

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

Program Code: EMNS, Academic Year 2019-20

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)	

Related Elective Courses: remaining credits

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