

Curriculum

Environmental Engineering Curriculum 2015-2016

FALL				SPRING			
First Year							
MAT	295	Calculus I	4	MAT	296	Calculus II	4
CHE	106	General Chemistry I	3	CHE	116	General Chemistry II	3
CHE	107	Gen. Chem. Lab. I	1	CHE	117	Gen. Chem. Lab. II	1
ECS	101	Intro to ECS	3	PHY	211	General Physics I	3
WRT	105	Writing Studio I	3	PHY	221	Gen. Physics Lab. I	1
		SS/HUM	3			SS/HUM	3
Semester Credits			17	Semester Credits			15
Second Year							
MAT	397	Calculus III	4	MAT	485	Differential Eq. & Matrix Algebra	3
ECS	221	Statics	3	ECS	325	Mech. of Solids	4
EAR	110	Dynamic Earth	4 or*	EAR	203	Earth System Science	4 or*
		SS/HUM	3*			SS/HUM	3*
		SS/HUM	3	CIE	274	Civ/Env. Systems	3
		SS/HUM	3	WRT	205	Writing Studio II	3
Semester Credits			16/17	Semester Credits			16/17
Third Year							
CIE	337	Intro. to Geo. Eng.	4	ECS	222	Dynamics	3 or*
				CIE	326	Eng. Materials	3 or*
CIE	341	Intro. to Env. Eng.	3	ELE	231	Elec. Eng. (EE) Fund I	3(4 w/lab) or*
				MAE	251	Thermodynamics	4 or*
				CHE	346	Physical Chemistry	3*
CIE	327	Prin. of Fluid Mech.	4* or	CIE	352	Water Res. Eng.	4
MAE	341	Fluid Mechanics	4*	CIE	329	Stats. and Risk	4
		SS/HUM	3	GEO	383	Geo. Information Sys.	4
		Free Elective	3			Professional Elective	3
Semester Credits			17	Semester Credits			18/19
Fourth Year							
CIE	471	Env. Chem. & Analy.	3	CIE	475	Civ/Env. Eng. Design	4
CIE	442	Treatment Proc. in Env. Eng	4			Professional Elective 3	3
CIE	472	Appl. Env. Micorb.	3			Technical Elective 1	3
GNE	461	Air Pollut. Eng	3			Technical Elective 2	3
		Professional Elective	3				
Semester Credits			16	Semester Credits			13

Total Credits Required: 129/130.

*only one (EAR 110 or EAR 203) is required; the other must be SS/HUM.

SS/HUM Electives

All CIE students are required to complete at least 18 credits of SS/HUM electives. A *minimum* of one course (3 credits) must be chosen from each of the three groups of designated courses listed below. The remaining three SS/HUM electives (9 credits) can be selected from the lists below or, in addition to the lists, may be chosen from:

- any College of Arts and Sciences courses in the Undergraduate Catalog that are listed in the Liberal Arts Core under the Divisional Perspective Requirement; acceptable courses are found under the “Humanities Division” and “Social Sciences Division” links.
- any foreign language courses (except the student’s native language)
- ECS 391 – Legal Aspects of Engineering and Computer Science
- ECS 392 – Ethical Aspects of Engineering and Computer Science

Group 1: Economics and Social Issues

ECN 203 – Economics Ideas and Issues
ECN 301* – Intermediate Microeconomics
ECN 302* – Intermediate Macroeconomics
ECN 365* – The World Economy
GEO 353 – Geographies of Environmental Justice
SOC 101 – Introduction to Sociology
SOC 102 – Social Problems
SOC 363 – Urban Sociology
STS/BPS 101 – Introduction to Science, Technology and Society

* requires ECN203 as prerequisite

Group 2: Global Affairs

ECN 365 – The World Economy
GEO 103 – Environment and Society
GEO 105 – World Urban Geography
GEO 215 – Global Environmental Change
GEO 272 – World Cultures
GEO 273 – World Political Economy
MAX 123 – Critical Issues for the U.S.
MAX 132 – Global Community
PAF 351 – Global Social Problems
PSC 124 – International Relations
PSC 355 – International Political Economy

Group 3: Public Policy and Policy Studies

ECN/WGS 358 – Economics of US Poverty and Discrimination
GEO 203 – Society and the Politics of Nature
GEO 314 – Hazardous Geographic Environments
GEO 356 – Environmental Ideas and Policy
PAF 101 – An Introduction to the Analysis of Public Policy
PAF 409+ – Intermediate Analysis of Public Policy
PAF 451 – Environmental Policy
PSC 302- Environmental Politics and Policy
PSC 305 –U.S. Congressional Politics
PSC 308 – The Politics of U.S. Public Policy
PSC 312 – Urban Government and Politics
PSC 318 – Technology, Politics, and Environment

+ requires PAF101 with minimum grade A as prerequisite

Check with your advisor to make sure the courses you have selected will fulfill your degree requirements.
The SSH credits can be, and are encouraged to be, used towards the completion of a minor

Professional Electives

Professional Electives are courses that advance a student's professional abilities and form a cohesive and meaningful addition to the required CIE coursework. They are designed to develop and enhance a student's role as a professional civil or environmental engineer. Professional Electives are *upper-level courses* (300 and above), generally from professional schools at SU and SUNY-ESF, and must be selected in consultation with the student's academic advisor. Many Professional Electives can be used towards completion of a minor. Approved Professional Electives include ECS 222, ELE 231 and MAE 251, if they have not been used to satisfy other degree requirements. Also, courses offered in the following schools/colleges with the indicated prefixes may be used as professional electives.

School/College	Course Prefix
Architecture	ARC
Arts and Sciences	AST, BCM, BIO, CHE, ECN, GEO, EAR, MAX, MAT, PAF, PHY
Engineering and Computer Science	All course prefixes
Information Studies	IST
Whitman	ACC, BUA, EEE, FIN, INB, LPP, MAR, O&M, SOM
Newhouse	COM
VPA	CRS
SUNY-ESF	All course prefixes

Technical Electives

Technical Electives **MUST** be CIE courses numbered 300 and above. They are to be selected in consultation with a student's advisor to advance the student's knowledge in a specific area of interest in civil or environmental engineering.

Free Electives

Any SU or ESF three or four credit course except Physical Education.