

**ENVIRONMENTAL ENGINEERING PROGRAM – University of Connecticut**  
(Catalog of 2019-2020)

**NORMAL 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</b> General Chemistry  |  | 4          | <b>CHEM 1128Q</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> Computing for Engineers (F/S)  |  | 3          | <b>ENVE 1000</b> Environmental Sustainability (CA2) |  | 3          |
| <b>ENGL 1010</b> Academic Writing<br>or <b>ENGL 1011</b> Writing thru Literature (F/S) |  | 4          | (1) CA 1 (_____)                                    |  | 3          |
| <b>TOTAL</b>   |  | <b>16</b>  | <b>TOTAL</b>  |  | <b>17</b>  |

| <b>SECOND YEAR - First Semester</b>                  |  | <b>Cr.</b> | <b>Second Semester</b>  |  | <b>Cr.</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 (F/S)             |  | 3          | <b>PHIL 1104</b> Philosophy & Ethics (CA1)                              |  | 3          |
| <b>ENVE 2310</b> Environmental Eng Fundamentals      |  | 3          | <b>CHEG 2111</b> Chemical Eng Thermodynamics or<br><b>ME 2233</b> (F/S) |  | 3          |
| <b>CE 2251</b> Probability & Statistics in CEE (F/S) |  | 3          | <b>ENVE 3270</b> Environmental Microbiology                             |  | 3          |
| <b>TOTAL</b>   |  | <b>17</b>  | <b>TOTAL</b>  |  | <b>16</b>  |

| <b>THIRD YEAR - First Semester</b>  |  | <b>Cr.</b> | <b>Second Semester</b>   |  | <b>Cr.</b> |
|---|--|------------|--|--|------------|
| <b>ENVE 2411</b> Introduction to CAD                                      |  | 1          | <b>ENVE 3200</b> Environmental Engineering Lab   |  | 3          |
| <b>ENVE 3120</b> Fluid Mechanics (F/S)                                    |  | 4          | <b>ENVE 3230</b> Air Pollution Control   |  | 3          |
| <b>ENVE 3220</b> Water Quality Engineering                                |  | 3          | <b>ENVE 3530</b> Engineering and Environmental<br>Geology (2) OR Professional Elective (3) |  | 3          |
| <b>ENVE 4210</b> Environ. Engineering Chemistry                           |  | 3          | (3) Professional Elective  |  | 3          |
| <b>NRE 4135</b> Groundwater Hydrology (2)<br>OR Professional Elective (3) |  | 3          | (1) GenEd: CA 4(I) (_____)   |  | 3          |
| <b>CE 2211</b> Engineering Economics (F/S)                                |  | 1          |  |  |            |
| <b>TOTAL</b>  |  | <b>15</b>  | <b>TOTAL</b>   |  | <b>15</b>  |

| <b>FOURTH YEAR – First Semester</b>            |  | <b>Cr.</b> | <b>Second Semester</b>   |  | <b>Cr.</b> |
|--|--|------------|--|--|------------|
| <b>ENVE 4910W</b> Environmental Eng’g Design I |  | 2          | <b>ENVE 4920W</b> Environmental Eng’g Design II  |  | 2          |
| <b>ENVE 4320</b> Ecological Principles & Eng’g |  | 3          | <b>ENVE 4310</b> Environmental Modeling  |  | 3          |
| <b>ENVE 4810</b> Engineering Hydrology         |  | 3          | <b>ENVE 4530</b> Geoenvironmental Engineering or<br><b>ENVE 4540</b> Design of Groundwater Systems |  | 3          |
| (1) GenEd: CA 4 (_____)                        |  | 3          | (4) Professional Elective  |  | 3          |
| (3) Professional Elective                      |  | 3          | (1) GenEd: CA 2 (_____)  |  | 3          |
| Free Elective                                  |  | 3          | Free Elective  |  | 1          |
| <b>TOTAL</b>                                   |  | <b>17</b>  | <b>TOTAL</b>   |  | <b>15</b>  |

NOTES: (F/S): these courses are offered both Fall and Spring semesters

(1) CA = Content Area in General Education (GenEd) Requirements (For current lists of GenEd courses, visit <http://geoc.uconn.edu>). These courses may be taken at any time and CA courses in particular semesters are indicative only.

