

**CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT**  
(Catalog of 2017-2018)

**SEMESTER BY SEMESTER COURSE SEQUENCE (128 credits)**

<b>FIRST YEAR - First Semester</b>	<b>Cr.</b>	<b>Second Semester</b>	<b>Cr.</b>
<b>CHEM 1127Q or 1147Q</b> General Chemistry	4	<b>CHEM 1128Q or 1148Q</b> General Chemistry	4
<b>MATH 1131Q</b> Calculus I	4	<b>MATH 1132Q</b> Calculus II	4
<b>ENGR 1000</b> Orientation to Engineering	1	<b>ENGR 1166</b> Foundations of Engineering	3
<b>CSE 1010</b> Intro to Computing for Engineers	3	(1)(2) GenEd: CA 1 (_____)	3
(1) <b>ENGL 1010</b> Seminar in Academic Writing or <b>ENGL 1011</b> Sem. in Writing thru Literature	4	(1)(2) GenEd: CA 2 (_____)	3
<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>17</b>

<b>SECOND YEAR - First Semester</b>		<b>Second Semester</b>	
<b>PHYS 1501Q</b> Physics for Engineers I	4	<b>PHYS 1502Q</b> Physics for Engineers II	4
<b>MATH 2110Q</b> Multivariable Calculus	4	<b>MATH 2410Q</b> Elem. Differential Equations	3
<b>CE 2110</b> Applied Mechanics I	3	<b>CE 3110</b> Mechanics of Materials	3
<b>CE 2410</b> Intro to Geospatial Anal. & Meas.	4	<b>CE 2710</b> Transportation Engineering	3
		<b>PHIL 1104</b> Philosophy & Ethics (CA 1)	3
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>16</b>

<b>THIRD YEAR - First Semester</b>		<b>Second Semester</b>	
<b>CE 2251</b> Probability and Statistics in CEE	3	<b>CE 3520</b> Civil Engineering Materials or <b>ENVE 3200</b> Environmental Engineering Lab	3
<b>ENVE 2310</b> Environmental Engineering Fundamentals	3	<b>ENVE 3120</b> Fluid Mechanics	4
<b>CE 3610</b> Basic Structural Analysis	3	(3) Civil Proficiency Area Req.(_____)	4 or 3
<b>CE 3510</b> Soil Mechanics I	3	(5) Science Elective (_____)	3 or 4
(2) GenEd: CA 2 (_____)	3	(2) GenEd: CA 4 (_____)	3
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>16(6)</b>

<b>FOURTH YEAR – First Semester</b>		<b>Second Semester</b>	
<b>CE 4900W</b> Civil Engineering Projects I	2	<b>CE 4920W</b> Civil Engineering Projects II	2
<b>CE 2211</b> Engineering Economics I	1	(3) Civil Proficiency Area Req.(_____)	3
(3) Civil Proficiency Area Req.(_____)	3or 4	(4) Prof. Req. (_____)	3
(3) Civil Proficiency Area Req.(_____)	3	(4) Prof. Req. (_____)	3
(4) Prof. Req. (_____)	3	Elective(s) (_____)	3
(2) GenEd: CA 4 (_____)	3	Elective(s) (_____)	1 - 4
<b>TOTAL</b>	<b>15(6)</b>	<b>TOTAL</b>	<b>15(6)</b>

- (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) Civil Proficiency Area Requirements must be chosen to include at least one course from four of the following technical areas: Construction Engineering & Mgmt. (CE 3220 or 4210), Environmental (ENVE 3220 if also taken CE 3610, or ENVE 4310), Geotechnical (CE 4510 or 4541), Hydraulic/Water Resources (ENVE 4810 or 4820), Structural (CE 3630 or 3640), Surveying/Geodetic (CE 4410), and Transportation (CE 4710 or 4720 or 4750).
- (4) Professional Requirement courses may be any course in engineering, mathematics or science not already used to satisfy another requirement at the 2000-level or higher or MGMT 5335 or OPIM 3801. See the next page for more details.
- (5) The Science Elective must be taken from the courses listed on the next page (or an approved substitute).
- (6) The credit totals for the last three semesters depend on how many structural design courses are chosen and when they are taken. If the second structural design class is selected as a professional requirement or if a 4 credit science elective is chosen, the number of free elective credits is reduced by one (each).

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**CIVIL PROFICIENCY AREA REQUIREMENTS**

All CE students must take one course in each of the seven (7) technical areas listed in the table below as required courses. In addition, for the Professional Requirements, each student must take a second course from **four (4)** of these areas listed as “Proficiency Courses”. (F) and (S) indicates if the course is typically offered in the First or Second semester. Some are offered in alternate years as indicated.

<b>Technical Areas</b>	<b>Required Courses</b>	<b>Proficiency Courses</b> (4 required @ 1 each from 4 Different Areas)
Construction Engineering & Management	CE 2251 Probability and Statistics in CEE (F,S)	CE 3220 Principles of Construction I (F) or CE 4220 Principles of Construction II (S) or CE 4210 Operations Research in CEE (S)
Environmental	ENVE 2310 Environmental Engineering 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 (S) or CE 4530 Geoenvironmental Engr (S – odd) or CE 4541 Advanced Soil Mechanics (F – even)
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 Analyses (F,S)	CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)
Surveying / Geodetic	CE 2410 Intro. to Geospatial Analysis and Measurement (F)	CE 4410 Computer Aided Site Design (S) or CE 2500 Intro to Geographic Information System (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transp. Engr. (F) or CE 4720 Highway Engr. – Design (S) or CE 4750 Pavement Design (F – even)

**PROFESSIONAL REQUIREMENTS**

Professional requirements are satisfied by twenty one (21) credits of 2000-level or higher courses in engineering, science or mathematics, including MGMT 5335 and OPIM 3801. Following are restrictions on these courses:

**Restrictions on Professional Requirement Courses:**

The remaining 9 credits may be satisfied by any course offered by the School of Engineering at the 2000 level or higher, or any science or mathematics course that were not used to meet another requirement in the curriculum. Following are specific restrictions to take note of:

- CE 3520 Civil Engineering Materials (F, S) or ENVE 3200 Environmental Engineering Laboratory (S) may be used only if the other was taken for the laboratory requirement
- “Science” means any course with one of the following subject designations: BIOL, CHEM, EEB, GEOG, GSCI, LAND, MARN, MATH, MCB, NRE, PHYS, SOIL, TURF

**SCIENCE ELECTIVE**

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

- BIOL 1107/1108: Principles of Biology (4 credits with lab; recommended concurrent CHEM 1127)
- EEB 2208: Introduction to Conservation Biology (3 credits)
- ENVE 4320: Ecological Engineering (3 credits; recommended prep ENVE3220 and 4210)
- GEOG 1300: Climate, Weather and the Environment (3 credits)
- GEOG 1302: GIS Modeling of Environmental Change (4 credits with lab)
- GEOG 2300: Introduction to Physical Geography (3 credits)
- GSCI 1050 / 1051: Earth and Life Through Time (4 credits with lab / 3 credits)
- GSCI 3710: Engineering and Environmental Geology (3 credits; recommended prep GSCI 1050 or 1051)
- MARN 1002: Introduction to Oceanography (3 credits)
- NRE 3105: Wetlands Biology and Conservation (3 credits; recommended prep BIOL 1107 and 1108)
- PSYC 1100: General Psychology I (3 credits)