MECHANICAL ENGINEERING CURRICULUM – *BLUE 4-YEAR PLAN*

1		**GEEN 1400 (3)** First-Year Engineering Projects	**CSCI 1300 (4)** Computer Science 1 (CR: APPM 1350)	**APPM 1350 (4)** Calculus 1 For Engineers	**PHYS 1110 (4)** General Physics 1 (CR: APPM 1350)	
2		**MCEN 1025 (4)** Computer-Aided Design & Fabrication	**MCEN 1024 (3)** Chemistry of Energy & Materials	**APPM 1360 (4)** Calculus 2 For Engineers (PR: APPM 1350)	**PHYS 1120 (4)** General Physics 2 (PR: PHYS 1110) (CR: APPM 1360)	**PHYS 1140 (1)** Experimental Physics (CR: PHYS 1120)
3	**Humanities & Social Science (3)** Lower Division	**MCEN 2000 (1)** Professionalism Seminar (Fall Only)	**MCEN 2024 (3)** Materials Science (PR: MCEN 1024, PHYS 1110)	**APPM 2350 (4)** Calculus 3 For Engineers (PR: APPM 1360)	**Math/Science Requirement (3)**	**MCEN 2023 (3)** Statics & Structures (PR: APPM 1360, PHYS 1110)
4	**Humanities & Social Science (3)** Lower Division	**Free Elective (3)**	**MCEN 3012 (3)** Thermodynamics 1 (PR: APPM 2350)	**APPM 2360 (4)** Linear Algebra & Differential Equations (PR: APPM 1360)	**MCEN 2063 (3)** Mechanics of Solids (PR: MCEN 2023, APPM 1360)	**MCEN 2043 (3)** Dynamics (PR: MCEN 2023, APPM 1360)
5	**Humanities & Social Science (3)** Lower Division	**MCEN 3025 (3)** Component Design (PR: MCEN 1025, MCEN 2024, MCEN 2063)	**MCEN 3030 (3)** Computational Methods (PR: CSCI 1300, APPM 2360)	**ECEN 3010 (3)** Circuits & Electronics (PR: PHYS 1120) (CR: APPM 2360)	**MCEN 3021 (3)** Fluid Mechanics (PR: MCEN 2023, APPM 2350)	
6	**Writing Requirement (3)**	**MCEN 4026 (3)** Manufacturing Processes & Systems (PR: MCEN 2024)	**General Technical Elective (3)**	**MCEN 3022 (3)** Heat Transfer (PR: MCEN 3012, MCEN 3021, APPM 2360)	**MCEN 4043 (3)** System Dynamics (PR: MCEN 2043, ECEN 3010, APPM 2360) (CR: MCEN 3030)	
7	**Humanities & Social Science (3)** Upper Division	**MCEN 4045 (3)** ME Design Project 1 (Fall Only)	**MCEN 3032 (3)** Thermodynamics 2 (PR: MCEN 3012, MCEN 3021, APPM 2360)	**Mechanical Technical Elective (3)**	**MCEN 3047 (4)** Data/Measurements (PR: MEN 2063, APPM 2360, PHYS 1140) (CR: Writing, MCEN 3030, ECEN 3010)	
8	**Humanities & Social Science (3)** Upper Division	**MCEN 4085 (3)** ME Design Project 2 (Spring Only)	**Free Elective (3)**	**Mechanical Technical Elective (3)**	**General Technical Elective (3)**	

== Must be taken before ME Design

== Can be taken any semester pending completion of any pre/co-requisites

== Can be taken as a pre- or co- requisite for ME Design. Must take one of MCEN 3047, 3022 or 4043 before ME Design

== ME Senior Design Sequence

== Can be taken as a pre-requisite or co-requisite to ME Design

Example

COURSE NUMBER (Cr.)
Course Name
(PR: Pre-Requisites)
(CR: Co-Requisites)

Effective: Spring 2021

MECHANICAL ENGINEERING SEMESTER X SEMESTER PLAN

Academic Year	Fall	Spring	Summer
Year 1	GEEN 1400 (3)	MCEN 1025 (4)	
	CSCI 1300 (4)	MCEN 1024 (3)	
	APPM 1350 (4)	APPM 1360 (4)	
	PHYS 1110 (4)	PHYS 1120 (4)	
		PHYS 1140 (1)	
Year 2	H&SS LD (3)	H&SS LD (3)	
	MCEN 20000 (1)	Free Elective (3)	
	MCEN 2024 (3)	MCEN 3012 (3)	
	APPM 2350 (4)	APPM 2360 (4)	
	Math/Science (3)	MCEN 2063 (3)	
	MCEN 2023 (3)	MCEN 2043 (3)	
Year 3	H&SS LD (3)	Writing (3)	
	MCEN 3025 (3)	MCEN 4026 (3)	
	MCEN 3030 (3)	GEN Tech (3)	
	ECEN 3010 (3)	MCEN 3022 (3)	
	MCEN 3021 (3)	MCEN 4043 (3)	
Year 4	H&SS UD (3)	H&SS UD (3)	
	MCEN 4045 (3)	MCEN 4085 (3)	
	MCEN 3032 (3)	Free Elective (3)	
	ME Tech (3)	ME Tech (3)	
	MCEN 3047 (4)	GEN Tech (3)	

Mechanical Engineering Curriculum

- **Course Substitutions**
- **Writing Requirement**

  The Writing Requirement can be fulfilled by:
  - ENES 1010 (freshmen only)
  - ENES 3100
  - WRTG 3030
  - WRTG 3035
- **Humanities & Social Science Electives**
- **Math/Science Foundation**
- **General Technical Electives**
- **Mechanical Technical Electives**
- **Grade Requirements**

  Beginning with the incoming class of Fall 2015, the minimum passing grade for pre-requisite and co-requisite classes in our curriculum is a C. This includes courses completed outside the department (APPM, PHYS, etc.). The minimum passing grade for standalone classes is a D-. In addition, students need to have a cumulative and major GPA of at least 2.25 in order to graduate from the College of Engineering.
  **Due to the COVID-19 Pandemic, modifications to the Grade Requirement are currently in place. For more information, please consult with your Academic Advisor.*

Design Your Career

Track Your Progress in Canvas

First Year: Ideate

The ideation phase is about coming up with ideas and trying new things. It's a time to explore your interests and start getting involved.

Requirements*:*

Student Group Participation

Explore ME Dinner

Second Year: Prototype

The prototyping phase is about trying out your ideas. A test run can provide valuable insights for your final design.

Requirements:

MCEN 2000 Mechanical Engineering as a Profession

Industry Tour

2X Industry / Research Talk

Third Year: Iterate

The iteration phase is about refining a proof of concept. Continue pursuing existing interests while keeping an eye out for new opportunities and honing your skills

Requirements:

Networking Event

Career Check-In

2X Industry / Research Talk

Summer Survey

Senior Design Pre-Expo

Fourth Year: Implement

You've ideated, prototyped and iterated. Now, it's time to launch your career!

Requirements:

MCEN 4045/4085

FE Exam

Summer Survey