, C., Dip.Tech.(NS) *Marine Institute*, First MateIntermediate Voyage, BMS *Memorial*, NFPA 1001 Fire Figher 2

Hye-Knudsen, K., Master Mariner

Kavanagh, T. J., Dip.Tech. *Marine Institute*, Marine Engineer, (3rd class motor, 4th class steam)Kearney, G., Dip. Tech. *Marine Institute*, Master Intermediate,Dynamic Positioning Certificate *Nautical Institute*Kiash, R. S., Dip.Voc.Ed. *Memorial*, C.Eng., Marine Engineer (1st

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Mueller, U., Master Mariner

Noseworthy, D.

O'Keefe, T., Dip.Tech. *Marine Institute*, B.Tech. *Memorial*

O'Quinn, B., N.F.P.A. 1003 & N.F.P.A. 1001 Level II & / N.F.P.A.

472 Haz-Mat Awareness and Operations / N.F.P.A. 1002

Pumper Operator / High Angle and Confine Space Rescue

Instructor, St. John Ambulance First Aid Instructor

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- Peach, A., B.A.(Honours) *Memorial*, M.A. *Toronto*
- Pearson, P., B.Eng. *Memorial*, M.Sc. *London* (on leave)
- Pelley, J., B.Sc., B.Ed. *Memorial*
- Piercey, H., N.F.P.A. 1001 Level II & / N.F.P.A. 472 Haz-Mat Awareness and Operations / N.,F.P.A 1002 Pumper Operator
- Pond, J., B.Eng. *Memorial*
- Porter, A., Dip.Tech. *Marine Institute*, B.Tech. *Memorial*
- Pynn, W., Dip.Tech. *Marine Institute*, MBA *University of Warwick*
- Ryan, J. C., B.P.E., B.Ed., B.Sc., B.A. *Memorial*
- Saric, M., M.Ed., *Uppsala*, M.Sc. *Dalhousie*, AIT (GCAT) Dip.
- Shanahan, J., Dip.Voc.Ed. *Memorial*, Marine Engineer (4th Class), Millwright (Indust.Mech.) Interprovincial Cert.
- Short, C., Master Mariner
- Simoes Ré, J.M., Curso Elementar de Pilotagem *ENIDH-Lislon*, Curso Complementar de Pilotagem *ENIDH-Lisbon*, Capitao Marinha Mercante, Master Mariner
- Singleton, J., B.Eng. *Memorial*
- Small, G., B.Sc., B.Ed. *Memorial*
- Smith, D., Dip. Tech. *Marine Institute*
- Snow, R., N.F.P.A., Level 3 Firefighting Cert., *University of Oklahoma*
- St. Croix, J., B.A., B.Ed., M.Ed., M.A. *Memorial*
- Stapleton, G., NFPA 1003, NFPA 1001 Level I/II/III, NFDA 1002, NFDA 472
- Stone, B., B.Eng., M.Eng., M.B.A. *Memorial*
- 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*
- Warren, V.
- Wareham, M., Dip. Tech. (MESD), Dip.Tech. (NA) *Marine Institute*, B.Eng. *Memorial*
- Way, B., B.Eng., M.B.A., M.Ed. *Memorial*, P.Eng.
- White, A., Dip.Tech. *College of Fisheries*, Marine Engineer (1st Class Motor, 4th Class Steam)
- Whitelaw, B., B.Sc. *Newcastle*
- Williams, G., Master Mariner
- Woolridge, B.
- 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 Oklahoma*, NFPA Fire Officer 1, NFPA Fire Instructor 1, High Angle Rescue Instructor, Confined Space Rescue Instructor, Certified Registered Safety Professional (CRSP)
- Zaki, A., Dip.Tech. *College of Fisheries*, Master Mariner

School of Ocean Technology

- Howse, D., B.Eng., M.Eng., M.B.A. *Memorial*, P.Eng. (School Head)
- Brett, P., B.Sc., M.Sc. *Memorial*
- Chaulk, C., B. Eng. *Memorial*
- Enanny, F.A., B.Sc. *Ain Shams University, Egypt*, M.S.(Eng.) *U.C. Berkeley*, B.Voc. Ed., M.Ed., *Memorial*, P.Eng.
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- Matchim, B.Eng. *Memorial*
- Ragunathan, J., B.Eng. *Madurai Kamaraj University India*, M.Eng. *Bharathidasan University India*, Ph.D. *Memorial*
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- VanderVoort, R., B.Sc. *Windsor*
- Way, B., B.Eng., M.B.A., M.Ed. *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.

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 Business 2301 3 credit hours in English at the 1000 level MSTM 4001 MSTM 4004 MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4100 MSTM 4200 | Business 1210 Business 2102 Business 3320 Business 4000 Business 4320 Business 5301 Business 6320 Business 7302 MSTM 4002 MSTM 4005 MSTM 4020 MSTM 4040 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: <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. |

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 |
|--|--|--|
| Business 1000 Business 2301 Engineering 4102 or MSTM 4020 3 credit hours in English at the 1000 level MSTM 4010 MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4100 MSTM 4200 Statistics 2500 | Business 1210 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4005 MSTM 4040 MSTM 4050 MSTM 4070 MSTM 4080 | Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 Philosophy 2801 Religious Studies 3830 Sociology 2120 Sociology 4206 |

5.2.2 Bachelor of Technology - Health Science Technology Option

- Students must take 39 credit hours with 18 credit hours from required courses and 21 credit hours from 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 3 credit hours in English at the 1000 level MSTM 4060 or an additional 3 credit hours in English at the 1000 level MSTM 4100 MSTM 4200 Nursing 5210 | Business 1210 Business 1600 Business 2102 Business 3320 Business 3700 Business 4000 Business 4320 or Psychology 3501 Business 6320 Economics 3360 MSTM 4040 MSTM 4050 MSTM 4080 | Economics 2010 Economics 2020 Economics 3080 Geography 4410 MSTM 4030 Philosophy 2801 Religious Studies 3830 Sociology 2120 Sociology 4206 | Biology 2040 or Biology 2041 Nursing 3023 Nursing 4002 Nursing 4701 Psychology 2010 or Psychology 2011 or Psychology 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 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.
PR: Admission to the Bachelor of Technology or 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

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

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