

College of Engineering & Computer Science

Environmental Engineering

Fall 2016

Name _____

SUID _____

pr= prerequisite, co=corequisite

Minor/Second Major (if any): _____

CREDIT	FIRST-YEAR		SOPHOMORE		JUNIOR		SENIOR		VAR
	F	S	F	S	F	S	F	S	
MATHEMATICS (15)									
MAT295 Calculus 1	(4)____	4							
MAT296 Calculus 2 (pr: MAT 295 min C-)	(4)____		4						
MAT397 Calculus 3 (pr: MAT 296 min C-)	(4)____			4					
MAT485 Diff. Equations & Matrix Algebra (pr: MAT 397)	(3)____				3				
SCIENCES (20)									
CHE106 General Chemistry I	(3)____	3							
CHE107 General Chemistry I Lab (co: CHE 106)	(1)____	1							
CHE116 General Chemistry 2 (pr: CHE 106)	(3)____		3						
CHE117 General Chemistry Lab 2 (pr: CHE 107, co: CHE 116)	(1)____		1						
PHY211 General Physics 1 (co: PHY 221, MAT 295)	(3)____		3						
PHY221 General Physics Lab 1 (co: PHY 211)	(1)____		1						
GEO383 Geographic Information System	(4)____					4			
Select one of the following two courses:	(4)____								
EAR110 Dynamic Earth									
EAR203 Earth System Science									
WRITING SKILLS (6)									
WRT105 Studio 1: Practices of Academic Writing	(3)____	3							
WRT205 Studio 2: Critical Research and Writing (pr: WRT 105)	(3)____			3					
SOCIAL SCIENCE /HUMANITIES (18) (See curriculum notes)									
SSH Elective _____	(3)____	3							
SSH Elective _____	(3)____		3						
SSH Elective _____	(3)____				3** or 3				
SSH Elective _____	(3)____		3						
SSH Elective _____	(3)____			3					
SSH Elective _____	(3)____				3				
ENGINEERING (16/17)									
ECS101 Intro. to Engr. & Comp. Sci.	(3)____	3							
ECS221 Statics (pr: PHY 211, co: MAT 296)	(3)____		3						
ECS325 Mechanics of Solids (pr:ECS 221, co: MAT 397)	(4)____			4					
CIE561 Air Resources I	(3)____						3		
Select One of the Following 5 Courses:	()							3 or 4	
ECS222 Dynamics (3) (pr: ECS 221, MAT 296)									
CIE/ECS 326 Engineering Materials									
ELE231 Elec. Engr. Fundamentals (3 or 4) (pr: MAT 295)									
MAE251 Thermodynamics (4) (pr: PHY 211)									
CHE346 Physical Chemistry (3) (pr: CHE 116, MAT 296, co: PHY 212)									
ENVIRONMENTAL ENGINEERING (35)									
CIE271 Env. Chemistry & Analysis	(3)____		3						
CIE274 Civil & Environmental Engr. Systems (pr: CHE 106, MAT 296)	(3)____			3					
CIE327/MAE341 Fluid Mechanics (pr: MAT 397, ECS 221)	(4)____				4				
CIE329 Prob, Stats and Risk for Civ & Env Engr (pr: MAT 485)	(4)____					4			
CIE337 Intro to Geotechnical Engineering (pr: ECS 325)	(4)____				4				
CIE341 Intro Environmental Engineering (pr: CIE 274)	(3)____				3				
CIE352 Water Resources Engr. (pr: CIE 327 or MAE 341)	(4)____					4			
CIE442 Treatment Proc. In Environmental Engr. (pr: CIE 327, CIE 341)	(4)____					4			
CIE472 Applied Env. Microbiology	(3)____						3		
CIE475 Capstone Design	(4)____							4	
ELECTIVES (18)									
Prof. Elective _____	(3)____						3		
Prof. Elective _____	(3)____						3		
Prof. Elective _____	(3)____							3	
Tech Elective _____	(3)____							3	
Tech Elective _____	(3)____							3 or 3	
Free Elective _____	(3)____				3				
TOTAL CREDITS	129-130	17	18	16-17	16-17	17	16	15	13-14

*If EAR is taken, then take SS/H sophomore spring semester

ENVIRONMENTAL ENGINEERING

Curriculum Notes

2016-2017

SS/HUM ELECTIVES

All CIE students are required to complete at least 18 credits of SS/HUM electives. A *minimum* of one course (or 3 credits) must be chosen from each of the three groups of designated courses listed below. The remaining three SS/HUM electives (or 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 that are listed on their Humanities and Social Sciences lists in the SU Bulletin – Undergraduate Course Catalog
- any foreign language courses (except student's native language)
- ECS 391 – Legal Aspects of ECS
- ECS 392 – Ethical Aspects of ECS.

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 3: Public Policy and Policy Studies
ECN/WGS 358 – Economics of US Poverty & Discrimination
GEO 203 – Society and the Politics of Nature
GEO 314 – Hazardous Geographic Environments
GEO 356 – Environmental Ideas & 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 – US Congressional Politics
PSC 308 – The Politics of US Public Policy
PSC 312 – Urban Government & Politics
PSC 318 – Technology, Politics & Environment

+ requires PAF101 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

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; as well as ECS 222, ELE 231, and MAE 251 that have not been used for degree credits), 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 are courses offered in the following schools/colleges with the indicated prefixes that meet the above stated criteria.

School/College	Course Prefix
Architecture	ARC
Arts and Sciences	AST, BCM, BIO, CHE, ECN, EAR, GOL, MAX, MAT, PAF, PHY
Engineering and Computer Science	All course prefixes
Information Studies	IST
Whitman	ACC, BUA, EEE, FIN, INB, LPP, MAR, O&M, MGT, 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 and remedial courses.