

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)

 == Must be taken before ME Design

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

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)

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

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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: MCEN 2063, APPM 2360, PHYS 1140)
(CR: Writing, MCEN 3030, ECEN 3010)

 == ME Senior Design Sequence

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

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)

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

MECHANICAL ENGINEERING SEMESTER X SEMESTER PLAN

Academic Year

Fall

Spring

Summer

_____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
_____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
_____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
_____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____

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.*

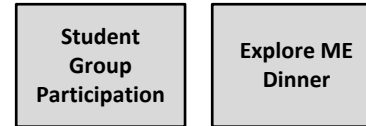
Design Your Career

[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:



Second Year: Prototype

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

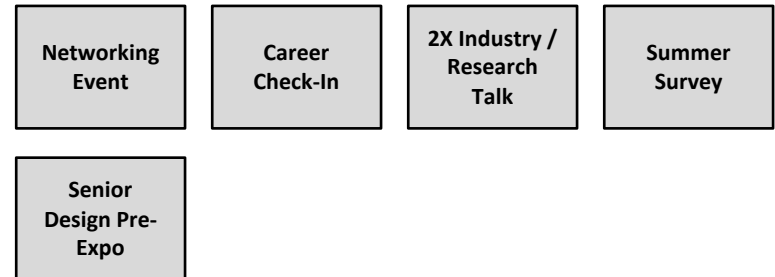
Requirements:



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:



Fourth Year: Implement

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

Requirements:

