

MECHANICAL ENGINEERING Suggested Academic Plan* (Option A: last name begins with A-K)

Semester 1

17 credits

CHEM 110 3 cr.
Chem Principles

MATH 140 # 4 cr.
Calc 1

EDSGN 100 3 cr.
Intro to Engr Design

ENGL 15 3 cr.
Rhetoric and Compisition

Engr FYS 1 cr.
*Students who did not take a 1 or C&E
FYS should verify completion of
this requirement with ME adviser*

Gen ed ^ 3 cr.

Semester 2

17 credits

Science elective 3 cr.
*CHEM 112, BIOL 141/161 or
PHYS 214 and CHEM 111*
P: Vary by selection

MATH 141 # 4 cr.
Calc 2
P: MATH 140

PHYS 211 4 cr.
Mechanics
P/C: MATH 140

ECON 102 or 104 3 cr.
Micro or Macro economics
(GS - Single domain)

Gen ed ^ 3 cr.

Semester 3

17 credits

CMPSC 200 or 201 3 cr.
MATLAB or C++
P: MATH 140
P/C: MATH 141

MATH 251 # 4 cr.
Diff Equations
P: MATH 141

PHYS 212 4 cr.
Elect & Magnetism
P: PHYS 211, MATH 140
P/C: MATH 141

EMCH 211 # 3 cr.
Statics
P: MATH 140

CAS 100 3 cr.
Effective Speech

Semester 4

16-17 credits

ME 300 3 cr.
ENGR Thermodynamics
P: CHEM 110
P/C: MATH 141

MATH 231 # 2 cr.
Calc of Several Variables
P: MATH 141

MATH 220 # 2-3 cr.
Matrices
P: MATH 140

EMCH 213 # 3 cr.
Strength of materials
P: EMCH 211

EMCH 212 # 3 cr.
Dynamics
P: EMCH 211, MATH 141

Gen ed ^ 3 cr.

Semester 5

15.5 credits

ME 370 3 cr.
Vibration of Mech Sys
P: EMCH 212, CMPSC 200/201,
MATH 220, MATH 251

ME 330 3 cr.
Computational Tools
P: EMCH 212 & 213,
MATH 251, PHYS 212

ME 348 3 cr.
Circuit Analysis...
P: MATH 251, PHYS 212

IE 312 3 cr.
Product Design...
P: EMCH 213
P/C: MATSE 259

MATSE 259 3 cr.
Prop&Proc ENGR Materials
P: EMCH 213

ME 390 0.5 cr.
Acad & Career Development

Semester 6

17 credits

ME 320 3 cr.
Fluid Flow
P: EMCH 212, MATH 251
ME 300, MATH 231

ME 340 3 cr.
ME Design Methodolgy
P: EDSGN 100
P/C: ME 320, ME 360

ME 360 3 cr.
Mechanical Design
P: EMCH 213
P/C: CMPSC 200/201

ME 454 3 cr.
Mechtatronics
P: ME 348

ENGL 202C 3 cr.
Technical Writing
P: ENGL 15

ME 490 0.5 cr.
Professional Development
P: ME 390

Gen ed ^ 1.5 cr.
GHW

Semester 7

16.5 credits

ME 450 3 cr.
Modeling Dynamic System
P: ME 370
P/C: ME 348

ME 410 3 cr.
Heat Transfer
P: ME 320, MATH 220
CMPSC 200/201

ME 435 3 cr.
ME Systems Lab
P: ME 348, ME 330, ME 320
P/C: ME 370

METE 3 cr.
ME Tech Elective
P/C: Vary by selection

ETE 3 cr.
ENGR Tech Elective
P/C: Vary by selection

Gen ed ^ 1.5 cr.
GHW

Semester 8

15 credits

ME 440W 3 cr.
Design Capstone
P: ME 340
P/C: IE 312, ENGL 202C

ETE 3 cr.
ENGR Tech Elective
P/C: Vary by selection

GTE 3 cr.
GTE Tech Elective
P/C: Vary by selection

Gen ed ^ 3 cr.

Gen ed ^ 3 cr.

*This flow chart is meant to be a guide for planning; use in conjunction with official degree audit. Please note that some courses require a C or better. For additional information on official degree requirements see www.bulletins.psu.edu.

P = prerequisite
C = concurrent

Courses applied toward
major GPA calculation

ME Course Sequencing

- Thermal Sciences
- Imbedded Labs
- Dynamic Systems
- Design Concentration

Note:

Completion of EMCH and MATH courses before the 5th semester is important for future course sequencing
EMCH 210 or EMCH 210H is **not** a direct substitute for EMCH 211 & 213 requirements and should not be taken for ME_BS

^ Gen ed requirements:

3 credits each Single domain	6 total credits Interdomain ("N")	9 total credits Exploratory
<input checked="" type="checkbox"/> *3 cr. GS - ECON 102 or 104	<input type="checkbox"/> 3 cr. -	<input checked="" type="checkbox"/> * GN - PHYS 211
<input checked="" type="checkbox"/> *3 cr. GN - CHEM 110	<input type="checkbox"/> 3 cr. -	<input checked="" type="checkbox"/> * GN - PHYS 212
<input type="checkbox"/> 3 cr. GA -		<input type="checkbox"/> 3 cr. - any GA/GHW/GS/GN/IL or 12 th cr. level language
<input type="checkbox"/> 3 cr. GH -		
<input type="checkbox"/> 3 total cr. GHW -		

*Gen eds satisfied through ME_BS required curriculum

Capture cultures requirements in above selections: 3 cr US & 3 cr IL

[Other University Requirements | Penn State \(psu.edu\)](http://Other University Requirements | Penn State (psu.edu))