






# MECHANICAL ENGINEERING CURRICULUM – SAMPLE 5-YEAR PLAN

1	<b>Humanities &amp; Social Science (3)</b> Lower Division	<b>MCEN 1024 (3)</b> Chemistry of Energy & Materials	<b>APPM 1350 (4)</b> Calculus 1 For Engineers	<b>GEEN 1400 (3)</b> First-Year Engineering Projects	<b>Example</b> <b>Course (Credits)</b> Course Name (PR: Prerequisites) (CR: Corequisites)
2	<b>Humanities &amp; Social Science (3)</b> Lower Division	<b>PHYS 1110 (4)</b> General Physics 1 (CR: APPM 1350)	<b>APPM 1360 (4)</b> Calculus 2 For Engineers (PR: APPM 1350)	<b>MCEN 1026 (3)</b> Computer-Aided Design	
3	<b>Humanities &amp; Social Science (3)</b> Lower Division	<b>PHYS 1120 (4)</b> General Physics 2 (PR: PHYS 1110) (CR: APPM 1360)	<b>PHYS 1140 (1)</b> Experimental Physics (CR: PHYS 1120)	<b>APPM 2350 (4)</b> Calculus 3 For Engineers (PR: APPM 1360)	<b>MCEN 2026 (1)</b> Introduction to Fabrication
4	<b>Free Elective (3)</b>	<b>MCEN 1030 (3)</b> Engineering Computing (CR: APPM 1235 or APPM 1350)	<b>MCEN 2023 (3)</b> Statics & Structures (PR: APPM 1360, PHYS 1110)	<b>APPM 2360 (4)</b> Linear Algebra & Differential Equations (PR: APPM 1360)	<b>MCEN 2000 (1)</b> Mechanical Engineering as a Profession
5	<b>Free Elective (3)</b>	<b>MCEN 2024 (3)</b> Materials Science (PR: MCEN 1024, PHYS 1110)	<b>MCEN 2063 (3)</b> Mechanics of Solids (PR: MCEN 2023, APPM 1360)	<b>MCEN 2043 (3)</b> Dynamics (PR: MCEN 2023, APPM 1360)	
6	<b>Humanities &amp; Social Science (3)</b> Upper Division	<b>MCEN 3012 (3)</b> Thermodynamics 1 (PR: APPM 1360)	<b>MCEN 3017 (3)</b> Circuits & Electronics (PR: PHYS 1120) (CR: APPM 2360)	<b>MCEN 3025 (4)</b> Component Design (PR: MCEN 1025, MCEN 2024, MCEN 2063)	
7	<b>Humanities &amp; Social Science (3)</b> Upper Division	<b>MCEN 4026 (4)</b> Manufacturing Processes & Systems (PR: MCEN 2024)	<b>MCEN 3030 (3)</b> Computational Methods (PR: MCEN 1030, APPM 2360)	<b>MCEN 3021 (3)</b> Fluid Mechanics (PR: MCEN 2023, APPM 2350)	
8	<b>General Technical Elective (3)</b>	<b>MCEN 3022 (3)</b> Heat Transfer (PR: MCEN 3012, MCEN 3021, APPM 2360)	<b>Writing Requirement (3)</b>	<b>MCEN 4043 (4)</b> System Dynamics (PR: MCEN 2043, MCEN 3017) (CR: MCEN 3030)	
9	<b>MCEN 3032 (3)</b> Thermodynamics 2 (PR: MCEN 3012, MCEN 3021, APPM 2360)	<b>MCEN 4045 (4)</b> ME Design Project 1 <b>Fall Only</b>	<b>MCEN Technical Elective (3)</b>	<b>MCEN 3047 (4)</b> Data/Measurements (PR: PHYS 1140) (CR: Writing, MCEN 3030, MCEN 3017)	
10	<b>General Technical Elective (3)</b>	<b>MCEN 4085 (3)</b> ME Design Project 2 <b>Spring Only</b>	<b>MCEN Technical Elective (3)</b>		

-  = Mechanical Engineering Design Project Sequence
-  = Must be taken as a pre-requisite to MCEN 4045
-  = Must take at least one of MCEN 3022, MCEN 3047, or MCEN 4043 as a pre-requisite to MCEN 4045. Remaining two can be taken as a co-requisite to MCEN 4045. All courses must be taken as a pre-requisite to MCEN 4085.
-  = Can be taken as a pre-requisite or co-requisite to MCEN 4045.
-  = Can be taken any semester pending completion of any applicable pre/co-requisites.