This resource is for ENGRUD students who entered the UW-Seattle in AUT25.

ME

Mechanical Engineering Degree Requirements

https://me.washington.edu
meadvise@uw.edu

ENGRUD Requirement Key:
◆ **= Placement Requirements**;
★ *= Pick **one** to satisfy placement requirement*
Placement: July 1 at the end of the first year

Engineering First-year Interest Group (E-FIG)

◆ **ENGR 101 (1cr)**
GEN ST 199 (1cr)

Mathematics (29-32cr)

◆ **MATH 124, 125, 126 - Calc. w/ Analytic Geom. I-III (15cr)**

MATH 207 - Intro to Differential Equations (4cr)
[pr: MATH 125] OR AMATH 351 (3cr) [pr: MATH 125]

MATH 208 - Matrix Algebra with Applications (4cr)
OR AMATH 352 (3cr) [pr: MATH 126]

One course from the following: MATH 209 (4cr), MATH 224 (4cr), AMATH 353 (3cr)

One course from the following: IND E 315 (3cr), STAT 290 - AP Statistics (5cr), STAT 390 (4cr)

Sciences (25cr)

◆ **CHEM 142 - General Chemistry (5cr)**

★ ***CHEM 152 - General Chemistry (5cr)***
[pr: CHEM 142]

◆ **PHYS 121 - Mechanics (5cr)**
[pr: MATH 125 or MATH 134]

★ ***PHYS 122 - Electromagnetism (5cr)***
[pr: MATH 125; PHYS 121]

★ ***PHYS 123 - Waves (5cr)***
[pr: MATH 126; PHYS 122]

General Education Requirements (29-34cr)

Written and Oral Communications:

◆ **English Composition (5cr)**
Writing (7cr) - met by coursework in the major

Areas of Inquiry:

Arts & Humanities - A&H (10cr) - 4cr met by M E 123
Social Sciences - SSc (10cr)
Additional A&H or SSc (4cr)

Diversity - DIV (5cr) (may overlap with Areas of Inquiry or W)

Engineering Fundamentals (28cr)

A A 210 - Engineering Statics (4cr)
[pr: MATH 126; PHYS 121]

★ ***AMATH 301 - Beginning Scientific Computing (4cr)***
[pr: Either MATH 125, Q SCI 292, or MATH 135]

CEE 220 - Intro to Mechanics of Materials (4cr)
[pr: AA 210]

E E 215 - Fundamentals of Electrical Engineering (4cr)
[pr: MATH 126 and either MATH 207 or AMATH 351, either of which may be taken concurrently; PHYS 122]

★ ***M E 123 - Intro to Vis. & Comp-Aided Design (4cr) (A&H)***
[pr: MATH 125 or MATH 135]

Engineering Fundamentals (cont'd)

M E 230 - Kinematics and Dynamics (4cr)
[pr: A A 210]

★ ***MSE 170 - Fundamentals of Materials Science (4cr)***
[pr: CHEM 142, CHEM 143, or CHEM 145]

Major Core Requirements (46cr)

M E 323 - Engineering Thermodynamics (5cr)

M E 331 - Intro to Heat Transfer (4cr)

M E 333 - Intro to Fluid Mechanics (5cr)

M E 354 - Mechanics of Materials Lab (5cr) (W)

M E 355 - Intro to Manufacturing Processes (4cr)

M E 356 - Machine Design Analysis (4cr)

M E 373 - Intro to System Dynamics (5cr)

M E 374 - Systems Dynamic Analysis and Design (5cr)

One course from:

- M E 493 - Introduction to Capstone Design (3cr) (W)
- M E 414/E E 414 Engineering Innovation in Health (3cr)

M E 494 - Capstone Design I (3cr)

M E 495 - Capstone Design II (3cr)

Mechanical Engineering Option (19cr)

Complete one option below. Contact department for list of approved courses.

a. Standard Option
b. Mechatronics Option
c. Biomechanics Option

Free Electives (to reach 180 total credits) (~5cr)

Additional coursework in any subject area not used elsewhere in degree.

Total credits required for graduation: 180cr

Honors or accelerated sequences of chemistry, math and physics will satisfy degree requirements.

Updated June 2025

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Mechanical Engineering

Questions? Contact ENGRUD Advising
Email: engradv@uw.edu
Office: IEB 307
Phone: (206) 543-1770

This is a sample four-year plan for Mechanical Engineering to provide ENGRUDs a framework to create their individual academic plan.

Courses required to request placement for ENGRUD students: **ENGR 101; MATH 124, 125, 126; CHEM 142; PHYS 121; English Composition; choose one: AMATH 301, CHEM 152, ME 123, MSE 170, PHYS 122, PHYS 123.**

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
◆ **MATH 124 - Calc. w/ Analytic Geom. I**	5	◆ **MATH 125 - Calc. w/ Analytic Geom. II**		◆ **MATH 126 - Calc. w/ Analytic Geom. III**	
◆ **CHEM 142 - General Chemistry**	5	★ ***CHEM 152 - General Chemistry***	5	◆ **PHYS 121 - Mechanics**	5
◆ **E-FIG: ENGR 101 & GEN ST 199**	2	◆ **English Composition**	5	A&H / SSc / DIV	5
A&H / SSc	3		5		5
Qtr. Total:	**15**	Qtr. Total:	**15**	Qtr. Total:	**15**

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
PHYS 122 - Electromagnetism	5	PHYS 123 - Waves	5	CEE 220 - Mechanics of Materials	4
A A 210 - Engineering Statics	4	MATH 208 - Matrix Algebra with Apps	4	MATH 209 or Math 224	4
M E 123 - Intro to Visualization & CAD	4	M E 230 - Kinematics & Dynamics	4	MSE 170 - Fundamentals of Material Sci	4
MATH 207 - Intro to Differential Equations	4	Free Elective	5	A&H / SSc	3
Qtr. Total:	**17**	Qtr. Total:	**18**	Qtr. Total:	**15**

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
M E 323 - Engineering Thermodynamics	5	M E 333 - Intro to Fluid Mechanics	5	M E 355 - Intro to Manufacturing Proc.	4
AMATH 301 - Beg Sci Computing	4	M E 354 - Mechanics of Materials Lab (W)	5	M E 374 - Sys Dynamic Analysis & Design	5
E E 215 - Fund of Electrical Engineering	4	M E 373 - Intro to System Dynamics	5	IND E 315 - Prob & Stats for Engineers	3
A&H / SSc	3			M E Option Elective	4
Qtr. Total:	**16**	Qtr. Total:	**15**	Qtr. Total:	**16**

Autumn Quarter	cr	Winter Quarter	cr	Spring Quarter	cr
M E 331 - Intro to Heat Transfer	4	M E 356 - Machine Design Analysis	4	M E 495 - Capstone Design II	3
M E 493 - Intro to Capstone Design (W)	3	M E 494 - Capstone Design I	3	M E Option Elective	4
M E Option Elective	3	M E Option Elective	4	A&H / SSc	3-5
A&H / SSc	3-5	M E Option Elective	4		
Qtr. Total:	**13-15**	Qtr. Total:	**15**	Qtr. Total:	**10-13**

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