

Requirements for **ESS B.S. Degree – ENVIRONMENTAL Option**

Department of Earth and Space Sciences

www.ess.washington.edu

General Education Requirements: College of the Environment (CoEnv)		Notes
1. English Composition (C)	5cr	
2. Additional Writing	10cr	
3. Quantitative & Symbolic Reasoning (Q/SR)	10cr	
4. Diversity (DIV)	3cr	
5. Areas of Knowledge (AoK)		
Visual, Literary, and Performing Arts (VLPA)	10cr	
Individuals and Societies (I&S)	20cr	
The Natural World (NW)	20cr	
Additional AoKs	10cr	

Note: 10 credits of I&S and 10 credits of NW must be outside the major (i.e., not a major prefix and no overlap with major)

Major Requirements: Department of Earth and Space Sciences (ESS)		Notes
Supporting Science Courses (35 credits)		
CHEM 142, CHEM 152 or 220	10cr	
MATH 124, 125	10cr	
PHYS 114/117 or 121	5cr	
One of ESS 310; STAT 311 or 390; QSCI 381	5cr	
And one from this list:	5cr	
CHEM 162; MATH 126; ESS 310 (if not counted above); PHYS 115/118 or 122		

ESS Core Courses (55-59 credits)		Prerequisites	Credits
1. Three courses required.*			
ESS 211 Physical Process Earth	AUT	MATH 124, 134, or QSCI 291; PHYS 114/117 or 121	5cr
ESS 212 Earth Materials/Processes	WIN	CHEM 142 or 145	5cr
ESS 213 Evolution of Earth	SPR	ESS 210, 211, or 212	5cr
2. ESS 201 The Earth System and Climate			
	SPR	MATH 124, MATH 134, or QSCI 291	3cr
3. Two courses required.*			
ESS 311 Geomechanics	WIN	MATH 125, 135, or QSCI 292; PHYS 114/117 or 121; ESS 211; MATLAB experience recommended	5cr
ESS 312 Geochemistry	SPR	CHEM 142 or 145; MATH 125, 135, or QSCI 292; ESS 212	5cr
ESS 313 Geobiology	AUT	CHEM 142 or 145; ESS 213	5cr
ESS 314 Geophysics	AUT	MATH 126, 136, or ESS 310; PHYS 115/118 or 122	5cr
4. ESS 326 Geomorphology			
	WIN	PHYS 114/117 or 121	5cr
5. Two courses required.			
ESS 315 Environmental Earth Science	WIN	ESS 101, 105, 210 or 211	5cr
ESS 420 Intro to GIS for the Earth Sciences	AUT, SPR	No prerequisites.	5cr
ESS 421 Intro Geological Remote Sensing	WIN	No prerequisites.	4cr
ESS 426 Fluvial Geomorphology	SPR	ESS 311 or 326	5cr
ESS 427 Hillslope Geomorphology	<i>varies</i>	ESS 311 or 326	5cr
ESS 454 Hydrogeology	SPR	ESS 311; MATLAB/spreadsheet experience recommended	3cr
ESS 455 Stratigraphy	<i>varies</i>	ESS 213	4cr
ESS 456 Depositional Environments	SPR	ESS 213; recommended: ESS 311 and 326, 425, 426, or 427	4cr
ESS 457 Environmental Geochemistry	WIN	ESS 312, CHEM 152, or CHEM 155	4cr
ESS 482 Environmental Geochemistry Lab	SPR	ESS 312 or ESS 457	4cr
6. One of ESS 400 Field Geology or ESS 401 Field Geology with GIS			
	SUM	ESS 211-213 and one of ESS 311-314; ESS 420 also required for ESS 401	12cr
7. ESS 418 Geoscience Communication			
	WIN, SPR	Two of ESS 201, 205, or 211-213	4cr

ESS Elective Courses (10 credits)
 ESS courses numbered 402 to 488 (excluding ESS 418) or approved ESS 490 courses (see Time Schedule). Extra course from ESS 311-314 not required above may also apply here.

Credits	Credits	Credits
ESS _____	ESS _____	ESS _____

*2.0 grade required in prerequisites for all ESS core courses. See individual course prerequisites for additional grade requirements.

Note: Minimum 2.00 cumulative GPA in all ESS-prefixed courses required. Grade requirements for students who declared the ESS major prior to Summer 2018 may differ; please see ESS Advising if you have any questions.