

Mechanical Engineering Curriculum

Freshman Year		Sophomore Year		Junior Year		Senior Year	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
MATH 121 * Calculus I Pr: (see catalog)	MATH 122 * Calculus II Pr: MATH 121	MATH 220 * Applied Differential Equations Pr: MATH 122	EECS 316 Circuits, Electronics and Instrumentation Pr. PHSX 212, MATH 220	ME 612 (CPE 521) Heat Transfer Pr: ME 312, MATH 220 Co: ME 510	Approved Elective ²	ME 455 Mech. Engr. Meas. & Exp. Pr: ME 208, ME 311, Co: ME 510, ME 320, ME 612, EECS 318 MATH 365	General Ed. Comp. Elective ¹
Fall/Spring - 5 cr	Spring/Fall - 5 cr	Fall/Spring – 3 cr	Spring only - 3 cr	Fall only - 3 cr	Spring/ Fall - 4 cr	Fall/Spring – 4 cr	Spring/Fall – 3 cr
ENGL 101 Composition Pr: (see catalog)	ENGL 102 Critical Reading and Writing Pr: ENGL 101	MATH 290 * Elementary Linear Algebra Pr: MATH 122	EECS 318 Circuits and Electronics Lab Co: EECS 316	ME 508 Num. Analysis Pr: ME 208, MATH 220, MATH 290	ME 661 Finite Element Method for Stress Analysis Pr: ME 311, MATH 220 MATH 290	General Ed. Comp. Elective	General Ed. Comp. Elective
Fall/Spring - 3 cr	Spring/Fall - 3 cr	Fall/Spring – 2 cr	Spring only – 1 cr	Fall only – 3 cr	Spring only– 3 cr	Fall/Spring – 3 cr	Spring/Fall – 3 cr
ME 228 * Computer Graphics Pr: None	ME 208 * Intro. Digital Comp. Methods in M.E. Co: MATH 121 (116)	ME 312 * Basic Engr Thermodynamics Pr : PHSX 211 Co: MATH 122	ME 510 (CPE 511 or AE 345) Fluid Mechanics Pr: ME 211 (201), ME 312	ME 412 Thermal Systems Pr. ME 312	General Ed. Comp Elective ¹	ME 682 System Dynamics and Control Systems Pr: ME 320	Approved Elective ²
Fall/ Spring– 3 cr	Spring /Fall- 3 cr	Fall/Spring - 3 cr	Spring/Fall – 3 cr	Fall/Spring – 3 cr	Spring/Fall – 3 cr	Fall only - 3 cr	Spring/Fall – 3 cr
CHEM 150 * Chemistry for Engineers Pr. None	PHSX 211 * Gen. Physics I Pr. MATH 121	ME 211 * Statics and Intro to Mechanics Pr: PHSX 211	ME 311 * Mechanics of Mat'ls Pr: ME 211, MATH 220	ME 306 Science of Materials Pr: CHEM 150 (130, 184)	ME 628 Mech. Design Pr: ME 311	Approved Elective ²	Approved Elective ²
Fall only– 5 cr	Spring/Fall - 4 cr	Fall/Spring - 3 cr	Spring/ Fall – 3 cr	Fall/Spring - 3 cr	Spring only - 3 cr	Fall/Spring – 3 cr	Spring/Fall – 3 cr
	PHSX 216 * Gen. Physics I Lab Co. PHSX 211	PHSX 212 * Gen. Physics II Pr: PHSX 211 Co: MATH 122	ME 320 / 321 Dynamics / Lab Pr: ME 211 (201), MATH 220, MATH 290	ME 307 Engr. Materials Lab Pr: CHEM 150 (184,130) Co: ME 306, ME 311	ME 501 Mech. Engr. Design Process Pr: ME 311, ME 312 Co: ME 228, ME 307	Capstone Design Option: A - List 1 Elective → B - ME 627 → C - ME 633 ⁴ → D - ME 644 ⁷ → E - List 1 Elective → Fall only – 3 cr	Capstone Design Option: A - ME 641 ⁵ B - ME 642 ³ C - ME 643 ⁶ D - List 1 Elective E - ME 645 ⁸ Spring only – 3 cr
	Spring/Fall - 1 cr	Fall/Spring - 3 cr	Spring only - 3+1 cr	Fall only – 2 cr	Spring only – 3 cr		
		PHSX 236 * Gen. Physics II Lab Co. PHSX 212	General Ed. Comp Elective ¹	MATH 365 * (or MATH 526 or CE 625 or DSCI 301) Statistics Pr: See Catalog			
		Fall/Spring - 1 cr	Spring/Fall – 3 cr	Spring/Fall – 3 cr			

Pr=Prerequisite Co=Corequisite cr=semester credit hour

¹ One course from each of the Communication, Contemporary Issues, Economics, Environmental Concern, and Ethics electives

² 6-16 credit hours from List 1 and 0-10 credit hours from List 2

³ Pr: ME 501, ME 627, and ME 628 Co: ME 412 and ME 455

⁴ Counts as List 1 Elect. -- Pr: ME 311 and ME 320

⁵ (includes 1 cr ME 640) -- Pr: ME 501, ME 455, and ME 628

⁶ (includes 1 cr ME 640) -- Pr: ME 501, ME 628, and ME 633

⁷ (includes 1 cr ME 640) -- Pr: ME 412, ME 501, and ME 455

⁸ (includes 1 cr ME 640) -- Pr: ME 501, ME 510, ME 628

Co: ME 455
Co: ME 628
Co: ME 412, ME 455

* A grade of "C" or better will be required for these courses and courses substituted for these courses.