

Mechanical Engineering

General Mechanical

Master of Engineering: 30 Credits / 10 Courses

The standard course plan for each consists of five courses from the core area and five technical electives. There is no research or thesis required for this degree.

General Mechanical Core (choose five):	
ENME600	Engineering Design Methods
ENME605	Advanced Systems Control
ENME607/ENRE671	Engineering Decision Making and Risk Management
ENME610	Engineering Optimization
ENME631	Advanced Conduction and Radiation Heat Transfer
ENME632	Advanced Convection Heat Transfer
ENME640	Fundamentals of Fluid Mechanics
ENME662	Linear Vibrations
ENME690	Mechanical Fundamentals of Electronic Systems
ENME712	Measurement, Instrumentation and Data Analysis for Thermo-Fluid Processes
ENPM652	Applied Finite Element Methods (every summer)
or ENME674	Finite Element Methods
ENPM654	Energy Systems Management* (every summer)
ENPM671	Advanced Mechanics of Materials

General Mechanical Pre-Approved Technical Electives (choose five):			
ENME611	Fiber Optics	ENME693	High Density Electronic Assemblies and Interconnects
ENME625	Multidisciplinary Optimization	ENME695	Failure Mechanisms and Reliability
ENME627	Manufacturing with Polymers	ENME700	Advanced Mechanical Engineering Analysis I
ENME641	Viscous Flow	ENME704	Active Vibration Control
ENME642	Hydrodynamics I	ENME711	Vibration Damping
ENME656	Physics of Turbulent Flow	ENME744	Additive Manufacturing
ENME664	Dynamics	ENME765	Thermal Issues in Electronic Systems
ENME665	Advanced Topics in Vibrations	ENME770	Life Cycle Cost and System Sustainment Analysis
ENME670	Continuum Mechanics	ENME780	Mech. Design of High Temp. and High Power Electronics
ENME672	Composite Materials	ENPM808A	Introduction to Machine Learning
ENME675	Mathematical Introduction to Robotics	ENPM809D	Optimization and Machine Learning for Engineering Design
ENME680	Experimental Mechanics	ENPM809E	Applied Topology Optimization
ENME684	Modeling Material Behavior		

NOTE: Any courses not listed above must be approved by the Senior Academic Advisor **PRIOR** to registration.

KEY	
Online Option *	(offering information)
[Prerequisite course]	