University of Connecticut

Guide to Course Selection and Student Advising Guide

B.S.E. Civil Engineering

July, 2013

With 3 and 4-digit Course Numbers

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What is in this Document?

This document is a roadmap to guide you, the undergraduate student in Civil Engineering (CE), through the complex process of selecting and registering for courses to earn your degree as efficiently and quickly as you want. It is organized according to common questions and issues you will face during your time at UConn.

This document does not substitute for the course catalog. Complete information about CE degree requirements can be found at the following web addresses:

- Undergraduate Catalog: http://www.catalog.uconn.edu/
- Gen Ed Course Lists: http://www.geoc.uconn.edu
- CE Curriculum: http://www.engr.uconn.edu/cee/ and in the Appendix.
- CE Plans of Study: http://www.engr.uconn.edu/cee/

What Does That Abbreviation or Acronym Mean?

Large organizations (including UConn) are notorious for using abbreviations and acronyms liberally in descriptions of offices and procedures. These abbreviations and acronyms are helpful for streamlining text, but only when everyone knows what they mean. Following is a list of abbreviations and acronyms that are used in this document and that you might see elsewhere as you navigate through UConn.

ASCE	American Society of Civil Engineers
CAST	Castleman Building (home of the CEE Department)
CE	Civil Engineering (the undergraduate or graduate program)
CEE	Civil & Environmental Engineering (the Department)
EII	Engineering II Building (home of the SoE Undergraduate Dean)
EIT	Engineer in Training
ENVE	Environmental Engineering (the undergraduate or graduate program)
FE	Fundamentals of Engineering examination
GenEd	General Education courses (required of all UConn undergraduates)
GPA	Grade Point Average
P&P	Principles and Practice examination
PE	Professional Engineer
PEO's	Program Educational Objectives
POS	Plan of Study
PR's	Professional Requirements (senior level electives)
SoE	School of Engineering
UConn	University of Connecticut (you probably know this one already)

What Is Civil Engineering?

Civil and Environmental Engineers seek to sustainably plan, design, construct and maintain infrastructure systems that meet the evolving needs of humanity while maintaining and protecting the natural environment. We work in the natural and constructed environments and must account for the forces of nature in our designs, seeking to minimize any adverse effects of our designs on the environment and society. We design and construct the physical infrastructure needed by society to insure a high quality of life. This includes the buildings where we live and work, the highways where we travel, the water that we drink, as well as a multitude of other projects necessary for the well-being of life on planet earth.

Civil & Environmental Engineers address some of the most important challenges that face our world today, including:

- Restoration and protection of the environment
- Sustainable energy and the environment
- Global warming and climate change
- Global water supply and flood and drought management
- Planning and design of sustainable transportation systems
- Safe, efficient and secure transportation for people and goods
- Structural monitoring and rehabilitation of aging infrastructure
- Infrastructure protection and natural hazards mitigation
- Design and construction of new infrastructure

The mission of the Civil and Environmental Engineering Department is to educate students who will become leaders in the profession; to advance the profession through cutting edge research and scholarship; to provide lifelong learning opportunities; and to serve as an intellectual resource to the state, national and international communities. Our academic programs emphasize fundamental scientific concepts, state-of-the-art planning and design, critical thinking and communication skills, interdisciplinary teamwork, strong faculty-student interaction and professional development. We strive to provide a uniquely challenging and invigorating learning environment for our students.

What is Accreditation and Why Is It Important?

Accreditation is a process to assure you that the Civil Engineering degree you earn at UConn (or any other accredited engineering school) can be trusted to prepare you for your career objectives, including gaining employment as an engineer after graduating and eventually becoming licensed as a Professional Engineer (PE) (see section "What is Professional Licensure?").

Engineering and technology programs in the US, including your CE degree from UConn, are accredited by an organization called ABET. One aspect of accreditation is announcing to our constituents – prospective students and potential employers – what our program prepares graduates for. This is known as our **Program Educational Objectives**, or PEO's, and they describe what we prepare our students to be doing 5-10 years after they graduate.

The UConn Civil Engineering undergraduate program educational objectives are to prepare our alumni/ae with the knowledge and skills needed to:

- actively contribute to the practice and profession of civil engineering in the public or private sectors in the technical areas of environmental, geotechnical, structural, transportation, and water resources engineering;
- follow a path that can lead to licensure as professional engineers who design and construct solutions to civil engineering problems in the natural and built environments; and
- practice life-long learning through post-graduate and professional education.

