

College of Engineering and Computer Science

Mechanical Engineering

Fall 2016

Name _____

SUID _____

pr= prerequisite, co=corequisite

Minor/Second Major (if any): _____

	CREDIT GRADE	FIRST-YEAR		SOPHOMORE		JUNIOR		SENIOR		VAR.	
		F	S	F	S	F	S	F	S		
MATHEMATICS (15)											
MAT295	Calculus 1	(4)_____	4								
MAT296	Calculus 2 (pr: MAT 295 min C-)	(4)_____		4							
MAT397	Calculus 3 (pr: MAT 296 min C-)	(4)_____			4						
MAT485	Diff Eqn & Matrix Algebr for Engrs (pr: MAT 397)	(3)_____				3					
SCIENCES (12)											
CHE106	General Chemistry I	(3)_____	3								
CHE107	General Chemistry I Lab (co: CHE 106)	(1)_____	1								
PHY211	General Physics 1 (co: PHY 221, MAT 295)	(3)_____		3							
PHY221	General Physics Lab 1 (co: PHY 211)	(1)_____		1							
PHY212	General Physics 2 (pr: PHY 211, 221, co: PHY 222, MAT 296)	(3)_____			3						
PHY222	General Physics Lab 2 (co: PHY 212)	(1)_____		1							
WRITING SKILLS/SOCIAL SCIENCE/HUMANITIES (12)											
WRT105	Studio 1: Practices of Academic Writing	(3)_____	3								
WRT205	Studio 2: Critical Research and Writing (pr: WRT 105)	(3)_____		3							
ECN203	Economic Ideas & Issues	(3)_____	3								
SSH Elective	_____	(3)_____		3							
PROGRAM CUSTOMIZATION (18)											
Course1	_____	(3)_____			3						
Course2	_____	(3)_____					3				
Course3	_____	(3)_____						3			
Course4	_____	(3)_____						3			
Course5	_____	(3)_____							3		
Course6	_____	(3)_____							3		
ENGINEERING (26)											
ECS101	Intro. to Engr. & Comp. Sci.	(3)_____	3								
ECS104	Engr. Comp Tools (co: MAT 295)	(3)_____		3							
ECS221	Statics (pr: PHY 211, co: MAT 296)	(3)_____			3						
ECS222	Dynamics (pr: ECS 221, MAT 296)	(3)_____				3					
ECS325	Mechanics of Solids (pr: ECS 221, co: MAT 397)	(4)_____				4					
ECS326	Engr. Materials, Prop. & Proc.	(3)_____			3						
ELE231	Elec. Engr. Fundamentals 1 (pr: MAT 295)	(3)_____					3				
ELE291	Elec. Engr. Laboratory 1 (co: ELE 231)	(1)_____					1				
MAE322	Control Systems for MAE (pr: MAT414 or 485, co: MAE321)	(3)_____						3			
MECHANICAL ENGINEERING (45)											
MAE284	Intro. to Design (pr: ECS 101)	(3)_____				3					
MAE251	Thermodynamics (pr: PHY 211)	(4)_____			4						
MAE312	Engineering Analysis (pr: ECS 104, MAT 485)	(3)_____					3				
MAE315	Mech/Aero Lab I (pr: ECS 325, co: MAE 341)	(3)_____					3				
MAE321	Dynamics of Mech. Systems (pr: ECS 325, ECS 222, MAT 485)	(3)_____						3			
MAE341	Fluid Mechanics (pr: ECS 221, MAT 397, PHY 211)	(4)_____					4				
MAE355	Heat Transfer (pr: MAE 341, co: MAE 251)	(4)_____						4			
MAE333	Data Analysis for Engrs.	(3)_____					3				
MEE332	Intro. Mach. Des. (pr: ECS 222, ECS 325)	(3)_____						3			
MEE416	Mechanical Engr. Lab (pr: MAE 251, MAE 315, MAE 341, MAE 355)	(3)_____							3		
MEE431	Manufacturing Processes (pr: MAE 184)	(3)_____							3		
MEE471	Design Practice (pr: MEE 332, MAE 184, co: MEE472)	(2)_____								2	
MEE472	Syn. Mech. Systems II (co: MEE 471)	(4)_____								4	
Select One of the Following 3 Courses:											
MAE430	Intro to Design Optimization (3) (pr: MAT 397, MAT 485)	(3)_____							3		
MAE 571	Applic of Cmptn'l Fluid Dynmcs (3) (pr: MAE 341)	(3)_____									
MAE573	Applic of Finte Elemnt Anlsys (3) (pr: ECS 325, MAT 485)	(3)_____									
TOTAL CREDITS			128	17	17	17	17	17	16	15	12

MECHANICAL ENGINEERING
Curriculum Notes
2016-2017

1. Mechanical Engineering students must take at least 3 credit hours in the Social Science/ Humanities in addition to ECN203. Further, they must take two Technical Electives (6 credits), one of which must be either MAE430, MAE571, or MAE573, as well as complete one of the following two 18-credit options, for a total of nine (9) Electives (27 credit hours):

Option 1: A University Minor – typically 18 credits coordinated by the offering department; the minor must have fewer than 12 credits of overlap with required MEE courses.

Option 2: A Distribution of Electives – an additional 6 credits of Social Sciences/Humanities, 9 credits of Technical Electives, and a 3-credit Free Elective.

2. Technical Electives are courses at the 300 level or higher taken within the Mechanical and Aerospace (MAE) department. Selected courses from other ECS departments, mathematics, or natural sciences may be accepted as Technical Electives, but no more than 3 credit hours of the Technical Electives can be taken outside the MAE department.
3. Many technical electives in the MAE Department are scheduled on a 2-year rotation, so students should check availability of Technical Electives starting in their third year.
4. Mechanical Engineering students seeking to complete a Mathematics Minor can take a mathematics course as a Free Elective but must still complete one of the 2 options listed above.
5. Mechanical Engineering students seeking to complete the Energy Systems Minor (15 credits) must take an additional 3-credit Social Sciences/Humanities Elective.