

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

Program Code EMNS, Academic Year 2021-22

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)	3/4
MEEM 3201 Introductory Fluid Mechanics & Heat Transfer (4) or MSE 3110 Materials Processing II (4) or ENG 3200 Thermodynamics/Fluid Mechanics* (4)	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

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Related Elective Courses Continued

Course	Credits
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.