

# KU Mechanical Engineering Curriculum



(Total credit hours for degree: 128 – see back for details)

Student Name: \_\_\_\_\_

Freshman Year		Sophomore Year		Junior Year		Senior Year	
Fall (16 hrs)	Spring (17 hrs)	Fall (17 hrs)	Spring (17 hrs)	Fall (15 hrs)	Spring (15 hrs)	Fall (15-17 hrs)	Spring (14-16 hrs)
ME 101 <b>ME Seminar</b>  Fall - 1 cr	ME 208 <b>Intro. Digital Comp. Methods in M.E.</b> Co: MATH 125  Fall, Spr - 3 cr	ME 211 <b>Statics and Intro to Mechanics</b> Pr: PHSX 210 (211 or 201)  Fall, Spr - 3 cr	ME 311 <b>Mechanics of Mat'ls</b> Pr: ME 211 (210), MATH 126 (C-)  Fall, Spr - 3 cr	ME 307 <b>Engr. Materials Lab</b> Pr: CHEM 150, ME 228 Co: ME 306, ME 311  Fall, Spr - 2 cr	ME 628 <b>Mech. Design</b> Pr: ME 311  Spring only - 3 cr	Adv. Engr. Elective★ (List 1) (ME 627 <sup>3</sup> if Capstone Option B – FSAE) (ME 633 <sup>5</sup> if Capstone Option C – BIO)  Fall only - 3 cr	Adv. Engr. Elective★ (List 1)  Fall, Spr - 3 cr
ME 228 <b>Computer Graphics</b> Co: MATH 104  Fall, Spr - 3 cr	MATH 126* <b>Calculus II</b> Pr: MATH 125  Fall, Spr, Su - 4 cr	MATH 127 <b>Calculus III</b> Pr: MATH 126  Fall, Spr, Su - 4 cr	MATH 290 <b>Elementary Linear Algebra</b> Pr: MATH 126  Fall, Spr, Su - 2 cr	ME 508 <b>Num. Analysis</b> Pr: ME 208, MATH 220, MATH 290  Fall, Spr - 3 cr	ME 501 <b>Mech. Engr. Design Process</b> Pr: ME 228, ME 311  Fall, Spr - 2 cr	<b>Capstone Design</b> Option: (AE6) A - ME 640 <sup>1</sup> → B - N/A → C - ME 640 <sup>1</sup> →  0-2 cr	<b>Capstone Design</b> Option: (AE6) A - ME 641 <sup>2</sup> (Gen/EcoHawks) B - ME 642 <sup>4</sup> (JMS) C - ME 643 <sup>6</sup> (BIO)  2-4 cr
MATH 125* (GE1.2) <b>Calculus I</b> Pr: see catalog  Fall, Spr, Su - 4 cr	MATH 365 or 526 <b>Statistics</b> Pr: see catalog  Fall, Spr, Su - 3 cr	ME 312 <b>Basic Engr Thermo</b> Pr: PHSX 210 (211 or 201), MATH 126 (C-)  Fall, Spr, Su - 3 cr	ME 412 <b>Thermal Systems</b> Pr: ME 312  Fall, Spr - 3 cr	ME 510 (CPE 511) <b>Fluid Mechanics</b> Pr: ME 211 (201), ME 312, MATH 127  Fall, Spr - 3 cr	ME 612 <b>Heat Transfer</b> Pr: ME 312, ME 510, MATH 220  Fall, Spr, Su - 3 cr	ME 455 <b>ME Meas. &amp; Exp.</b> Pr: ME 208, ME 307, ME 320, MATH 365 Co: ME 612, EECS 318  Fall, Spr - 4 cr	<b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1)  Fall, Spr, Su - 3 cr
CHEM 150 (GE3N) <b>Chemistry for Engineers</b>  Fall, Spr - 5 cr	PHSX 210* + 216 (GE1.1) <b>Gen. Physics I</b> Pr: MATH 125 Co: MATH 126 Co: PHSX 210 for PHSX 216 Fall, Spr, Su - 3+1 cr	PHSX 212 + 236 <b>Gen. Physics II</b> Pr: PHSX 210 (211 or 201), MATH 126 Co: PHSX 212 for PHSX 236 Fall, Spr, Su - 3+1 cr	MATH 220 <b>Applied Differential Equations</b> Pr: MATH 126  Fall, Spr, Su - 3 cr	ME 320 + 321 <b>Dynamics / Lab</b> Pr: ME 211 (201), MATH 220, MATH 290 Co: ME 320 for ME 321 Fall, Spr - 3+1 cr	EECS 316 + 318 <b>Circuits, Electronics and Instrumentation</b> Pr: 8 cr of PHSX, MATH 220 Co: EECS 316 for EECS 318 Spring only - 3+1 cr	ME 682 <b>System Dynamics and Control Systems</b> Pr: ME 320  Fall only - 3 cr	General Elective★ (List 2)  Fall, Spr, Su - 3 cr
ENGL 101 <b>Written Comm (GE2.1)</b> Pr: see catalog  Fall, Spr, Su - 3 cr	ENGL 102 <b>Written Comm (GE2.1)</b> Pr: ENGL 101  Fall, Spr, Su - 3 cr	ME 306 <b>Science of Materials</b> Pr: CHEM 150  Fall, Spr, Su - 3 cr	<b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1) Fall, Spr, Su - 3 cr  <b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1) Fall, Spr, Su - 3 cr	<b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1)  Fall, Spr, Su - 3 cr	ME 661 <b>Finite Element Method for Stress Analysis</b> Pr: ME 311, MATH 220, MATH 290  Spr, Su - 3 cr	<b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1) Fall, Spr, Su - 3 cr  General Elective★ (List 2)  Fall, Spr, Su - 2 cr	<b>KU Core**</b> ★ (GE2.2, GE3H, GE3S, AE4.1, AE4.2, or AE5.1)  Fall, Spr, Su - 3 cr

NOTE : If Course A is a pre-/co-requisite for Course B, and if Course B is a pre-/co-requisite for Course C, then Course A is a pre-/co-requisite for Course C.

Pr = Prerequisite; Co = Corequisite; cr = semester credit hour  
★ = Taken in any order as long as any pre- and co-reqs are met

**Capstone Design Footnotes (see back for detailed tracks)**

- <sup>1</sup> Fall, Spring -- Pr: ME 501, ME 628
- <sup>2</sup> Fall, Spring -- Pr: ME 640 (2 cr), ME 501, ME 510, ME 628 Co: ME 412, ME 455
- <sup>3</sup> Fall Only -- Pr: Instructor's Permission Counts as List 1 Elect.
- <sup>4</sup> Spring Only -- Pr: ME 501, ME 627, ME 628 Co: ME 412, ME 455
- <sup>5</sup> Fall Only -- Pr: ME 311, ME 320 Counts as List 1 Elect.
- <sup>6</sup> Fall, Spring -- Pr: ME 640 (2 cr), ME 501, ME 628, ME 633 Co: ME 455

\* A grade of "C-" or better is required by the Math and Physics Departments for these courses and courses substituted for these courses to satisfy pre- and co-requisites.

\*\*GE3S must be ECON 104, 142, or 144. AE5.1 must be PHIL 160, 161, or 180.