

Tentative Schedule of ME Technical Electives and Graduate Courses  
(Course Offerings Subject to Instructor Availability and Student Demand)

**Technical Elective Courses (ME 4XX/6XX)**

Course	Title	Fall 2025	Spring 2026	Fall 2026	Spring 2027	Fall 2027	Spring 2028	Fall 2028	Spring 2029	Fall 2029	Spring 2030	Fall 2030	Spring 2031
ME 332	Engineering Materials II	C				X				X			
<i>ME 411/611</i>	<i>Intro to Nuclear Engineering</i>			X		X		X		?		?	
<i>ME 436/636</i>	<i>Biopolymers and Biocomposites</i>			X				X				X	
ME 437/637	Engineering Ceramics				X				X				X
<i>ME 466/666</i>	<i>Basic Principles of Unmanned Vehicles</i>		C		X		X		X		?		?
<i>ME 468/668*</i>	<i>Introduction to Biomechanics</i>	X		X		X		X		X		X	
<i>ME 469/669*</i>	<i>Energy Storage Technology</i>		X		X		X		X		X		X
<i>ME 470/670</i>	<i>Renewable Energy Technology</i>	X		X		X		X		X		X	
<i>ME 471/671</i>	<i>Experimental Stress Analysis</i>												
ME 472/672	Fatigue & Fracture of Metals	C				X				?			
ME 473/673	Engineering with Polymeric Materials	X		X		X		X		X		X	
ME 474/674*	Mechanics of Composite Materials		X		X		X		X		X		X
<i>ME 475/675</i>	<i>Automatic Controls</i>		X		X		X		X		X		X
<i>ME 476/676*</i>	<i>Mechatronics</i>	X		X		X		X		X		X	
ME 477/677*	ME Finite Element Analysis	X	X	X	X	X	X	X	X	X	X	X	X
ME 478/678	Advanced Flow Diagnostics	X		X		X		X		X		X	
<i>ME 479/679</i>	<i>Fluid Power Systems Design</i>	ABEN	ABEN	ABEN									
ME 480/680	Biofluid Mechanics				X				X				X
<i>ME 481/681</i>	<i>Fundamentals of Energy Conversion</i>		X				X				X		
<i>ME 482/682</i>	<i>Fuel Cell Science and Engineering</i>												
ME 483/683	Intro. to Computational Fluid Dynamics		X		X		X		X		X		X
ME 484/684	Aerospace Propulsion	X				X				X			
ME 485/685*	Heating, Ventilation and Air Conditioning		X		X		X		X		X		X
<i>ME 486/686</i>	<i>Nanotechnology &amp; Nanomaterials</i>		CCEE										
<i>ME 487/687</i>	<i>Internal Combustion Engines</i>	X		X		X		X		X		X	
ME 488/688	Introduction to Aerodynamics	X		X		X		X		X		X	
<i>ME 489/689</i>	<i>Vehicle Dynamics</i>		X		X		X		X		X		X

*Classes in blue are without ME program admission restrictions. Other course requisites must be met.*

**Graduate Level Courses (ME 7XX)**

Course	Title	Fall 2025	Spring 2026	Fall 2026	Spring 2027	Fall 2027	Spring 2028	Fall 2028	Spring 2029	Fall 2029	Spring 2024	Fall 2024	Spring 2025
ME 711	Advanced Engineering Analysis	X		X		X		X		X		X	
ME 712	Advanced Finite Element Analysis	X				X				X			
ME 717*	Advanced Controls for Mech. Systems		C				X				X		
ME 720	Continuum Mechanics				X				X				X
ME 721	Advanced Dynamics	C				X				X			
ME 722*	Advanced Mechanics of Materials			X				X				X	
ME 725	Adv Mech & Failure of Composites		X				X				X		
ME 726*	Fracture Mechanics		C				X				X		
ME 729	Advanced Vibrations			X				X				X	
ME 731*	Mechanical Behavior of Materials				X				X			X	
ME 733	Polymer Nanocomposites	X				X				X			
ME 734	Smart Materials & Structures				X				X				X
ME 736	Advanced Surface Analysis		X				X				X		
ME 751	Advanced Thermodynamics	X				X				X			
ME 753	Gas Dynamics			X				X				X	
ME 754	Viscous Fluid Flow		X				X				X		
ME 755*	Fluid Mechanics for Bio/Nanotechnologies		C				X				X		
ME 761	Advanced Heat Transfer			X				X				X	
ME 762	Applied Multimode Heat Transfer	C			X				X				X
ME 763	Advanced Transport Phenomena				X				X				X

**Approved Tech Electives from other Depts.**

Course	Title
ABEN 456	Biobased Energy
ABEN 473	Agricultural Power
CPM 473	Polymer Synthesis
CPM 474	Applied Polymer Science
CPM 475	Coatings' Materials Science
CPM 486	Corrosion & Materials
CSCI 485	Autonomous Command for Robots
ECE 461	Control Systems
ECE 463	Modern Controls
ECE 485	Biomedical Engineering
ECE 487	Cardiovascular Engineering
ECE 488	Cardiovascular Engineering II
ENGR 321	Introduction to Robotics
ENGR 410	Entrepreneurship for Engrs & Scientists
IME 380	CAD/CAM for Manufacturing
IME 430	Process Engineering
IME 431	Production Engineering
IME 432	Composite Materials Manufacturing
IME 433	Additive Manufacturing
IME 440	Engineering Economics
IME 450	Systems Engineering and Mgmt.
IME 456	Prog. & Project Mgmt
IME 460	Evaluation of Engineering Data
IME 465	Intro to Machine Learning
IME 482	Automated Manufacturing Systems
IME 485	Industrial & Mfg. Facility Design
PHYS 350	Modern Physics
PHYS 355	Classical Mechanics
PHYS 361	Electromagnetic Theory
PHYS 485	Quantum Mechanics I

**Legend:**

- X = Planned offering
- C = Offered but canceled
- ? = Tentative offering
- \* = Asynchronous offering (M.Engr Program only)