(2) Earth Science Requirement (1 Course):

- NRE 4135-Intro. to Groundwater Hydrology (Fall semester) OR
- ENVE 3530- Engr. & Env. Geology (Spring semester)

(3) Professional Electives (4 Courses/12 credits): At least one course from the area of Management and Policy (see next page for courses); At least two courses from any 3000-level or higher courses in engineering or science (BIOL, CHEM, EEB, GEOG, GSCI, LAND, MARN, MATH, MCB, NRE, PHYS, SOIL, TURF), or CE 2500 or CHEM 2241, 2443; At least one course from any 3000-level or higher CE or ENVE courses. See suggested courses on the next page. Three credits of ENVE 4886 and/or 4986 Thesis may fulfill one professional elective. Honors students must fulfill one professional elective using Thesis credits. Research courses (4986, 3997, 4997) are recommended as professional electives for students planning to pursue graduate studies.

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**ENVE Professional Electives (F: Fall semester, S: Spring semester)**  
**Note: Course scheduling may change for departments other than CEE**

**Management and Policy:**

AH 3275. HAZWOPER (F)  
ARE 3434. Environment and Resource Policy (S)  
ARE 4462. Economics of Natural Resource Use  
EEB 3205. Current Issues in Environmental Science (F, odd years)  
ENVE 3100 Climate Resilience and Adaptation (F)  
GEOG 3320W. Environmental Evaluation and Assessment (S, online)  
GEOG 3340. Environmental Planning and Management  
LAND 3230W. Environmental Planning and Landscape Design  
MEM 2221. Principles of Engineering Management  
NRE 3245. Environmental Law (F)  
OPIM 3801. Project Management

**Suggested courses in other Engineering or Science Programs:**

CHEG 3151. Process Kinetics  
CHEG 4147. Process Dynamics and Control  
CHEM 2241 or CHEM 2443. Organic Chemistry  
GEOG 3400. Climate and Weather (F)  
MARN 3030. Coastal Pollution and Bioremediation  
MARN 4030W. Chemical Oceanography (F)  
ME 3239. Combustion for Energy Conversion  
ME 3263 Introduction to Sensors and Data Analysis  
ME 3270 Fuel Cells (S, even yrs)  
ME 3285 Sustainable Energy Sources and Systems (S, odd yrs)  
Wetlands Biology and Conservation (F)  
NRE 3105. Wetlands Biology and Conservation (F)  
NRE 3125 Watershed Hydrology (F)  
NRE 3145. Meteorology (F)  
NRE 3146 Climatology (S)  
NRE 3155. Water Quality Management (F, even yrs)  
NRE 3205. Stream Ecology (F, odd yrs)  
NRE 3535 Remote Sensing of the Environment (F)  
NRE 4135. Groundwater Hydrology (F)\*  
NRE 4165. Soil and Water Management and Engineering (S, odd yrs)  
NRE 4340 Ecotoxicology (S, odd yrs)  
SPSS 3420. Soil Chemistry Components (F, even yrs)  
SPSS 4420. Soil Chemistry Processes (F, odd yrs)

**Suggested courses in CE and ENVE (note, you must select one in this category but may select up to three):**

CE 2500 Introduction to GIS (S)  
CE 3220. Principles of Construction Management I (F)  
CE 2410 Geomatics & Spatial Measurement (F)  
CE 3510. Soil Mechanics (F)  
CE 4210. Operations Research in Civil and Environmental Engineering (S)  
CE 4220. Principles of Construction Management II (S)  
CE 4410. Computer Aided Site Design (S)  
ENVE 3110 Brownfield Redevelopment  
ENVE 3530. Engineering and Environmental Geology  
ENVE 4820. Hydraulic Engineering (S)  
ENVE 4850. Sustainable and Resilient Water Governance and Management (F)  
ENVE 3995. Special Topics in Environmental Engineering (F/S)  
Examples:  
Ecohydrology  
Hydroclimatology  
Environmental Organic Chemistry  
Biodegradation and Bioremediation  
Environmental Remediation  
Vadose zone hydrology  
ENVE 3997. Directed Research in ENVE  
ENVE 4997. Independent Research in ENVE  
ENVE 4999. Independent Study (F/S, by arrangement)

\* If you choose one course as earth science requirement, then you can take the other one as professional elective.