Environmental Engineering

Sample AB Major in Engineering Sciences

Prerequisites

MATH 3, 8, 13; or MATH 11; PHYS 13, 14; CHEM 5;
ENGS 20 or COSC 1 and 10

Common Core (3 courses)

ENGS 21: Introduction to Engineering*
ENGS 22: Systems
ENGS 23: Distributed Systems and Fields

Distributive Core (2 courses)

ENGS 25: Introduction to Thermodynamics
ENGS 27: Discrete and Probabilistic Systems

Gateway (2 courses)

ENGS 34: Fluid Mechanics
ENGS 37: Introduction to Environmental Engineering*

Electives (2 courses; 1 may be math or natural science)

ENGS 41: Sustainability and Natural Resource Management
ENGS 44: Sustainable Design*

Culminating Experience: *ENGS 86, 88, 89 or one advanced ENGS course that may also count as 1) one of the above electives and 2) toward the BE Math and Natural Science Requirement or the BE ENGS/ENGG requirement.*

***Total:** Includes 9 or 10 courses through AB*

LEGEND

Allowable or potentially allowable in the BE concentration
Math or Natural Science course
Introductory course: Not allowable in the BE concentration
* Significant design content

Capstone Design Experience **BE →**

ENGS 89: Engineering Design Methodology and Project Initiation*
ENGS 90: Engineering Design Methodology and Project Completion*

Sample BE Program

Math and Natural Science Requirement
9 course credits (minimum) including any completed for AB major requirements.

CHEM 6: General Chemistry
MATH 23: Differential Equations

Applied MATH/ENGS Requirement
One of ENGS 91, 92 and 93 must be completed for the BE and may be counted as either a MATH course or an ENGS course in fulfilling BE requirements.

ENGS 93: Statistical Methods in Engineering

ENGS/ENGG Requirement
– 13.5 courses minimum (15.5 is typical), including courses completed for the AB major, 6 total with significant design content. ENGS 20 (or CS 1 + 10) counts as 0.5 ENGS credit.*
*– 3-course concentration, 1 with significant design content**
– ENGS 89 and 90

Engineering Electives: 3-course concentration

ENGS 43: Environmental Transport & Fate
ENGS 51: Dynamic Modeling of Technological, Social, and Resource Systems*
ENGS 171: Industrial Ecology*

Electives (3 courses; 2 may be math or natural science)

EARS 66: Hydrogeology
ENGS 24: Science of Materials
ENGS 36: Chemical Engineering*
ENGS 46: Advanced Hydrology
ENGS 52: Introduction to Operations Research
ENGS 93: Statistical Methods in Engineering
ENGS 151: Environmental Fluid Mechanics
ENGS 172: Climate Change and Engineering
ENGG 173: Energy Utilization*
ENGG 174: Energy Conversion*
ENGS 175: Energy Systems
MATH 22: Linear Algebra with Applications