DOUBLE MAJOR - CIVIL and ENVIRONMENTAL ENGINEERING
University of Connecticut
(Catalog of 2021-2022 and later)
SEMESTER BY SEMESTER COURSE SEQUENCE (132-134 credits)

FIRST YEAR - Fall Semester	**Cr.**	**Spring 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]GenEd: CA 1 (_____)	3
ENGL 1007 Seminar in Academic Writing	4	**ENVE 1000** Environ. Sustainability (CA 2)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - Fall Semester		**Spring Semester**	
PHYS 1501Q Physics for Engineers I	4	**MATH 2410Q** Elem. Differential Equations	3
MATH 2110Q Multivariable Calculus	4	[6] **PHYS 1502Q** Physics for Engineers II	4
CE 2110 Applied Mechanics I	3	(2,3,4) Bio. or Earth Science Req. (CE PR)	3
CE 2251 Probability and Statistics in CEE	3	**CE 2211** Engineering Economics	1
CE 2411 Intro to Computer Aided Design	1	**CE 3110** Mechanics of Materials	3
ENVE 2310 Environ. Engr. Fundamentals	3	**CHEG 2211** or **ME 2233** Thermodynamics	3
TOTAL	**18**	**TOTAL**	**17**

THIRD YEAR - First Semester		**Second Semester**	
ENVE 3220 Water Quality Engineering (CE PR)	3	**ENVE 3230** Air Pollution Control	3
ENVE 4210 Env Eng Chem	3	**ENVE 4320** Ecological Principles and Eng	3
ENVE 3201 Environ. Eng. Laboratory I	1	**ENVE 3202** Environ. Eng. Laboratory II	1
ENVE 3120 Fluid Mechanics	4	**CE 2710** Transportation Engineering	3
CE 3510 Soil Mechanics	3	[2,3,4,6]Bio. or Ear. Sci. Req. (CE Sci elect)	3
CE 3220 Principles of Construction I	3	[1] **PHIL 1104** Philosophy & Ethics (CA 1)	3
TOTAL	**17**	**TOTAL**	**16**

FOURTH YEAR – First Semester		**Second Semester**	
CE 4910W or **ENVE 4910W** Projects I	2	**CE 4920W** or **ENVE 4920W** Projects II	2
CE 3520 Civil Engineering Materials	3	[5]**ENVE 4530 or 4540** (CE PR)	3
ENVE 4810 Engineering Hydrology (CE PR)	3	[5,6]**CE** Prof Req or **ENVE** Management and Policy Req	3 or 4
[1]GenEd: CA 2/4 double-dip	3	**ENVE 4310** Environmental Modeling	3
CE 3610 Introduction to Struct. Analy. and Des.	3	[2]GenEd: CA 4 (_____)	3
[5,6]**CE** Prof Req or **ENVE** Management and Policy Req	3 or 4		
TOTAL	**17 or 18**	**TOTAL**	**14** or **15**

The sequence of ENVE courses is critical (particularly 2310 and 3120). You should take those in the years indicated. Other elective courses may be taken at any time.

ENVE 3220/4210/3210 and ENVE 3230/4320/3202 are corequisites and should be taken in the same semester.

[1]CA = Content Area in General Education (GenEd) Requirements (For current lists of GenEd courses, visit http://geoc.uconn.edu).

[2]This course must be approved as Science Elective for the Civil Engineering Program.

[3]Earth Science Requirement *(1 Course): ERTH 1051 or 3710/ENVE 3530, ERTH 4735/NRE 4135; MARN 1002; NRE 3145 or 3146; SPSS 2120, 3420 or 4420. Note, only 2000 level or higher will count towards CE degree

[4]Biological Science Requirement (1 Course): BIOL 1108; EEB 2100E; ENVE 3270; NRE 3105, 3205, 3265, or 4340. Note, only 2000 level or higher will count towards CE degree

[5]See details on next page.

[6]these courses may be taken either semester in the fourth year.

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CIVIL PROFICIENCY AREA REQUIREMENTS

All CE students must take one course in each of seven (7) technical areas 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". In the case of Double majors, students must choose three required technical areas by taking ENVE 3220 (Environmental), ENVE 4810 (Hydraulic/Water Resources), ENVE 4530 or 4540 (Geotechnical). To fulfill the last area, students must choose **one** of the following Proficiency courses to fulfill the requirements of courses in four areas. (F) and (S) indicates if the course is typically offered in the Fall or Spring semester. Some are offered in alternate years as indicated.

Technical Areas	Required Courses	Proficiency Courses
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)
Structural	CE 3610 Basic Structural Analysis (S)	CE 3630 Steel Structure Design (S) or CE 3640 Design of Reinforced Concrete Structures (F)
Surveying / Geodetic	CE 2411 Intro. to Computer Aided Design (F, S)	CE 2500 Intro. to Geographic Info. System (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)

The CE Science requirement will be fulfilled by one of the courses you choose for the ENVE biological or earth science requirements.

ENVE MAJOR REQUIREMENTS

In addition to courses chosen for the CE Proficiency courses, ENVE students must take the following courses (9 credits of which will fulfill the remaining Professional Requirements for CE):
CHEG 2111/ME 2233, ENVE 3230, 4210, 4310, 3530, 4320 and the Management and Policy Requirement below

ENVE MANAGEMENT AND POLICY

Choose one of the following courses:

AH 3275. HAZWOPER (F)
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)
BADM/OPIM 3801. Project Management
$^{(2,3,4,6)}$Bio. or Ear. Sci. Requirement (CE Sci elect)