In addition to publishing these PEO's, we also assess whether or not we achieve them. One of the ways we do this is to periodically ask our graduates questions about their career progress. After you earn your degree at UConn, we may contact you at some time to do this. It is very important to maintain accreditation of your degree to help us out by answering these questions. These questions are also helpful to support our goal of continuously looking for ways to improve our program. We thank you in advance for your cooperation.

What Else Does Accreditation Involve?

STUDENT OUTCOMES are what students are expected to know and be able to do by the time of graduation, and include the following:

a.) an ability to apply knowledge of mathematics, science, and engineering
b.) an ability to design and conduct experiments, as well as to analyze and interpret data
c.) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d.) an ability to function on multi-disciplinary teams
e.) an ability to identify, formulate, and solve engineering problems
f.) an understanding of professional and ethical responsibility
g.) an ability to communicate effectively
h.) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i.) a recognition of the need for, and an ability to engage in life-long learning
j.) a knowledge of contemporary issues
k.) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

In addition there are special **CE PROGRAM CRITERIA** defined by the American Society of Civil Engineers (ASCE), the professional society for civil engineers in the US. These criteria say that any accredited civil engineering program must prepare graduates to "apply knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of basic science, consistent with the program educational objectives; apply knowledge of four technical areas appropriate to civil engineering; conduct civil engineering experiments and analyze and interpret the resulting data; design a system, component, or process in more than one civil engineering context; explain basic concepts in management, business, public policy, and leadership; and explain the importance of professional licensure."

The undergraduate course program you take in CE is designed so that by graduation you will have taken courses to learn how to do all of the above.

What is Professional Licensure?

Engineers are required to be licensed when their work directly affects public health, safety and welfare. Licensure ensures that engineers have met minimum qualifications, including competence, ability, experience and character. The licensing process involves an initial exam, called the *Fundamentals of Engineering Examination (FE Exam)*, professional experience, and a second exam, called the *Principles and Practice of Engineering (P&P Exam).* Once an individual has passed the FE Exam, he/she is certified as an *Engineer-in-Training (EIT).* After passing the P&P Exam, the individual becomes a *Professional Engineer (PE),* and is said to be "licensed". The exams are developed and administered by the *National Council of Examiners for Engineering and Surveying* (www.ncees.org).

The first exam, the *Fundamentals of Engineering Examination*, can be taken just before graduation from a four-year accredited engineering program, such as what you are in at UConn (See "What is Accreditation …?" on page 4). The exam stresses subject material in a typical undergraduate program, including chemistry, physics, mathematics, statistics, dynamics, mechanics of materials, fluid mechanics, electrical engineering, thermodynamics and engineering economics.

The CE Faculty strongly encourages all CE students to take this exam in the last semester of their undergraduate program when the subject matter is still fresh in your mind. Waiting to take this exam after graduation often requires significant additional preparation. The exam is given twice a year, in April and in October. Students need to submit applications by December 1 for the April exam and by July 1 for the October examination. The application and instructions can be found online at http://www.dcp.state.ct.us/licensing/professions.htm.

Following are some hints for completing the application:

- Sign up as Class 9S.
- You only need to list faculty names; you do not need their signatures.
- Leave the part about listing experience blank.
- The UConn COOP has a notary.
- The Registrar's Office at the Wilbur Cross building can process the "Certificate of Education".
- You do not need to fill in the "Verification of Registration" form.

Who Do I Need To See For … ?

Signatures

If a form asks for the signature of …	**… see:**
… the Dean	**the Associate Dean** for undergraduate education or **the Director of Advising, SoE**
… the Department Head	**the Associate Head** of CEE
… your advisor	**your faculty advisor**, assigned by the **Director of Advising** in SoE, listed in PeopleSoft

People in the Registration Process and What They Do

Associate Dean, SoE, Undergraduate Affairs	SoE Dean's designee for undergraduate academic issues; supervises the **Director of Advising, SoE;**
Director of Advising, SoE	Reviews and approves POS's for all engineering students; approves substitutions for SoE requirements, such as Math, Sciences, Gen Ed; assigns students to faculty advisors
Associate Head, CEE	Department Head's designee for academic issues; works with the **Director of Advising, CE** to approve substitutions for CE courses and program requirements
Director of Advising, CE	Reviews and approves POS's for CE students; approves substitutions for CE courses and program requirements
Your faculty advisor	A member of the CEE Faculty who will help you in planning your program of study and selecting courses

