

MECHANICAL ENGINEERING										2017-2018
SEM 1	SEM 2	SEM 3	SEM 4	SEM 5	SEM 6	SEM 7	SEM 8			
4 <b>MATH 1220 or 1700 Calculus I</b>	4 <b>MATH 1230 or 1710 Calculus II</b>	4 <b>MATH 2720 Multivariate Calculus</b>	4 <b>MATH 3740 Differential Equations</b>	3 <b>ME 3560 Fluid Mechanics (F, Sp, Su1)</b>	3 <b>ME 3350 Instrumentation (F, Sp, Su1) (L)</b>	1 <b>ME 4790 Mechanical Eng. Project Planning (F, Sp)</b>	2 <b>IEE 3090 Eng Economy (F, Sp, Su1 or 2)</b>			
MATH 1180 ≥ C or placement	MATH 1220 or 1700 ≥ C	MATH 1230 or 1710 ≥ C	MATH 2720 ≥ C	ME 2580 ≥ C MATH 3740 ≥ C	ME 2570 ≥ C ME 3620 ≥ C ECE 2100 ≥ C Writing Requirement	ME 3350 ≥ C ME 3600 ≥ C ME Design Elective ≥ C or taking concurrently	MATH 1230 or 1710 ≥ C			
3+1 <b>CHEM 1100/1110 Chemistry I (F, Sp, Su1, Su2) (L)</b>	4+1 <b>PHYS 2050/2060 University Physics I (L)</b>	4+1 <b>PHYS 2070/2080 University Physics II (L)</b>	3 <b>ME 2500 Materials Science (F, Sp)</b>	3 <b>ME 3580 Mechanism Analysis (F, Sp)</b>	3 <b>ME 3600 Control Systems (F, Sp, Su1)</b>	3 <b>ME Design Elective</b>	3 <b>ME 4800 Mechanical Eng. Project</b>			
MATH 1110 ≥ C or placement	MATH 1220 or 1700 ≥ C MATH 1230 or 1710 ≥ C or taking concurrently	PHYS 2050 ≥ C MATH 1230 or 1710 ≥ C	MATH 1220 or 1700 ≥ C CHEM 1100/1110 ≥ C ME 2615 ≥ C	ME 2580 ≥ C CS 1060 or 1022 or 1023 ≥ C	ME 2580 ≥ C MATH 3740 ECE 2100 ≥ C		ME 4790 ≥ C ME Design Elective ≥ C			
3 <b>IEE 1020 Technical Communication (F, Sp)</b>	1 <b>CS 1022 or 1023 Math Software or Programming (L)</b>	3 <b>ME 2320 Thermodynamics I (F, Sp, Su1)</b>	3 <b>ME 2570 Mechanics of Materials (F, Sp, Su2)</b>	3 <b>ME 3620 Engineering Experimentation (F, Sp)</b>	3 <b>ME 4310 Heat Transfer (F, Sp, Su2)</b>	3 <b>ME Elective</b>	3 <b>ME Design Elective</b>			
ENGL 1000 ≥ C or placement	MATH 1180 ≥ C	MATH 1230 or 1710 ≥ C PHYS 2050/2060 ≥ C	ME 2560 ≥ C	MATH 1230 or 1710 ≥ C CS 1060,1022, 1023, 1110, or 1200 ≥ C	ME 2320 ≥ C ME 3560 or AAE 3710 ≥ C					
3 <b>EDMM 1420 Engineering Graphics(L) (F, Sp)</b>	3 <b>ME 2615 Introduction to Mechanical Engineering</b>	3 <b>ME 2560 Statics (F, Sp, Su1)</b>	4 <b>ECE 2100 Circuit Analysis I (F, Sp, Su1) (L)</b>	3+1 <b>CHEM 1120/1130 Chemistry II (F, Sp, Su1, Su2) (L)</b>	3 <b>ME 4320 Thermodynamics II (F, Sp)</b>	3 <b>ME Elective</b>	3 <b>ME Elective</b>			
	MATH 1220 or 1700 ≥ C or concurrent	MATH 1230 or 1710 ≥ C PHYS 2050 and 2060 ≥ C	MATH 1230 or 1710 ≥ C PHYS 2070 ≥ C or taking concurrently	CHEM 1100/1110 ≥ C or <b>PHYS 3090/3100 Physics III (F, Sp) (L)</b> PHYS 2070 ≥ C MATH 2300 or 2720 ≥ C	ME 2320 ≥ C ME 3560 ≥ C or taking concurrently					
3 <b>GEN ED I* Fine Arts</b>	3 <b>GEN ED II* Humanities</b>		3 <b>ME 2580 Dynamics (F, Sp, Su1)</b>	3 <b>ME 3650 Machine Design I (F, Sp) (L)</b>	3 <b>ECE 2110 Machine &amp; Electronics Circuits (F, Sp) (L)</b>	3 <b>GEN ED V* Social/Behavioral Science</b>	2 <b>GEN ED VIII* Health &amp; Well Being</b>			
			ME 2560 or 2530 ≥ C PHYS 2050/2060 ≥ C	EDMM 1420 ≥ C ME 2570 ≥ C ME 2580 ≥ C ME 2500 ≥ C ME 2615 ≥ C	ECE 2100 ≥ C					
						3 <b>GEN ED III* U.S. Cultures and Issues</b>	3 <b>GEN ED IV* Other Cultures and Issues</b>			
17-18 hours	16 hours	15 hours	17 hours	16-17 hours	15-16 hours	16-18 hours	16-17 hours			

NOTES: Prerequisite courses are shown in smaller print.

