

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

Course	Title	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021
ME 332	Engineering Materials II	X				C				X			
ME 353	Thermodynamics II		X		C		C						
ME 435/635	Plastics & Inj. Molding Manufacturing												
ME 437/637	Engineering Ceramics			X				X				X	
ME 468/668	Introduction to Biomechanics	X		X		X		X		X		X	
ME 470/670	Renewable Energy Technology		X		C	X		X		X		X	
ME 471/671	Experimental Stress Analysis	X					C				C?		
ME 472/672	Fatigue & Fracture of Metals				X				X				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
ME 475/675	Automatic Controls		X		X		X		X		X		X
ME 476/676	Mechatronics			X				X					
ME 477/677	ME Finite Element Analysis	X		X		X	X	X	X	X	X	X	X
ME 478/678	Advanced Flow Diagnostics							X?		X			
ME 479/679	Fluid Power Systems Design	ABEN		ABEN		ABEN		ABEN		ABEN		ABEN	
ME 480/680	Biofluid Mechanics				X				X				
ME 481/681	Fundamentals of Energy Conversion		X				X				X		
ME 482/682	Fuel Cell Science and Engineering												
ME 483/683	Intro. to Computational Fluid Dynamics		X		X		X		X		X		X
ME 484/684	Gas Turbines			C					C?				
ME 485/685	Heating, Ventilation and Air Conditioning		CME		CME	C	CME		CME		CME		CME
ME 486/686	Nanotechnology & Nanomaterials						CEE		CEE		CEE		CEE
ME 487/687	Internal Combustion Engines	X		X		X		X		X		X	
ME 488/688	Introduction to Aerodynamics	X		X		X		C?	X?	X		X	
ME 489/689	Vehicle Dynamics		X		X		X		X		X		X
ME 711	Advanced Engineering Analysis	X		X		X		X		X		X	
ME 712	Advanced Finite Element Analysis					X				X			
ME 717	Advanced Controls for Mech. Systems		X				X				X		
ME 720	Continuum Mechanics				X				X				X
ME 721	Advanced Dynamics	X				X				X			
ME 722	Advanced Mechanics of Materials			X				X				X	
ME 725	Adv Mech & Failure of Composites		X				C				X		
ME 726	Fracture Mechanics		X				X				X		
ME 728	Stress Waves in Solids					X							
ME 729	Advanced Vibrations			X				X				X	
ME 731	Mechanical Behavior of Materials	X			X				X				X
ME 733	Polymer Nanocomposites		X				X			X			
ME 734	Smart Materials & Structures				X				X			C?	
ME 736	Advanced Surface Analysis			C			X				X		
ME 743	Biomechanics of Impact				X				X				X
ME 751	Advanced Thermodynamics	X				X				X			
ME 753	Gas Dynamics			C				X				X	
ME 754	Boundary Layer Theory		X				X				X		
ME 755	Fluid Mechanics for Bio/Nanotechnologies			C				X				X	
ME 761	Heat Transmission I				X				X				X

Approved Tech Electives from other Depts.

IME 430	Process Engineering
IME 431	Production Engineering
IME 432	Composite Materials Manufacturing
IME 440	Engineering Economics
IME 450	Systems Engineering and Mgmt.
IME 460	Evaluation of Engineering Data
IME 485	Industrial & Mfg. Facility Design
ABEN 456	Biobased Energy
CPM 473	Polymer Synthesis
CPM 474	Coatings I
CPM 475	Coatings II
CPM 486	Corrosion & Materials
CSCI 485	Autonomous Command for Robots
ECE 485	Biomedical Engineering
ECE 487	Cardiovascular Engineering
ECE 488	Cardiovascular Engineering II
PHYS 350	Modern Physics
PHYS 361	Electromagnetic Theory
PHYS 485	Quantum Mechanics I

Courses Cross-Listed with other Departments

ME 435/635	Plastics & Inj. Molding Manuf. (IME)
ME 479/679	Fluid Power Systems Design (ABEN)
ME 485/685	Heating, Vent. & Air Cond. (CME)
ME 486/686	Nanotech. & Nanomaterials (CE)
ME 720	Continuum Mechanics (CE)

Only THREE Technical Elective courses may be taken from outside the Mechanical Eng. Dept. Cross-listed courses must be taken with an ME prefix in order to count as in-department. If there is not an ME prefix available and the course is being offered by another department, contact the ME office for assistance.