

Environmental Engineering—Major Requirements for BS Degree

Effective Fall 2013

University of California, Merced

Anticipated Graduation Date (ex: May 2017) _____

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		
-BIO 001	Contemporary Biology		4 units		
-CHEM 002	General Chemistry I		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 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:

This guide is an unofficial document intended to be used for advising/course planning only. This document cannot be used to supersede or waive requirements listed in the UCM Catalog unless approved by your advisor.

Environmental Engineering—Major Requirements for BS Degree

Effective Fall 2013

University of California, Merced

Anticipated Graduation Date (ex: May 2017) _____

Full Name: _____ ID #: _____ Email _____

Service Learning/Freshman Seminar/SSHA GE

3 units of ENGR 097/ENGR 197, or 1 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 155 |
| ENVE 114 | ENVE 162 |
| ENVE 116 | ENVE 164 |
| ENVE 118 | ENVE 170 |
| ENVE 121 | ENVE 171 |
| ENVE 132 | ENVE 176 |
| ENVE 140 | ENGR 180 |
| ENVE 152 | ENGR 097/197 (max 4 units) |

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

This guide in an unofficial document intended to be used for advising/course planning only. This document cannot be used to supersede or waive requirements listed in the UCM Catalog unless approved by your advisor.