

# Mechanical Engineering Curriculum

Freshman Year		Sophomore Year		Junior Year		Senior Year	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
MATH 121 * (GE12) <b>Calculus I</b> Pr: (see catalog)	MATH 122 * <b>Calculus II</b> Pr: MATH 121	MATH 220 * <b>Applied Differential Equations</b> Pr: MATH 122	EECS 316 <b>Circuits, Electronics and Instrumentation</b> Pr. PHSX 212, MATH 220	ME 612 (CPE 521) <b>Heat Transfer</b> Pr: ME 312, MATH 220 Co: ME 510	<b>Ethics (AE51)</b> PHIL 160, 180 or 320	ME 455 <b>Mech. Engr. Meas. &amp; Exp.</b> Pr: ME 208, ME 311, Co: ME 510, ME 320, ME 612, EECS 318 MATH 365	<b>Diversity in US<sup>1</sup> (AE41)</b>
Fall/Spring - 5 cr	Spring/Fall - 5 cr	Fall/Spring – 3 cr	Spring only - 3 cr	Fall only - 3 cr	Spring/Fall – 3 cr	Fall/Spring – 4 cr	Spring/Fall – 3 cr
<b>Written Comm (GE21)</b> ENGL 101 Pr: (see catalog)	<b>Written Comm (GE21)</b> ENGL 102 Pr: ENGL 101	MATH 290 * <b>Elementary Linear Algebra</b> Pr: MATH 122	EECS 318 <b>Circuits and Electronics Lab</b> Co: EECS 316	ME 508 <b>Num. Analysis</b> Pr: ME 208, MATH 220, MATH 290	ME 661 <b>Finite Element Method for Stress Analysis</b> Pr: ME 311, MATH 220 MATH 290	<b>Arts and Humanities<sup>1</sup> (GE3H)</b>	<b>Global Awareness<sup>1</sup> (AE42)</b>
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 * <b>Computer Graphics</b> Pr: None	ME 208 * <b>Intro. Digital Comp. Methods in M.E.</b> Co: MATH 121 (116)	ME 312 * <b>Basic Engr Thermodynamics</b> Pr: PHSX 211 Co: MATH 122,	ME 510 (CPE 511 or AE 345) <b>Fluid Mechanics</b> Pr: ME 211 (201) ME 312	ME 412 <b>Thermal Systems</b> Pr: ME 312	<b>Economics (GE3S)</b> ECON 104, 142, or 144	ME 682 <b>System Dynamics and Control Systems</b> Pr: ME 320	Approved Elective <sup>2</sup>
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 *(GE3N) <b>Chemistry for Engineers</b> Pr. None	PHSX 211 *(GE11) <b>Gen. Physics I</b> Pr. MATH 121	ME 211 * <b>Statics and Intro to Mechanics</b> Pr: PHSX 211	ME 311* <b>Mechanics of Mat'ls</b> Pr: ME 211, MATH 220	ME 306 <b>Science of Materials</b> Pr: CHEM 150 (130)	ME 628 <b>Mech. Design</b> Pr: ME 311	Approved Elective <sup>2</sup>	Approved Elective <sup>2</sup>
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 – 4 cr	Spring/Fall – 3 cr
	PHSX 216 * <b>Gen. Physics I Lab</b> Co. PHSX 211	PHSX 212 * <b>Gen. Physics II</b> Pr: PHSX 211 Co: MATH 122	ME 320 / 321 <b>Dynamics / Lab</b> Pr: ME 211 (201), MATH 220, MATH 290	ME 307 <b>Engr. Materials Lab</b> Pr: CHEM 150(130, 184) Co: ME 306, ME 311	ME 501 <b>Mech. Engr. Design Process</b> Pr: ME 311, ME 312 Co: ME 228, ME 307	<b>Capstone Design</b> Option: A - <b>List 1 Elective</b> → B - <b>ME 627</b> → C - <b>ME 633<sup>4</sup></b> → D - <b>ME 644<sup>7</sup></b> → E - <b>List 1 Elective</b> →	<b>Capstone Design (AE6)</b> Option: A - <b>ME 641<sup>5</sup></b> B - <b>ME 642<sup>3</sup></b> C - <b>ME 643<sup>6</sup></b> D - <b>List 1 Elective</b> E - <b>ME 645<sup>8</sup></b>
	Spring/Fall - 1 cr	Fall/Spring - 3 cr	Spring/Fall - 3+1 cr	Fall only – 2 cr	Spring only – 3 cr	Fall only – 3 cr	Spring only – 3 cr
		PHSX 236 * <b>Gen. Physics II Lab</b> Co. PHSX 212	<b>Oral Comm (GE22)</b> COMS 130	<b>Statistics *</b> MATH 365, 526, CE 625, or DSCI 301 Pr: See Catalog	<sup>1</sup> Courses to satisfy the KU Core from each of the following areas: Goal 3 Arts and Humanities, Goal 4 LO1 Diversity in the US, and Goal 4 Global Awareness <sup>2</sup> 6-13 credit hours from List 1 and 0-7 credit hours from List 2 <sup>3</sup> Pr: ME 501, ME 627, and ME 628 Co: ME 412 and ME 455 <sup>4</sup> Counts as List 1 Elect. -- Pr: ME 311 and ME 320 <sup>5</sup> (includes 1 cr ME 640) -- Pr: ME 501, ME 455, and ME 628 <sup>6</sup> (includes 1 cr ME 640) -- Pr: ME 501, ME 628, and ME 633 <sup>7</sup> (includes 1 cr ME 640) -- Pr: ME 412, ME 501, and ME 455 <sup>8</sup> (includes 1 cr ME 640) -- Pr: ME 501, ME 510, ME 628		
		Fall/Spring - 1 cr	Spring/Fall – 3 cr	Fall/Spring – 3 cr			Co : ME 455 Co: ME 628 Co : ME 412, ME 455

Pr=Prerequisite Co=Corequisite cr=semester credit hour

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