

College of Engineering & Computer Science

Civil Engineering

Fall 2020

Name _____

SUID _____

pr= prerequisite, co=corequisite

Minor/Second Major (if any): _____

MATHEMATICS (15)

MAT295 Calculus 1

MAT296 Calculus 2 (pr: MAT 295 min C-)

MAT397 Calculus 3 (pr: MAT 296 min C-)

MAT485 Diff. Equations & Matrix Algebra (pr: MAT 397)

SCIENCES (16)

CHE106 General Chemistry I

CHE107 General Chemistry Lab I (co: CHE 106)

PHY211 General Physics 1 (co: PHY 221, MAT 295)

PHY221 General Physics Lab 1 (co: PHY 211)

PHY212 General Physics 2 (pr: PHY 211, 221, co: PHY 222, MAT 296)

PHY222 General Physics Lab 2 (co: PHY 212)

Select one of the following two options:

EAR105 Earth Science (3) and EAR104 Earth Science Lab (1)

EAR203 Earth System Science (4)

WRITING SKILLS (9)

WRT105 Studio 1: Practices of Academic Writing

WRT205 Studio 2: Critical Research and Writing (pr: WRT 105)

SOCIAL SCIENCE /HUMANITIES (18)

(See curriculum notes)

SSH Elective _____

SSH Elective _____

SSH Elective _____

SSH Elective _____

SSH Elective _____

SSH Elective _____

ENGINEERING (15)

ECS101 Intro. to Engr. & Comp. Sci.

ECS221 Statics (pr: PHY 211, co: MAT 296)

ECS222 Dynamics (3) (pr:ECS 221, MAT 296)

CEE325 Mechanics of Solids (pr: ECS 221, co: MAT 397)

CEE/ECS 326 Engineering Materials

CIVIL ENGINEERING (44)

CEE273 Intro to Geomatics and BIM (pr: MAT 295)

CEE274 Sustainability in Civil & Env. Systems (pr: CHE 106, MAT 296)

CEE327 Prin Fluid Mechanics (pr: MAT 397, ECS 221)

CEE329 Prob, Stats and Risk for Civ & Env Engr (pr: MAT 485 or MAT 331)

CEE331 Analysis of Structures and Materials (pr: ECS 325)

CEE332 Design of Concrete Structures (pr: CIE 331)

CEE337 Intro to Geotechnical Engineering (pr: ECS 325)

CEE338 Foundation Engineering (pr: CIE 337)

CEE341 Intro to Environmental Engr. (pr: CIE 274)

CEE352 Water Resources Engr. (pr: CIE 327 or MAE 341)

CEE401 Construction Engineering & Project Management

CEE443 Transportation Engineering

CEE475 Capstone Design

ELECTIVES (12)

Free Elective _____

Tech Elective _____

Tech Elective _____

Prof Elective _____

TOTAL CREDITS

CREDIT GRADE	FIRST-YEAR		SOPHOMORE		JUNIOR		SENIOR		VAR +/-
	F	S	F	S	F	S	F	S	
(4) _____	4								
(4) _____		4							
(4) _____			4						
(3) _____				3					
(3) _____	3								
(1) _____	1								
(3) _____		3							
(1) _____		1							
(3) _____			3						
(1) _____			1						
(4) _____		4							
(3) _____	3								
(3) _____				3					
(3) _____		3							
(3) _____			3						
(3) _____					3				
(3) _____						3			
(3) _____							3		
(3) _____	3								
(3) _____			3						
(3) _____				3					
(3) _____					3				
(3) _____						3			
(3) _____							3		
(3) _____								3	
(4) _____									4
(3) _____									3
(3) _____								3	
(3) _____									3
(3) _____									3
126	17	15	17	15	17	17	15	13	

*If SS/H taken, then take CIE 463 Fall senior year

**If CIE 442 taken, then take SS/H Fall senior year

See reverse side for all notes

Civil Engineering Curriculum Notes 2020-2021

SS/HUM ELECTIVES

All CEE 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 / Liberal Arts Core
- 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 101 – Intro to Microeconomics
ECN 102 – Intro to Macroeconomics
ECN 203 – Economics Ideas and Issues
GEO 353 – Geographies of Environmental Justice
SOC 101 – Introduction to Sociology
SOC 102 – Social Problems
SOC 230/WGS 230 – Intergroup dialogue
SOC 248/WGS 248 – Ethnic Inequality & Intergroup Relations
SOC 305/WGS 305 – Sociology of Sex and Gender
SOC 363 – Urban Sociology

Group 2: Global Affairs
ECN 365 – The World Economy (requires ECN 101, 102 or 203 as pre-req)
GEO 103 – Environment and Society
GEO 105 – World Urban Geography
GEO 272 – World Cultures
GEO 273 – World Political Economy
MAX 123 – Critical Issues for the U.S.
MAX 132 – Global Community
PST 351 – Global Social Problems
PSC 124 – International Relations
PSC 352 – International Law
PSC 355 – International Political Economy
PSC 364/AAS364 – African International Relations
PSC 365/AAS 365 – International Political Economy of the Third World

Group 3: U.S. Government, 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
PST 101 – An Introduction to the Analysis of Public Policy
PST 451 – Environmental Policy
PSC 121 – American National Government & Politics
PSC 125 – Political Theory
PSC 202 – Intro to Political Analysis
PSC 302- Environmental Politics and Policy
PSC 305 – US Congressional Politics
PSC 306 – African American Politics
PSC 308 – The Politics of US Public Policy
PSC 312 – Urban Government & Politics
PSC 318 – Technology, Politics & Environment
PSC 360 – Sustainability Science & Policy

PROFESSIONAL ELECTIVES

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, GEO, MAX, MAT, PST, 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/CEE 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 Academic Excellence Workshops, Physical Education and remedial courses.