ME Technical Electives and Graduate Courses: Tentative 4-Year Plan
(Course Offerings Subject to Instructor Availability and Student Demand)

Course	Title	Sum 08	F 2008	S 2009	Sum 09	F 2009	S 2010	Sum 10	F 2010	S 2011	Sum 11	F 2011	S 2012
ME 332	Engineering Materials II	X			X			X			X		
ME 341	Mechanics of Machinery												
ME 353	Thermodynamics II			X			X			X			X
ME 415	Emerging Technologies in ME												
ME 433/633	Composite Materials Science & Eng.						X					X	
ME 435/635	Plastics & Inj. Molding Manufacturing (IME)												
ME 468/668	Advances in Biomedical Engineering												X
ME 470/670	Renewable Energy Technology					X				X			
ME 471/671	Stress Analysis					X						X	
ME 472/672	Fatigue & Fracture of Metals			X						X			
ME 473/673	Engineering with Polymeric Materials			X					X				X
ME 474/674	Mechanics of Composite Materials		X			X				X			
ME 475/675	Automatic Controls			X			X			X			X
ME 476/676	Mechatronics		X						X				
ME 477/677	ME Finite Element Analysis		X			X			X			X	
ME 479/679	Fluid Power Systems		ABEN			X			ABEN			X	
ME 480/680	Advanced Fluid Dynamics			X						X			
ME 481/681	Fundamentals of Energy Conversion		X				X					X	
ME 482/682	Fuel Cell Science and Engineering			X						X			
ME 483/683	Intro. to Computational Fluid Dynamics			X			X			X			X
ME 484/684	Gas Turbines								X				X
ME 485/685	Heating, Ventilation and Air Conditioning			X			X		X				
ME 486/686	Nanotechnology & Nanomaterials (CE)												
ME 487/687	Internal Combustion Engines		X			X			X			X	
ME 488/688	Introduction to Aerodynamics			X		X			X			X	
ME 489/689	Vehicle Dynamics			X			X			X			X
ME 711	Advanced Engineering Analysis		X			X			X			X	
ME 712	Advanced Finite Element Analysis			X						X			
ME 717	Advanced Controls for Mech. Systems					X							X
ME 720	Continuum Mechanics (CE)												
ME 721	Advanced Dynamics		X				X					X	
ME 722	Advanced Mechanics of Materials			X					X				X
ME 723	Experimental Stress Analysis												
ME 725	Adv Mech & Failure of Composites						X						X
ME 726	Fracture Mechanics		X						X				
ME 728	Stress Waves in Solids												X
ME 729	Advanced Vibrations												
ME 731	Mechanical Behavior of Materials					X				X			
ME 733	Nanocomposites						X					X	
ME 734	Smart Materials												
ME 736	Advanced Surface Protection								X				
ME 741	Advanced Biomechanics												
ME 743	Biomechanics of Impact			X						X			
ME 751	Advanced Thermodynamics			X						X			
ME 753	Gas Dynamics					X						X	
ME 754	Boundary Layer Theory						X						X
ME 755	Multiscale Fluid Dynamics								X				
ME 761	Heat Transmission I		X				X					X	

Approved Tech Electives from other Depts.

IME 440	Engineering Economics
IME 460	Evaluation of Engineering Data
ABEN 456	Biobased Energy
ECE 487	Cardiovascular Engineering
PHYS 350	Modern Physics
PHYS 361	Electromagnetic Theory

Courses Cross-Listed with other Departments

ME 435/635	Plastics & Inj. Molding Manuf. (IME)
ME 486/686	Nanotech. & Nanomaterials (CE)
ME 720	Continuum Mechanics (CE)

Only 2 Technical Elective courses may be taken outside the Mechanical Engineering Department. 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.