*So … Who Are these People?**

Title	**Name, Office, Phone, Email**
Associate Dean, SoE, Undergraduate Affairs	Daniel Burkey, EII 304A, 860-486-2167 daniel@engr.uconn.edu
Director of Advising, SoE	Brian Schwarz, EII 304C, 860-486-5462 schwarz@engr.uconn.edu
Associate Head, CEE	Prof. John N. Ivan, CAST 301, 860-486-0352 johnivan@engr.uconn.edu
Director of Advising, CE	Prof. Howard I. Epstein, CAST 202, 860-486-5638 hie@engr.uconn.edu
Your faculty advisor	You can find out who your advisor is by logging into PeopleSoft, or asking the **Director of Advising, SoE**

***correct as of August 23, 2012**

How Do I Register for Classes?

1. **Complete the Pre-Advising Assignments on HuskyCT**: Instructions to prepare for advising are announced in early October and March each semester for registration for the following semester. Follow these instructions carefully. Once you have done the indicated tasks, you may proceed to Step 2. If you have not completed these tasks in Step 1, your advisor will send you away until you have completed them.
2. **Make an appointment to see your advisor.** Each advisor uses a different procedure for doing this: some make appointments by email; others post a sign-up sheet on the office door. Remember that due to conference or research travel, your advisor may occasionally be off campus for several days at a time and unavailable for appointments. It is a good idea to contact him/her for an appointment two weeks before your registration time window.
3. **Meet with your advisor.** Several things will happen in your meeting:
   a. **You will discuss your schedule.** Tell your advisor about your career plans, including graduate school or studying abroad or taking a semester off on coop. This will help him/her to give you advice about which classes to take, including a list of courses you will sign up for next semester.
   b. **You will fill out a Plan of Study (POS).** This must be submitted for approval two (2) semesters before you expect to graduate.
   c. **Your advisor will fill out and sign a registration form.** This form must be filled out completely.
4. **Take the registration form to the CEE Department Office.** Give the form to one of the full-time staff members. She will log into PeopleSoft and remove your advising bar so you can register. You cannot register in PeopleSoft until you get your advising bar removed. Note that the office staff have other responsibilities, and they might not be able to remove your bar right away. Generally, they will do it by the end of the day (5:00 PM) that you turn in your form. If you need it removed sooner, let them know what you need and they will tell you if they are able to accommodate your request.
5. **Login to PeopleSoft** during your assigned time window and sign up for your courses. Be sure to sign up for exactly the courses your advisor directed you to take. If you need to deviate from the schedule you and your advisor discussed, contact your advisor immediately to make sure this will not have repercussions on your course program and planned graduation date.

What is the Plan of Study?

The Plan of Study (POS) is a contract between you and the University. The POS lists all of the courses you will take to meet the requirements for your degree. Once you have passed all of these courses, you will receive your degree.

Where Do I Get A Copy of the POS?

You can download a copy of the CE POS at this link: http://www.engr.uconn.edu/cee/. Click on the pulldown menu "Undergraduate" and then choose "Forms" and then on the next page click on "Plan of Study". Then choose the POS for CE and the year of the catalog you are under.

Which POS Should I Use?

Choose the POS for the catalog in effect when you first enrolled in the School of Engineering. For example, if you entered the School in academic year 2011-2012, choose the POS labeled "fall 2011", or the most recent one before that. If it is to your benefit, you are permitted to change to a later catalog, but you may not change back to an earlier catalog once you have officially changed.

When Should I Submit My POS?

Your POS must be submitted by the time you register for your second-to-last semester. For most students this is in the spring of the third year when they are registering for their 7^{th} semester.

Who Fills Out My POS?

You should fill out the POS together with your course advisor. It is often helpful to start this process at least one semester ahead of time, that is, in the fall of the third year.

Do All of the Courses I Take Go On the POS?

You don't need to list every course on your transcript on the POS. You only need to list what is needed to meet the required courses for the CE degree and total at least 128 credits. In some cases, it may be necessary to list more than 128 credits; this happens when a student must take a foreign language or chooses a minor degree. Some courses may not be needed; leave them off. Any course not used to meet your degree requirements can be used to meet another degree, *e.g.,* a graduate degree.