46 Cr. Pre-Engineering Req.

56-57 Cr. ME Req.

11 Cr. Gen Ed Req.

15-17 Cr. ME Elective Req.

128-131 total hours

\*See your academic advisor for general education requirements.

A 'C' or better is required for admission to upper level CEAS courses

## MECHANICAL ENGINEERING ELECTIVES

**Students must complete five different elective courses. A minimum of two must be design courses and two must have a laboratory experience (marked with an "L").\*\*\***

### ME Design Elective Courses (choose two)

<b>4</b>	<b>AE 4630 - Aerospace Structural Design</b>	<b>3</b>	<b>AE 4690 - Aircraft Design</b>	<b>3</b>	<b>ME 4330 Environmental Systems Design In Buildings</b>	<b>3</b>	<b>ME 4390 - Design of Thermal Systems (L)</b>
	ME 2570 ≥ C		AE 3800 ≥ C and AE 4600 ≥ C		ME 4310 ≥ C or CHEG 3120 ≥ C ME 4320 ≥ C		(ME 3350 ≥ C and ME 4310 ≥ C) or (CHEG 2810 ≥ C, CHEG 3120 ≥ C, and IEE 2610 ≥ C)
<b>3</b>	<b>ME 4530 - Machine Desing II (L)</b>	<b>3</b>	<b>ME 4680 - Engine Design (L)</b>	<b>3</b>	<b>ME 4700 - Vehicle Structural Design</b>	<b>3</b>	<b>ME 5390 - Advanced Thermal Design</b>
	ME 3650 ≥ C		ME 3560 ≥ C and (ME 3670 or ME 4320) ≥ C		ME 3580 ≥ C and ME 3650 ≥ C		ME 4310 ≥ B
<b>3</b>	<b>ME 5500 - Modern Engineered Materials</b>	<b>3</b>	<b>ME 5530 - Advanced Product Engineering</b>	<b>3</b>	<b>ME 5730 - Materials Selection in Design</b>		
	ME 2500 or AE 2500 ≥ B ECE 2100 ≥ B		ME 3600 and ME 4530 ≥ B		ME 3650 ≥ B		

\*\*\*Students may choose more than two design electives. Graduate level (5000+) courses require a B or better in all prerequisites.

# ME Electives

<b>4</b>	<b>AE 3610 Aerodynamics I (L)</b>	<b>3</b>	<b>AE 4600 Aircraft Stability and Control</b>	<b>3</b>	<b>AE 4660 - Aerospace Propulsion I</b>	<b>3</b>	<b>ME 3990 Cooperative Education</b>	<b>3</b>	<b>ME 3670 Internal Combustion Engines I (L)</b>
	MATH 2720 ≥ C		AE 3710 ≥ C and ME 3600 ≥ C		ME 2320 ≥ C and (ME 3560 or AE 3710) ≥ C		Repeatable 3 times to count as one elective 3 credit course		MATH 2720 ≥ C
	AE 2610 ≥ C or ME 3560 ≥ C								ME 2580 ≥ C
	PHYS 2050/2060 ≥ C								ME 2320 ≥ C
<b>3</b>	<b>ME 4570 Experimental Solid Mechanics (L)</b>	<b>3</b>	<b>ME 4650 Vehicle Dynamics</b>	<b>3</b>	<b>ME 4710 Motion and Control (L)</b>	<b>3</b>	<b>ME 5200 - Orthopaedic Biomechanics</b>	<b>3</b>	<b>ME 5300 - Theoretical and Computational Fluid Mechanics</b>
	ME 3650 ≥ C or AE 4630 ≥ C		ME 3580 ≥ C		ME 3600 ≥ C or ECE 3710		(ME 3650 or AE 4630) ≥ B		ME 3560 ≥ B
	ME 2570 ≥ C		ME 3600 ≥ C						
	ME 3350 ≥ C		ME 3650 ≥ C						
<b>3</b>	<b>ME 5350 - Applied Spectroscopy</b>	<b>3</b>	<b>ME 5410 - Continuous System Modeling &amp; Simulation</b>	<b>3</b>	<b>ME 5430 - Mechanical Systems Control</b>	<b>3</b>	<b>ME 5450 - Computational Fluid Dynamics</b>	<b>3</b>	<b>ME 5550 Intermediate Dynamics</b>
	ME 3350 ≥ B		ME 3600 ≥ B		ME 3600 ≥ B		ME 3560 ≥ B		ME 2580 ≥ B
							CS 2010 ≥ B		MATH 3740 ≥ B

