

Environmental Engineering Degree Requirements

http://ce.washington.edu ceadvice@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 (24-28cr)

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

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

AMATH 352 - Appl Linear Algebra and Numerical Analysis (3cr) [pr: MATH 126] OR MATH 208 (4cr)

One course from the following: IND E 315 (3cr), STAT 390 (4cr), Q SCI 381 (5cr)

Sciences (28-30cr)

BIOL 180 - Introductory Biology (5cr)

◆ CHEM 142 - General Chemistry (5cr)

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

◆ PHYS 121 - Mechanics (5cr) [pr: MATH 124]

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

Basic Science Elective (3-5cr) - Visit department list for approved courses.

General Education Requirements (29-41cr)

Written and Oral Communication:

◆ English Composition (5cr)

Writing from the University list (7cr) (may overlap with Areas of Inquiry or DIV)

Areas of Inquiry:

Arts & Humanities - A&H (10cr) Social Sciences - SSc (10cr) Additional A&H or SSc (4cr)

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

Economics (4-5cr)

ECON 200 - Microeconomics (SSc) (5cr)

OR IND E 250 - Fund of Engr Economy (4cr)

OR ESRM 235/ ECON 235/ ENVIR 235 (SSc) (5cr)

Engineering Fundamentals (12-13cr)

One course from the following:

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

★ CSE 121 - Intro to Computer Programming I (4cr)

★ CSE 122 - Intro to Computer Programming II (4cr)

★ CSE 123 - Intro to Computer Programming III (4cr)

★ CSE 160 - Data Programming (4cr)

Engineering Fundamentals (cont'd)

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

One course from the following:

A A 260 - Thermodynamics (4cr)

[pr: CHEM 142; MATH 126; PHYS 121]

M E 323 (5cr)

[pr: CHEM 142; MATH 126; PHYS 121]

Major Core Requirements (30cr)

CEE 347 - Introduction to Fluid Mechanics (5cr)

CEE 348 - Hydrology and Environmental Fluid Methods (4cr)

CEE 349 - Case Studies in Environmental Engineering (3cr)

CEE 350 - Mass and Energy Bal in Environmental Engr. (4cr)

CEE 352 - Intro to Microbial Prin. in Environmental Engr. (5cr)

CEE 354 - Intro to Chem Prin. in Environmental Engr. (5cr)

CEE 356 - Quant. and Concept Tools for Sustainability (4cr)

Professional Practice (2cr)

CEE 440 - Professional Practice Studio (2cr)

Capstone (5cr)

One of the following Capstone Design Projects:

CEE 444 - Water Resources and Hydraulic Engineering

CEE 445 - Environmental Engineering

Environmental Engineering Tech Electives (15cr)

CEE 400-level coursework. Visit the department website for <u>a list</u> of approved courses.

Engineering & Science Electives (13cr)

Choice of additional CEE 400-level courses. Visit the department website for a list of approved courses.

Free Electives (to reach 180 total credits)

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

Total credits required for graduation: 180cr

Environmental Engineering

Questions? Contact ENGRUD Advising

Email: engradv@uw.edu

Office: IEB 307

Phone: (206) 543-1770

This is a sample four-year plan for Environmental 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, CHEM 162, CSE 122, CSE 160, PHYS 122, PHYS 123.

<u>Autumn Quarter</u>	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>	
♦ MATH 124 - Calc. w/ Analytic Geom. I	5	◆ MATH 125 - Calc. w/ Analytic Geom. II	5	♦ MATH 126 - Calc. w/ Analytic Geom. III		
◆ CHEM 142 - General Chemistry	5	★ CHEM 152 - General Chemistry	5	★ CHEM 162 - General Chemistry	5	
◆ E-FIG: ENGR 101 & GEN ST 199	2	◆ English Composition	5	◆ PHYS 121 - Mechanics	5	
A&H / SSc	5				5	
Qtr. Total:	17	Qtr. Total:	15	Qtr.Total:	15	

Autumn Quarter	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>
AMATH 351 - Appl. Differential Equations	3	AMATH 352 - Linear Alg & Num. Analysis	3	AMATH 301 - Beg. Sci. Computing	4
★ PHYS 122 - Electromagnetism	5	★ PHYS 123 - Waves	5	BIOL 180 - Intro Biology I	5
A A 210 - Engineering Statics	4	A&H / SSc (with Writing)	5	A A 260 - Thermodynamics	4
A&H / SSc	4			Basic Science Elective	3
Qtr. Total:	16	Qtr. Total:	13	Qtr. Total:	16

Autumn Quarter	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>
CEE 349 - Case Studies in EnvE	3	CEE 347 - Inro to Fluid Mechanics	5	CEE 348 - Hydrology & Environmental	4
CEE 350 - Mass & Energy Bal in EnvE	4	CEE 354 - Intro to Chemical Principles in	5	Fluid Methods	
CEE 352 - Intro to Microbial Principles in Environmental Engineering	5	Environmental Engineering IND E 315	3	CEE 356 - Quantitative & Conceptual Tools for Sustainability	4
CEE 440- Professional Practice Studio	2			IND E 250 - Engineering Economy	4
	_			Technical Elective	3
Qtr. Total:	14	Qtr. Total:	13	Qtr. Total:	15

Autumn Quarter	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>
Technical Elective	3	E&S Elective	4	CEE 444/445 - Capstone Design	5
Technical Elective	3	Technical Elective	3	Technical Elective	3
E&S Elective	4	DIV	5	E&S Elective	3
A&H / SSc	5	A&H / SSc (with Writing)	5	E&S Elective	3
Qtr. Total:	15	Qtr. Total:	17	Qtr. Total:	14

- ◆ = Placement Requirement
- ★ = Pick **one** to satisfy placement requirements