How Do I Fill Out the POS?

1. Fill out the top with the student's contact information, expected graduation date, and the catalog year requirements being followed. This is the address to which communication about the POS will be sent, so be sure it is accurate and a place where you receive mail from the postal service and an email address you check regularly. Fill out this section LAST.
2. For each of the General Education (Gen Ed) Requirements, write in the course you chose to meet that requirement.
3. If you used the same course to meet more than one GenEd requirement, write it in parentheses () for the second requirement to indicate this.
4. For the second language competency, circle "High School" if the requirement was met in high school. If not, write in the courses being used to meet that requirement.
5. For the writing competency, write the course in parentheses if it is listed elsewhere on the POS to meet another requirement.
6. When there is a choice between two courses, be sure to circle which course you took.
7. Next to "CE 2010" or "CE 291" write which two semesters this was taken.
8. Mark "T" next to any course requirements met by transfer credit.
9. Total the course credits on each row in separate columns at the right for those taken at UConn and those transferred in. Do not include courses written in parentheses (those meeting multiple requirements) in the row totals. Also compute the total UConn and transfer credits at the bottom.
10. In the "Comments" section at the bottom, indicate the following using footnotes (*, +, etc.):
    a. Titles of any "special topics" courses taken
    b. Course substitutions (attach substitution form approved by SoE Director of Advising), including any transfer courses that did not transfer directly as required courses.
11. If a minor field is taken, write it in the indicated place at the bottom, and attach the signed POS for that minor degree.
12. Once the POS is completed, both the student and the advisor sign and date it in ink.
13. Make sure the top section is completed, attach a current copy of the student's unofficial transcript and submit it to the Director of Advising, CE.

What Are Some Common Mistakes on the POS?

Following are the most common mistakes that students make when filling out the POS. Doing any of these will guarantee that your POS will NOT be approved and your graduation may end up being delayed if you take courses that will not meet your graduation requirements.

1. Double dipping with CE and ENVE courses; for example none of the following are permitted:
    a. Using CE 3630 or CE 3640 as a professional requirement without taking the other one for your CE requirement.
    b. Using CE 3610 or ENVE 3220 as a professional requirement without taking the other one for your CE requirement.
    c. Using CE 3520 or ENVE 3200 as a professional requirement without taking the other one for your CE requirement.
2. Counting the credits for your double-dipped GenEd and/or W course twice. You may use the same course to meet two requirements, but you may only count the credits once.
3. Failing to circle which course you took when there is a choice, *e.g.*:
    a. High School? or _____; _____
    b. ENGL 1010, or 1011, or …
    c. CSE 1100 or CSE 1010
    d. CE 3610 or ENVE 3220
    e. CE 3520 or ENVE 3200
    f. CE 3630 or 3640

    Note that <u>you do NOT need to circle every course you took</u>, and it is preferred that you only circle classes where there is an "or".
4. Totaling your credits incorrectly, especially neglecting to note the UConn and transfer credits in two columns and total them separately.
5. Presenting a POS with fewer than 128 total credits.
6. Crossing off a course you did not take without indicating a substitution, which must be approved by either the Associate Head of the Department (for a CE requirement) or the Head of Advising, SOE (for School of Engineering or University requirements).
7. Including restricted courses (more than 8 credits of CHEM or PHYS, STAT 1000, etc., see page 16)

How Do I Decide Which POS / Catalog to Use?

The rule is that you must use the catalog in effect when you first enroll in the School of Engineering as a freshman or a transfer student. If you are dismissed from the School and later are re-admitted, you must use the catalog in effect when you re-enroll. You also are permitted to change to a new catalog once; sometimes the catalog change is beneficial to you.

There currently are four catalogs in effect for CE students: 2009-10, 2011-12, 2012-13 and 2013-14. You can find the suggested course sequence and course requirements for each catalog in the Appendix; following are the primary differences:

Catalog of 2009-10: Requires 5 professional requirements plus ECE 3002
Catalog of 2011-12: Requires 6 professional requirements without ECE 3002
Catalog of 2012-13: Requires 5 professional requirements with a new science elective (any science except chemistry or physics) instead of ECE 3002
Catalog of 2013-14: Requires 6 professional requirements with the new science elective (any science except chemistry or physics) without ECE 3002 and also does not require CE 2120

Most students who entered the School of Engineering before 2011 have already figured out they can switch to the catalog of 2011-12 and avoid taking ECE 3002. All you need to do is use a Fall 2011 or later POS and write in "2011-12" at the top for the catalog you are using.

