

*Note: No Major or Support courses may be selected as credit/no credit.*

<b>MAJOR COURSES</b>		
CE 113	Computer Aided Drafting in Civil Engineering	2
Select one of the following two options: <sup>1</sup>		5
CE 204	Mechanics of Materials I & CE 207 <b>and</b> Mechanics of Materials II or CE 208 Mechanics of Materials	
CE 251	Programming Applications in Engineering	2
CE 336	Water Resources Engineering	4
CE 337	Hydraulics Laboratory	1
CE 381	Geotechnical Engineering	4
CE 434	Groundwater Hydraulics and Hydrology	4
CE 465	Civil Engineering Professional Practice	1
ENVE 111	Intro to the ENVE Profession	1
ENVE 264	Environmental Fluid Mechanics	4
ENVE 304	Process Thermodynamics	3
ENVE 309	Noise and Vibration Control	3
ENVE 325	Air Quality Engineering	4
ENVE 331	Fundamentals of Environmental Engineering	4
ENVE 421	Mass Transfer Operations	4
ENVE 426	Air Quality Measurements	3
ENVE 434	Water Chem & Water Quality Measurements	4
ENVE 438	Water and Wastewater Treatment Design	3
ENVE 450	Industrial Pollution Prevention	4
ENVE 466	Senior Project Design Laboratory I & ENVE 467 <b>and</b> Senior Project Design Laboratory II	4
Select from the following:		12
ENVE 411	Air Pollution Control	
ENVE 436	Introduction to Hazardous Waste Management	
ENVE 439	Sustainable Solid Waste Engineering	
ENVE 443	Bioremediation Engineering	
ENVE 455	Environmental Health and Safety	
ENVE 480	Environmental Engineering of Energy	
Technical Electives <sup>2,3</sup> (see reverse for list)		10
<b>Total Major Units</b>		<b>86</b>

<b>SUPPORT COURSES</b>		
CHEM 124	Gen Chem for Physical Science & Engr I (B1 & B3) <sup>4</sup>	4
CHEM 125	General Chemistry for Physical Science and Eng II	4
CHEM 126	General Chemistry for Physical Science and Eng III	4
CHEM 312	Survey of Organic Chemistry <sup>5</sup>	5
MATH 141	Calculus I (B4) <sup>4</sup>	4
MATH 142	Calculus II (B4) <sup>4</sup>	4
MATH 143	Calculus III (Area B Electives) <sup>4</sup>	4
MATH 241	Calculus IV	4
MATH 244	Linear Analysis I	4
MCRO 221	Microbiology (B2) <sup>4</sup>	4-5
or MCRO 224	General Microbiology I (B2) <sup>4</sup>	
ME 211	Engineering Statics	3
PHYS 141	General Physics IA (Area B Electives) <sup>4</sup>	4
PHYS 132	General Physics II	4
PHYS 133	General Physics III	4
STAT 312	Statistical Methods for Engineers (UD - B) <sup>4</sup>	4
<b>Total Support Units</b>		<b>60-61</b>

<b>GENERAL EDUCATION</b>		
<b>Area A English Language Communication &amp; Critical Thinking</b>		
A1	Oral Communication	4
A2	Written Communication	4
A3	Critical Thinking	4
<b>Area B Scientific Inquiry and Quantitative Reasoning</b>		
B1	Physical Science (4 units in Support) <sup>4</sup>	0
B2	Life Science (4 units in Support) <sup>4</sup>	0
B3	One lab taken with either a B1 or B2 course	
B4	Mathematics/Quantitative Reasoning (8 units in Support) <sup>4</sup>	0
Upper-Division B (4 units in Support) <sup>4</sup>		0
Area B Electives (8 units in Support) <sup>4</sup>		0
<b>Area C Arts and Humanities</b>		
<b>Lower-division courses in Area C must come from three different subject prefixes.</b>		
C1	Arts	4
C2	Humanities	4
Lower-Division C Elective - Select a course from either C1 or C2.		4
Upper-Division C		4
<b>Area D Social Sciences</b>		
D1	American Institutions (Title 5, Section 40404 Requirement)	4
Area D Elective - Select either a lower-division D2 or upper-division D course.		4
<b>Area E Lifelong Learning and Self-Development</b>		
Lower-Division E		4
<b>Area F Ethnic Studies</b>		
Lower-Division F		4
<b>Total GE Units</b>		<b>44</b>
<b>FREE ELECTIVES</b>		<b>0</b>
<b>TOTAL DEGREE UNITS</b>		<b>190-191</b>

<b>FOOTNOTES</b>
<sup>1</sup> Transfer students take CE 208 in the Fall Quarter.
<sup>2</sup> To be selected in consultation with your academic advisor.
<sup>3</sup> A student may petition to take a course not included in the list of electives and receive Technical Elective credit, but they must first obtain approval from a faculty advisor, before taking the course.
<sup>4</sup> Required in Major or Support; also satisfies General Education (GE) requirement.
<sup>5</sup> CHEM 212 substitutes, but will not be counted as upper-division units.

**Technical Electives<sup>2,3</sup>**

Technical Electives may be chosen from any 300-500 level CE/ENVE courses not taken to satisfy other curriculum requirements, with the following exceptions: senior project, co-op, graduate seminar, comprehensive exam, and thesis; and ENVE 324, ENVE 323, ENVE 570, ENVE 571.

Technical Electives cannot be used to satisfy other Major or Support requirements. No double counting is allowed.

No more than 4 units in total

from CE 400/ENVE 400, CE 500/ENVE 500, ENVE 405, ENVE 407, and ENVE 471 combined can be counted towards Technical Electives.

No more than 4 units of coursework other than CE/ENVE may be used to satisfy the Technical Electives degree requirement.

**Air Quality and Climate**

ERSC/GEOG Global and Regional Climatology  
414

PHYS 313 Introduction to Atmospheric Physics

**Appropriate Technology**

PSC/UNIV Appropriate Technology for the World's People:  
492 Design

**Biology/Biochemistry/Microbiology**

BIO 363 Principles of Conservation Biology

ENGR/ENVE Biochemical Engineering  
581

MCRO 342 Public Health Microbiology

**Computer Applications and Computations**

LA/NR 317 The World of Spatial Data and Geographic Information  
Technology

STAT 313 Applied Experimental Design and Regression Models

STAT 323 Design and Analysis of Experiments I

**Chemistry**

CHEM 313 Survey of Biochemistry and Biotechnology

CHEM 341 Environmental Chemistry: Water Pollution

**Energy**

BRAE 448 Bioconversion

PHYS 310 Physics of Energy

**Hydrology and Soils**

BRAE 532 Water Wells and Pumps

**Law and Policy**

CRP/NR 404 Environmental Law

CRP/NR 408 Water Resource Law and Policy

IME 314 Engineering Economics

or IME 315 Financial Decision Making for Engineers