MARINE TECHNOLOGY, BACHELOR OF SCIENCE

NMC Code 870

The Marine Technology major at NMC prepares students to meet the needs of the global marine industry. Graduates will be in high demand for global employment opportunities in extremely diverse and fast-growing industries. This four-year bachelor's program builds on NMC's Marine Technology concentration of the Engineering Technology program. Technical training will occur at numerous campus labs, NMC's Great Lakes campus harbor and aboard research vessels operating throughout the Great Lakes. Program emphasis is focused on project management, technical competencies and hands-on learning with students having direct access to remotely operated vehicles, multiple SONAR platforms, marine instrumentation and marine data processing software. Instruction will be provided by highly trained instructors with experience in the industry.

Within this degree students will have the opportunity to earn the following: CSWA Certified Solidworks Associate, ISPS Connector and Conductor, PCEP- Certified Entry-Level Python Programmer, IFPS Hydraulic Specialist, and Certified Associate in Project Management (CAPM).

Requirements

Major Requirements

Course	Title	Credits
General Education Requirements		
ENG 111	English Composition	4
ENG 220	Technical Writing	3
PHL 105 or PHL 203	Critical Thinking Environmental Ethics	3
PHL 202	Contemporary Ethical Dilemmas	3
MTH 121	College Algebra	4
MTH 122	Trigonometry	3
MTH 131	Intro to Prob & Stats	3
MTH 141	Calculus I	5
PHY 121	General Physics I	4
PHY 122	General Physics II	4
ECO 202	Principles of Microeconomics	3
GEO 115	Introduction to GIS	3
Marine Technology Requirements		
DD 170	CADD/Computer Modeling	4
EET 102	Intro to Engineering Tech	2
EET 103	Electrical Studies I	3
EET 204	Electrical Studies II	3
EET 260	System Engineering in Practice	3
EET 304	Marine Electronics	3
ENV 117	Meteorology & Climatology	4
ENV 131	Oceanography	4
MFG 104	Fluid Power	3
MFG 304	Marine Hydraulics	3
RAM 155	Microcontroller Programming	3
RAM 205	Microcontroller Systems	3
WSI 200	GL Research Technologies	3
WSI 210	Underwater Acoustics and Sonar	3
WSI 215	Marine GIS & Data Processing	3
WSI 240	ROV Systems and Operations	3
WSI 300	Remote Sensing and Sensors	3
WSI 310	Sonar Systems and Operations	4
WSI 315	Advanced Marine Survey & Data	3
WSI 390	Marine Tech Internship	3
WSI 400	Marine Technology Capstone	4
WSI 405	Marine Industry	3
WSI 433	Marine Project Management	3
WSI 440	Advanced Marine Platforms	3
Approved Elective (see advisor)		3
Total Credits		**121**

Course Sequence Guide

Course	Title	Credits
Year 1		
Fall		
ENG 111	English Composition	4
PHL 105 or PHL 203	Critical Thinking or Environmental Ethics	3
EET 102	Intro to Engineering Tech	2
EET 103	Electrical Studies I	3
RAM 155	Microcontroller Programming	3
	Credits	**15**
Spring		
ENG 220	Technical Writing	3
RAM 205	Microcontroller Systems	3
DD 170	CADD/Computer Modeling	4
EET 204	Electrical Studies II	3
	Credits	**13**
Summer		
WSI 200	GL Research Technologies (Summer only)	3
	Credits	**3**
Year 2		
Fall		
MTH 121	College Algebra	4
GEO 115	Introduction to GIS	3
MFG 104	Fluid Power	3
WSI 210	Underwater Acoustics and Sonar (Fall only)	3
WSI 240	ROV Systems and Operations (Fall only)	3
	Credits	**16**
Spring		
MTH 122	Trigonometry	3
ENV 117	Meteorology & Climatology	4
EET 260	System Engineering in Practice (Spring only)	3
WSI 215	Marine GIS & Data Processing (Spring only)	3

WSI 315	Advanced Marine Survey & Data (Spring only)	3
	Credits	**16**
Summer		
WSI 310 or WSI 440	Sonar Systems and Operations (Summer only) or Advanced Marine Platforms	3-4
	Credits	**3-4**
Year 3		
Fall		
MTH 141	Calculus I	5
PHY 121	General Physics I (Fall only)	4
EET 304	Marine Electronics (Fall only)	3
WSI 300	Remote Sensing and Sensors	3
	Credits	**15**
Spring		
PHY 122	General Physics II (Spring only)	4
ENV 131	Oceanography	4
MFG 304	Marine Hydraulics (Spring only)	3
MTH 131	Intro to Prob & Stats	3
	Credits	**14**
Summer		
WSI 390	Marine Tech Internship [1]	3
Or WSI 297A Independent Study - Water Studies		
WSI 440 or WSI 310	Advanced Marine Platforms or Sonar Systems and Operations	3-4
	Credits	**6-7**
Year 4		
Fall		
WSI 405	Marine Industry (Fall only)	3
ECO 202	Principles of Microeconomics	3
Approved Technical Elective		3
	Credits	**9**
Spring		
PHL 202	Contemporary Ethical Dilemmas	3
WSI 400	Marine Technology Capstone	4
WSI 433	Marine Project Management (Spring only)	3
Optional: Internship **or** Independent Study		3
	Credits	**10**
	Total Credits	**120-122**

[1] WSI 390 (https://catalog.nmc.edu/archives/2021-2022/search/?P=WSI%20390) Marine Tech Internship **or** WSI 297A Independent Study - Water Studies **option to take Summer year 3 OR Spring year 4**