Students entering the School of Engineering in fall 2012 must take the new science elective required in the catalog of 2012-13. If you entered before 2012, you do not need to change to this catalog. However, many students have on their transcripts Early College Experience, AP Exam or transfer credits consisting of 1000 level science courses that cannot be used as professional requirements. If this is the case for you, it might be advantageous to switch to the 2012-13 catalog, especially if you have 9 or more other credits of courses on your transcript that do not meet any other requirements.

Because the catalog of 2013-14 is less restrictive than the catalog of 2012-13, it is advantageous for most students under the catalog of 2012-13 to switch to the catalog of 2013-14.

How Do I Satisfy the General Education Requirements?

What is General Education?

General Education (GenEd) consists of courses outside your major intended to give you a "broad" education that is not "one-dimensional". UConn has common GenEd requirements for all students, including those in Engineering. Our accreditation also requires that Engineering students devote a portion of their studies to GenEd to make sure engineers understand the world around them and the society they will serve. GenEd includes courses in the Sciences, Liberal Arts, Humanities and Social Sciences. However, the Science (Chemistry and Physics) and Mathematics courses required of Engineering majors exceed (and automatically satisfy) the GenEd science requirements.

What are the rules for selecting GenEd courses?

1. Two courses each in Content Areas (CA) 1, 2, 3 and 4 (CA 3 is met with CHEM and PHYS courses). The most up-to-date list of Gen Ed courses can be found online at: http://www.geoc.uconn.edu/.
2. All Engineering students must take PHIL 1104. This counts as a CA 1 course. Even if your GenEd requirements are waived due to a previous Bachelor's degree, you still must take PHIL 1104.
3. The six courses in CA 1 through 3 must be from 6 different Departments. Therefore, do not take a course in PHIL other than 1104.
4. One of the CA 4 courses must be on a sub-list of "International" courses.
5. One of your CA 1 or 2 courses may also count as one of your CA 4 courses. There are many CA 1 and 2 courses that are also on the CA 4 list. Many of these are also "International" courses.
6. Unless you take the new two-semester senior design sequence (CE 4900W and CE 4920W) you must take a W course as one of your GenEd's.

Can some GenEd courses strengthen my major?

Courses in Economics, Geography, Psychology and Political Science can be good choices to complement your study in CE. Ask your advisor or other students for suggestions. ENVE 1000 "Environmental Sustainability", taught by faculty in CEE, satisfies the CA 2 requirement.

How Do I Satisfy the CE Program Requirements?

The courses required for the CE degree in each catalog year are listed in the Appendix and on the respective POS. Pay close attention to the pre-requisites for each course. The Appendix also gives a flow chart of the required and elective courses indicating the pre-requisite chains with arrows.

Professional Requirements (PR) consist of five (5) or six (6) elective courses in engineering, science or math (depending on the catalog). In all catalogs CE students must take courses in four (4) different areas of CE as listed below.

Professional Requirements for Civil Engineering Major

Technical Areas	**Required CE Courses**	**Proficiency Courses** (4 required: at least 1 each from 4 different areas)
Construction Management	CE 2210 or ENVE 2330	CE 4210
Environmental/Sanitary	ENVE 2310	ENVE 3220* or ENVE 4310
Geotechnical	CE 3510	CE 4510 or CE 4541
Hydraulic/Water Resources	CE 3120 or ENVE 3120	ENVE 4810 or ENVE 4820
Structural	CE 3630 or CE 3640	CE 3630 or CE 3640**
Surveying/Geodetic	CE 2410	CE 4410
Transportation	CE 2710	CE 4710 or CE 4720 or CE 4750

*ENVE 3220 is allowed for CE proficiency requirements only if CE 3610 has also been taken
**Whichever was not taken as the required structural engineering course

The remaining credits of CE professional requirements may be satisfied by any 2000-level or higher course in engineering, science or mathematics, or MGMT 5335. At most one course may be at 2000-level for catalogs prior to 2013-14. Following are some suggested courses:

- any courses in the above list not already used to meet proficiency requirements or other course requirements
- CE 3520 CE Materials or ENVE 3200 ENVE Lab (only if the other was taken for the lab requirement)
- CE 3610 Basic Structural Analysis or ENVE 3220 Water Quality Engineering (only if the other was taken to meet CE requirements)
- CE 4610 Adv. Structural Analysis or CE 4570 Bituminous Materials
- CE/ENVE 3530 / GSCI 3710 Engr. & Env. Geology
- CE 4730 Transportation Planning or CE 4740 Traffic Engineering
- AH 3275 HAZWOPER

Which PR Courses Should I Take for a Particular Area of CE?

