

MECHANICAL ENGINEERING CURRICULUM – BLUE 4-YEAR PLAN

1

GEEN 1400 (3)
First-Year Engineering
Projects

APPM 1350 (4)
Calculus 1 For Engineers

PHYS 1110 (4)
General Physics 1
(CR: APPM 1350)

MCEN 1030 (4)
Engineering Computing
(CR: APPM 1235 or
APPM 1350)

Example

Course (Credits)

Course Name
(PR: Prerequisites)
(CR: Corequisites)

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)
Mechanical Engineering
as a Profession

APPM 2350 (4)
Calculus 3 For Engineers
(PR: APPM 1360)

MCEN 2024 (3)
Materials Science
(PR: MCEN 1024, PHYS
1110)

Math/Science
Foundations (3)

MCEN 2023 (3)
Statics & Structures
(PR: APPM 1360, PHYS
1110)

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Humanities &
Social Science (3)
Lower Division

Free Elective (3)

APPM 2360 (4)
Linear Algebra &
Differential Equations
(PR: APPM 1360)

MCEN 3012 (3)
Thermodynamics 1
(PR: APPM 1360)

MCEN 2063 (3)
Mechanics of Solids
(PR: MCEN 2023, APPM
1360)

MCEN 2043 (3)
Dynamics
(PR: MCEN 2023, APPM
1360)

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Humanities &
Social Science (3)
Lower Division


MCEN 3025 (3)
Component Design
(PR: MCEN 1025, MCEN
2024, MCEN 2063)

MCEN 3030 (3)
Computational
Methods
(PR: MCEN 1030, APPM
2360)

MCEN 3017 (3)
Circuits & Electronics
(PR: PHYS 1120)
(CR: APPM 2360)

MCEN 3021 (3)
Fluid Mechanics
(PR: MCEN 2023, APPM
2350)

Key

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

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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, MCEN
3017, APPM 2360)
(CR: MCEN 3030)

 == Must be taken as a pre-
requisite to MCEN 4045.

 == Must take at least one of
MCEN 3047, MCEN 3022 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.

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Humanities &
Social Science (3)
Upper Division

MCEN 4045 (3)
Mechanical Engineering
Design Project 1
(Fall Only)

MCEN 3032 (3)
Thermodynamics 2
(PR: MCEN 3012, MCEN
3021, APPM 2360)

MCEN Technical
Elective (3)

MCEN 3047 (4)
Data/Measurements
(PR: MCEN 2063, APPM 2360,
PHYS 1140)
(CR: Writing, MCEN 3030, MCEN
3017)

 == Can be taken as a pre-
requisite or co-requisite
to MCEN 4045.

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Humanities &
Social Science (3)
Upper Division

MCEN 4085 (3)
Mechanical Engineering
Design Project 2
(PR: MCEN 4045)
(Spring Only)

Free Elective (3)

MCEN Technical
Elective (3)

General
Technical
Elective (3)

 == Mechanical Engineering
Design Project Sequence.