

Environmental Engineering Graduation Requirements

University of Washington http://ce.washington.edu

ENGRUD Requirement Sheet – Key;

= Placement Requirements;

★ = Pick one to satisfy placement requirementsPlacement 1 = July 1 at the end of the first year

◆ E-FIG: ENGR 101 and GEN ST 199 (2cr)

Mathematics (24cr)

◆ 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

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

IND E 315 - Probability & Statistics for Engineers (3cr)
[pr: either MATH 136, MATH 207, or AMATH 351]
OR STAT 390 - Statistical Methods in Engr. & Science (4cr)

Sciences (35cr)

BIOL 180 - Introductory Biology (5cr)

- ◆ CHEM 142 General Chemistry (5cr)
- ★ CHEM 152 General Chemistry (5cr)
 [pr: CHEM 142, 143, or CHEM 145]
- ★ CHEM 162 General Chemistry (5cr)
 [pr: CHEM 152]
- ◆ PHYS 121 Mechanics (5cr) [pr: MATH 124 or MATH 134]
- ★ PHYS 122 Electromagnetism (5cr) [pr: MATH 125 or MATH 134; PHYS 121]
- ★ PHYS 123 Waves (5cr) [pr: MATH 126 or MATH 134; PHYS 122]

Engineering General Education Requirements (36cr)

Written and Oral Communication:

◆ English Composition (5cr)

ENGR 231 - Introduction to Technical Communication (3cr) Additional Writing (4cr) (May overlap with A&H, SSc, or DIV)

Areas of Inquiry:

Arts & Humanities – A&H (10cr) Social Sciences - SSc (10cr)

A&H or SSc (4cr)

Diversity - DIV (5cr) (may overlap with A&H or SSc)

Economics (4-5cr)

ECON 200 - Microeconomics (5cr) (can satisfy SSc) OR IND E 250 (4cr)

Engineering Fundamentals (16-17cr)

★ AMATH 301 - Beginning Scientific Computing (4cr)

[pr: MATH 125]

OR CSE 122 OR CSE 160

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

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

A A 260 - Thermodynamics (4cr)

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

OR M E 323 (5cr)

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

EnvE Core (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 Chemical Prin. in Environmental Engr. (5cr)

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

<u>Professional Practice & Capstone (7cr)</u>

CEE 440 - Professional Practice Studio (2cr)
AND

Capstone (one from): CEE 444, 445 (5cr)

EnvE Technical Electives (15cr)

CEE 400-level coursework from an approved list.

Engineering & Science Electives (13-15cr)

- Earth Science Elective (3-5cr) See department for a list of approved courses.
- Engineering & Science Electives (8-10cr) Choice of additional CEE 400-level courses or courses from an approved list from outside the department. Maximum 6 credits of CEE 498 and 3 credits of CEE 499 allowed toward engineering and science electives.
- Additional credits as necessary to reach 13cr.

Total credits required for graduation: 180cr

This resource is for ENGRUD students who entered the UW in AUT23 or later.



Environmental Engineering Sample Curriculum University of Washington http://ce.washington.edu

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This is a sample four-year plan for ENGRUD students that prepares them to be able to request placement at the end of the first year. It is intended to provide a framework for ENGRUD students to reference as they create their own individual academic plan.

Courses required to request placement for ENGRUD students: ENGR 101; MATH 124, 125, 126; CHEM 142, PHYS 121, English Composition; ENGRUD students interested in EnvE should choose one of the following: AMATH 301, CHEM 152, CHEM 162, CSE 122, CSE 160, PHYS 122, PHYS 123.

First Year

Autumn Quarter	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>	Ī
◆ MATH 124 - Calc w Analytic Geom I	5	♦ MATH 125 - Calc w Analytic Geom II	5	◆ MATH 126 - Calc w Analytic Geom III	5	
◆ 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	3					
Qtr. Total:	15	Qtr. Total:	15	Qtr.Total:	15	

Second Year

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	<u>OR</u> CSE 122 <u>OR</u> CSE 160	5
AA 210 - Engineering Statics	4	CEE 220 - Mechanics of Materials	4	BIOL 180 - Intro Biology I	4
A&H / SSc / DIV	5	A&H / SSc	5	AA 260 - Thermodynamics	
Qtr. Total:	17	Qtr. Total:	15	Qtr. Total:	13

Third Year

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	5	Environmental Engineering		CEE 356 - Quantitative & Conceptual Tools for Sustainability	4	
Environmental Engineering		ENGR 231 - Intro to Technical Comm	3	, and the second se		
IND E 315 - Prob and Stat for Engineers	3	Additional Writing	4	IND E 250 - Engineering Economy	4	
				Technical Elective	3	
Qtr. Total:	15	Qtr. Total:	17	Qtr. Total:	15	

Fourth Year

Autumn Quarter	<u>cr</u>	Winter Quarter	<u>cr</u>	Spring Quarter	<u>cr</u>
Technical Elective	3	CEE 440 - Professional Practice Studio	2	CEE 444/445 – Capstone Design	5
Technical Elective	3	Technical Elective	3	Technical Elective	3
E&S Elective	3	E&S Elective	4	E&S Elective	3
A&H / SSc	5	A&H / SSc	5	E&S Elective	3
Qtr. Total:	14	Qtr. Total:	14	Qtr. Total:	14

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