

MICHIGAN TECH - Mechanical Engineering - Technical Electives

2017-2018 Academic Year (Planned)

Semesters/years offered subject to change. Refer to the schedule of classes in BanWeb for current offerings, pre-requisites, restrictions, and course descriptions.

By Course Number

Course Number	Credits	Title	Summer 2017	Fall 2017	Spring 2018
CEE4404	3	Railroad Engineering		X	
EE4219	3	Introduction to Electric Machinery and Drives			X
EE4220	1	Introduction to Electric Machinery and Drives Laboratory			X
ENG4300	3	Engineering Project Management	A (online)		
GE4610	3	Formation Evaluation and Petroleum Engineering		X	
MEEM4150	3	Intermediate Mechanics of Materials			X
MEEM4160	3	Fundamentals of Experimental Stress Analysis		X	
MEEM4170	3	Failure of Materials in Mechanics			X
MEEM4180	3	Engineering Biomechanics	NOT OFFERED		
MEEM4200	3	Principles of Energy Conversion & Storage			X
MEEM4201	3	Intermediate Thermodynamics	A	X	X
MEEM4202	4	Int Fluids and Heat Transfer		X	
MEEM4210	3	Computational Fluids Engineering		X	
MEEM4220	3	Internal Combustion Engines I			X
MEEM4230	3	Compressible Flow/Gas Dynamics			X
MEEM4235	3	Wind Energy		X	
MEEM4240	3	Combustion & Air Pollution		X	
MEEM4250	3	Heating/Ventilation/Air Conditioning	NOT OFFERED		
MEEM4260	3	Fuel Cell Technology		X	
MEEM4295	3	Introduction to Propulsion Systems for Hybrid Electric Vehicles		X	
MEEM4296	3	Introduction to Propulsion Systems for Hybrid Electric Vehicles Lab		X	
MEEM4404	4	Mechanism Synthesis/Dynamic Modeling			X
MEEM4405	3	Intro to Finite Element Method	B	X	X
MEEM4430	4	Advanced CAD and CAM Methods	A	X	X
MEEM4450	3	Vehicle Dynamics			X
MEEM4610	3	Advanced Machining Processes			X
MEEM4615	4	Metal Forming Processes	NOT OFFERED		
MEEM4625	3	Precision Manufacturing and Metrology	NOT OFFERED		
MEEM4630	3	Human Factors	NOT OFFERED		
MEEM4635	3	Design with Plastics	NOT OFFERED		
MEEM4640	3	Micromanufacturing Processes	NOT OFFERED		
MEEM4650	3	Quality Engineering		X	
MEEM4655	3	Production Planning			X
MEEM4660	3	Data Based Modeling & Control	NOT OFFERED		
MEEM4675	3	Material Handling-Plant Layout	NOT OFFERED		
MEEM4685	3	Environmentally Responsible Design & Manufacturing	NOT OFFERED		
MEEM4701	4	Analytical and Experimental Modal Analysis		X	
MEEM4702	3	Shock and Vibration			X
MEEM4704	3	Acoustics and Noise Control			X
MEEM4705	4	Introduction to Robotics and Mechatronics	NOT OFFERED (SEE MEEM5705)		
MEEM4707	3	Autonomous Systems			X
MEEM4720	3	Space Mechanics		X	
MEEM4750	3	Distributed Embedded Control Systems	NOT OFFERED (SEE MEEM5750)		
MEEM4775	4	Control System Analysis and Design		X	
MEEM4810	3	Introduction to Aerospace Engineering		X	
MEEM4820	3	Aerospace Propulsion			X
MEEM4990	3	Design for Manufacturing		X	
MEEM4990	3	Additive Manufacturing			X
MEEM5110	3	Continuum Mechanics/Elasticity		X	
MEEM5130	3	Nanoscale Science and Technology	NOT OFFERED		
MEEM5150	3	Advanced Mechanics of Materials		X	
MEEM5170	3	Finite Element and Variational Methods in Engineering		X	
MEEM5180	3	Mechanics of Composite Materials			X

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MEEM5200	3	Advanced Thermodynamics	NOT OFFERED		
MEEM5210	3	Advanced Fluid Mechanics		X	
MEEM5225	3	Advanced Power System and Pollution Control			X
MEEM5230	3	Advanced Heat Transfer			X
MEEM5240	3	Computational Fluid Dynamics			X
MEEM5250	3	Internal Combustion Engines II		X	
MEEM5255	3	Advanced Powertrain Instrumentation and Experimental Methods			X
MEEM5265	3	Physical Gasdynamics	NOT OFFERED		
MEEM5270	3	Advanced Combustion			X
MEEM5275	3	Energy Storage Systems			X
MEEM5280	3	Phase Change and Two-Phase Flows			X
MEEM5295	3	Advanced Propulsion Systems for Hybrid Electric Vehicles			X
MEEM5296	2	Advanced Propulsion Systems for Hybrid Electric Vehicles Laboratory			X
MEEM5401	3	Design for Reliability			X
MEEM5440	3	Advanced Vehicle Dynamics	A (on campus & online)		
MEEM5455	3	Discover. Design. Delight.		X	
MEEM5645	3	Numerical Analysis of Manufacturing Processes	NOT OFFERED		
MEEM5655	3	Introduction to Lean Manufacturing			X
MEEM5665	3	Micro & Nano Fabrication for Energy	NOT OFFERED		
MEEM5670	3	Experimental Design in Engineering		X	
MEEM5680	3	Optimization I			X
MEEM5685	3	Environmentally Responsible Design & Manufacturing	NOT OFFERED		
MEEM5700	4	Dynamic Measurement/Signal Analysis		X	
MEEM5701	3	Intermediate Dynamics	NOT OFFERED		
MEEM5702	3	Analytical Vibroacoustics		X	
MEEM5703	4	Experimental Methods Vibro-Acoustics			X
MEEM5705	4	Introduction to Robotics and Mechatronics			X
MEEM5715	3	Linear Systems Theory and Design		X	
MEEM5720	3	Space Mechanics			X
MEEM5750	3	Distributed Embedded Control Systems			X
MEEM5800	3	Advanced Engineering Mathematics with Applications	FULL SEM (online)		
MEEM5811	3	Automotive Systems			X
MEEM5812	3	Automotive Control Systems		X	
MY4130	3	Principles of Metal Casting		X	
MY4140	3	Science of Ceramic Materials			X
MY4155	3	Composite Materials			X
MY4180	3	Advanced Physical Metallurgy			X
MY4300	3	Mechanical Behavior of Materials		X	
MY4600	3	Introduction to Polymer Engineering		X	
MY4777	3	Distributed Additive Manufacturing Using Open-Source 3-D Printing	NOT OFFERED		
MY4800	3	Material and Process Selection in Design			X