CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT

(Catalog of 2023-2024)

SEMESTER BY SEMESTER COURSE SEQUENCE (128 credits)

FIRST YEAR - First Semester	Cr.	Second Semester	Cr.
CHEM 1127Q or 1147Q General Chemistry	4	**CHEM 1128Q or 1148Q** General Chemistry	4
MATH 1131Q Calculus I	4	**MATH 1132Q** Calculus II	4
ENGR 1000 Orientation to Engineering	1	**ENGR 1166** Foundations of Engineering	3
CSE 1010 Intro to Computing for Engineers	3	[1, 2]GenEd: CA 1 (_____)	3
ENGL 1007 Seminar and Studio in Writing and Multimodal Composition	4	[1, 2]GenEd: CA 2 (_____)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		Second Semester	
CE 2110 Applied Mechanics I	3	**MATH 2410Q** Elem. Differential Equations	3
[7]**CE 2411** Intro to Computer Aided Design	1	[7]**CE 2211** Engineering Economics	1
MATH 2110Q Multivariable Calculus	4	[3]**CE 2251** Probability and Statistics in CEE	3
[3]**PHIL 1104** Philosophy & Ethics (CA 1)	3	[7]**CE 2710** Transportation Engineering	3
PHYS 1501Q Physics for Engineers I	4	**CE 3110** Mechanics of Materials	3
		[2, 3]GenEd: CA 2 (_____)	3
TOTAL	**15**	**TOTAL**	**16**

THIRD YEAR - First Semester		Second Semester	
[7, 8]**CE 3220** Principles of Construction I	3	[4]**CE 3520** Civil Engineering Materials	3
[7]**CE 3510** Soil Mechanics	3	[4]**ENVE 2310E** Environ. Engr. Fundamentals	3
[7, 8]**CE 3610** Basic Structural Analysis	3	[4]**ENVE 3120** Fluid Mechanics	4
[5]Science Elective (_____)	3 or 4	[5]Professional Requirement (_____)	3
[2]GenEd: CA 4-int. (_____)	3	[2]GenEd: CA 4 (_____)	3
TOTAL	**15[6]**	**TOTAL**	**16**

FOURTH YEAR – First Semester		Second Semester	
[7]**CE 4900W** Civil Engineering Projects I	2	[7]**CE 4920W** Civil Engineering Projects II	2
PHYS 1502Q Physics for Engineers II	3	[5]Civil Proficiency Area Req.(_____)	3
[5]Civil Proficiency Area Req.(_____)	3	[5]Civil Proficiency Area Req.(_____)	3 or 4
[5]Civil Proficiency Area Req.(_____ _)	3 or 4	[5]Professional Requirement (_____)	3
[5]Professional Requirement (_____)	3	[6]Elective(s) (_____)	3
[6]Elective(s) (_____)	3	[6]Elective(s) (_____)	1
TOTAL	**17[6]**	**TOTAL**	**15[6]**

(1) These courses may be taken either semester in the first year.
(2) GenEd CA = Content Area in General Education Requirements (For current lists of GenEd courses, visit http://geoc.uconn.edu). These courses may be taken at any time.
(3) These courses may be taken either semester in the second year.
(4) These courses may be taken either semester in the third year.
(5) See details on the next page.
(6) The credit totals for the last three semesters and the number of credits of free electives depend on what courses are chosen for professional requirements and the science elective. If any 4 credit courses are selected for the professional requirements or the science elective, the number of free elective credits is reduced by one for each of these courses.
(7) These courses are offered only once per year.
(8) These courses may be taken either in junior or senior year based on your concentration.

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CIVIL PROFICIENCY AREA REQUIREMENTS

All CE students must take all required courses listed in the second column of the table below.

In addition, for the Professional Requirements, all CE students must take at least **4 courses**, 1 each from four of these areas listed as "Proficiency Courses". (F) and (S) indicate if the course is typically offered in the Fall or Spring semester. Some are offered in alternate years as indicated.

Technical Areas	**Required Courses** (**ALL** required)	**Proficiency Courses** (**4** required @ **1 each** from 4 Different Areas)
Construction Engineering & Management	CE 3220 Principles of Construction I (F)	CE 4210 Operations Research in CEE (F) or CE 4220 Principles of Construction II (S)
Environmental	ENVE 2310 Environmental Engr. Fundamentals (F, S)	ENVE 3220 Water Quality Engineering (S) or ENVE 4310 Environmental Modeling (S)
Geotechnical	CE 3510 Soil Mechanics (F)	CE 4510 Foundation Design (F – even) or CE 4530 Geoenvironmental Engr (S – odd) or ENVE 4540 Design of Groundwater Systems (S – even) or CE 4560 Coastal Hazard Engineering (F – odd)
Hydraulic/ Water Resources	ENVE 3120 Fluid Mechanics (F, S)	ENVE 4810 Engineering Hydrology (F) or ENVE 4820 Hydraulic Engineering (S)
Structural	CE 3610 Basic Structural Analysis (F)	CE 3630 Design of Steel Structures (S) or CE 3640 Design of Reinforced Concrete Structures (F)
Surveying / Geodetic	CE 2411 Intro. to Computer Aided Design (F)	CE 2500 Intro. to Geographic Info. Systems (S) or CE 4410 Computer Aided Site Design (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transp. Engr. (F) or CE 4720 Street and Highway Design (S) or CE 4730 Transportation Planning (F – odd) or CE 4740 Traffic Engineering I (F – even)

PROFESSIONAL REQUIREMENTS

The professional requirements are satisfied by **21** credits: 1) at least **4** proficiency courses from the list above (third column, shaded), and 2) remaining credits with any 2000-level or higher courses in engineering, science, mathematics, or statistics, that were not used to meet another requirement in the curriculum.
The following are specific restrictions to fulfill 2) additional professional requirement courses:

- No more than one science course at the 2000 level may be used.
- "Science" course means any course with one of the following subject designations: BIOL, CHEM, EEB, ERTH, GEOG, LAND, MARN, MCB, NRE, PHYS, SPSS, STAT.
- Approved courses include MGMT 5335, BADM 3801, and ART 3670.

SCIENCE ELECTIVE

One of the following (or an approved substitution) must be taken:

- BIOL 1107: Principles of Biology (4 Credits)
- CHEM 2241 Organic Chemistry (3)
- CHEM 2443 Organic Chemistry (3)
- EEB 2208: Intro to Conservation Biology (3)
- GEOG 1300: Climate, Weather and the Environment (3)
- GEOG 1302: GIS Modeling of Environmental Change (4)
- GEOG 2300: Intro to Physical Geography (3)
- GSCI 1050/1051: Earth and Life Through Time (4 or 3)
- MARN 1002: Intro to Oceanography (3)
- NRE 1000 Environmental Science (3)
- NRE 1235 Environmental Conservation (3)
- NRE 2215 Intro to Water Resources (3)
- NRE 3105: Wetlands Biology and Conservation (3)
- NRE 3145 Meteorology (3)