

Environmental Engineering—Major Requirements for BS Degree

Effective Fall 2015

University of California, Merced

Anticipated Graduation Date (ex: May 2019) _____

Full Name: _____ ID #: _____ Email _____

Requirement	Course Title	Grade	Units or # Required	Term/Year Completed	Substitute Approved
UCM Requirements					
-UC Entry Level Writing			n/a		
-American History/Institutions			n/a		
-CORE 001	World at Home I		1 course		
-WRI 010	College Composition		1 course		
School Requirements					
-MATH 021	Calculus I Phys Sciences & Eng		4 units		
-MATH 022	Calculus II Phys Sciences & Eng		4 units		
-MATH 023	Vector Calculus		4 units		
-MATH 024	Linear Algebra and Differential Equations		4 units		
-MATH 032	Statistics		4 units		
-PHYS 008	Introductory Physics I		4 units		
-PHYS 009	Introductory Physics II		4 units		
-ME 021	Engineering Computing		4 units		
-Science Course	BIO 001, BIO 005, ESS 001, or ESS 005		4 units		
-Arts/Humanities GE			3-4 units		
-Social Science GE			3-4 units		
Major/Core Requirements					
-ENGR 097/197 or SSHA GE			3 units		
-Upper-division Writing Course			4 units		
Engineering Fundamentals					
-ENGR 057	Statics and Dynamics		4 units		
-ENGR 120	Fluid Mechanics		4 units		
-ENGR 155	Engineering Economics		3 units		
<i>And choose 7 units from the following:</i>					
-ENGR 045*	Introduction to Materials		4 units		
-ENGR 065*	Circuit Theory		3 units		
-ENGR 130*	Thermodynamics		3 units		
-ENGR 151*	Strength of Materials		4 units		
-ENGR 180	Spatial Analysis & Modeling		4 units		
* Strongly recommended for environmental engineering students preparing for the Fundamentals of Engineering (FE) examination					
Environmental Engineering Core					
-ENVE 020	Intro to Env Sci & Tech		4 units		
-ENVE 100	Environmental Chemistry		4 units		
-ENVE 110	Hydrology & Climate		4 units		
-ENVE 130	Meteorology & Air Pollution		4 units		
-ENVE 160	Sustainable Energy		4 units		
-ENVE 190	Environmental Engineering Capstone Design		3 units		
-ENGR 191	Professional Seminar		1 unit		
Additional Degree Requirements					
-CHEM 002	General Chemistry I		4 units		
-CHEM 010	General Chemistry II		4 units		
Choose a minimum of 15 units from Technical Electives	See page 2 for specifics		15 units		

Notes/Comments
Advisor Signature/Date:
Student Signature/Date:

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Service Learning/Freshman Seminar/SSHA GE

3 units of ENGR 097/ENGR 197, or one 3-4 unit SSHA GE course.

Term / Course / Team or Title / Units

1.
2.
3.

Technical Elective Courses

-Choose a minimum of 15 units

-At least **one** field methods (F) course is required

-At least **one** upper-division earth systems sciences course

-At least **one** upper-division environmental biology course

-A max of 4 units of Service Learning* and/or Undergraduate Research may be used

*Service Learning units counted as technical electives may not be counted as GE

Field Methods (choose 1)

ENVE 181 (Field Methods in Snow Hydrology)

ENVE 182 (Field Methods in Surface Hydrology)

ENVE 183 (Field Methods in Subsurface Hydrology)

ENVE 184 (Field Methods in Environmental Chemistry)

Earth Systems Science (choose 1)

ESS 103 (Geochemistry of Earth Systems) – 3 units

ESS 105 (Biogeochemistry) – 3 units

ESS 112 (Subsurface Hydrology) – 4 units

ESS 170 (Fundamentals of Soil Science) – 3 units

Environmental Biology (choose 1)

ESS 105 (Biogeochemistry)

ESS 120 (Intro to Ecological and Environmental Microbiology) – 4 units

ESS 124 (Terrestrial Ecosystem Ecology) – 3 units

ESS 148 (Fundamentals of Ecology) – 4 units

ESS 149 (Conservation Biology) – 4 units

The remaining technical elective units may be chosen from the following courses or any of the above courses:

ENVE 105

ENVE 114

ENVE 116

ENVE 118

ENVE 121

ENVE 132

ENVE 140

ENVE 152

ENVE 155

ENVE 162

ENVE 164

ENVE 170

ENVE 171

ENVE 176

ENGR 180

ENGR 097/197 or ENVE 195 (max 4 units)

Course Dept. #	Course Title	Grade	Units	Term/Year Completed

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