

Michigan Technological University**Minor in Naval Systems Engineering**

Program Code: EMNS, Academic Year 2020-21

Department of Mechanical Engineering-Engineering Mechanics

Total Credits Required: 18

Required Courses: 14 credits minimum

Course	Credits
MEEM 2150 Mechanics of Materials (3) or ENG 2120 Statics-Strength of Materials* (4)	
MEEM 3201 Introductory Fluid Mechanics & Heat Transfer (4) or MSE 3110 Materials Processing II (4) or ENG 3200 Thermodynamics/Fluid Mechanics* (4)	
MEEM 4850 Naval Systems and Platforms (3)	
ENT 4950 Enterprise Project Work V** (2)	
ENT 4960 Enterprise Project Work VI** (2)	

Core Elective Courses: at least 3 credits

Course	Credits
ENT 4961 Enterprise Project Work VII** (1)	
MEEM 4702 Shock and Vibration (3)	
MEEM 4707 Autonomous Systems (3)	
CEE 5520 Intro to Hydrodynamic Modeling (3)	

Electives: choose two courses for 6 credits

Course	Course	Credits
CS 4471 Computer Security (3)	MEEM 4210 Computational Fluids Engineering (3)	
CS 4496 GPU and Multicore Programming (3)	MEEM 4630 Human Factors (3)	
CS 4821 Data Mining (3)	MEEM 4650 Quality Engineering (3)	
EC 4050 Game Theory/Strategic Behavior (3)	MEEM 4701 Analytical and Experimental Model Analysis (4)	
EE 3173 Hardware/Software System Integration (4)	MEEM 4704 Acoustics and Noise Control (3)	
EE 4227 Power Electronics (3)	MEEM 4705 Intro to Robotics and Mechatronics (4)	
EE 4228 Power Electronics Lab (1)	MEEM/EE 4295 Introduction to Propulsion Systems for Hybrid Electric Vehicles (3)	
EE 4252 Digital Signal Processing and its App. (4)	MSE 4320 Corrosion and Environmental Effects (3)	
EE 4490 Laser Systems and Applications (4)	MSE 4325 Fundamentals of Corrosion (1)	
MEEM 4150 Intermediate Mechanics of Materials (3)	MSE 4120 Material & Process Selection in Design (3)	
MEEM 4170 Failure of Materials in Mechanics (3)	MSE 4430 Composite Materials (3)	
MEEM 4180 Engineering Biomechanics (3)		

* Minor credit cannot be granted for ME majors for these two courses

**Requires naval systems project approved by minor advisor

Prerequisite courses can be found in the undergraduate catalog.