The program in CE is designed to give you a broad education that will give you flexibility in future career choices. The world is changing rapidly and it is to your benefit to prepare yourself to easily jump to another area according to the job market and your own developing career interests. Nevertheless, you may have one area of CE that you want to focus in. Following are lists of PR courses we suggest you take if you want to focus in any of these technical areas.

Construction Engineering

CE 3630 (S) or 3640 (F)
CE 4210 (S)
CE 4410 (S)
CE 4510 (S odd) or 4541 (S even)
CE 4720 (S odd) or 4750 (F even)

Environmental Engineering*

CE 4210 (S)
CE 4410 (S)
ENVE 4310 (S)
ENVE 4810 (F)
ENVE 3230 (S)

Geotechnical Engineering

CE 3630 (S) or 3640 (F)
CE 4210 (S)
CE 4410 (S)
CE 4510 (S odd)
CE 4541 (S even) or 3530 (F even)

Pavement Engineering

CE 4210 (S)
CE 4410 (S)
CE 4570 (F odd)
CE 4720 (S odd)
CE 4750 (F even)

Site Engineering

CE 4210 (S)
CE 4410 (S)
CE 4510 (S odd) or 4541 (S even)
CE 4710 (F)
CE 4720 (S odd)

Structural Engineering

CE 3630 (S) or 3640 (F)
CE 4210 (S)
CE 4410 (S)
CE 4510 (S odd) or 4541 (S even)
CE 4610 (F)

Transportation Engineering

CE 4210 (S)
CE 4410 (S)
CE 4510 (S odd) or 3630 or 3640
CE 4710 (F) or 4720 (S odd)
CE 4730 (F odd) or 4740 (F even)

Water Resources Engineering

CE 4210 (S)
CE 4410 (S)
ENVE 3220 (S) or ENVE 4310 (S)
ENVE 4810 (F)
ENVE 4820 (S)

*to focus in environmental engineering, be sure to choose ENVE 3220 and ENVE 3200 for the lab and analysis requirements. If you follow this track, you can also get the ENVE minor.

How Do I Choose Free Electives?

How many free elective credits do I get?

The number of free elective credits varies for each student, depending on many factors. To find out how many free elective credits you need, fill out your POS to meet all of the GenEd and CE requirements, and then total the credits for those courses. The difference between 128 and that number is the number of free elective credits you must put on your POS.

What can I take for free electives?

You may take any course, either at UConn or transferred from another college or university, subject to the following restrictions:

University Course Restrictions (listed in the Undergraduate Catalog):

- No credit for MATH 1010
- Not more than 12 credits of biology (MCB or EEB) at the 1000-level
- Not more than 3 credits of EKIN 1160
- Not more than 6 credits from PHIL 1101 through 1107 (note that PHIL 1104 is required for students in Engineering)
- Not both STAT 1000 and 1100

No credit for a course prerequisite to a second course in the same department may be counted for credit toward graduation after the student has passed the second course (see "FAQ's about Course Registration Issues", page 29)

Additional SoE Restrictions (these may <u>not</u> be used on the POS):

- MATH 1110Q or 1112Q or courses numbered below 1100
- PHYS 1010Q and 1030Q
- CSE 1000
- STAT 1000
- Courses labeled "independent study" or "variable topics" taken in departments outside the School of Engineering
- No course taken on a Pass/Fail basis may be counted for credit toward graduation or used to meet any course requirement of the School of Engineering (other than CE 2010)
- No more than 8 credits of 1000-level PHYS or CHEM

What about Transfer Courses and Course Substitutions?

How do I get credit for courses I took somewhere else?

Courses from other institutions with a grade of C- or better can be transferred and can count as credit towards graduation, subject to the credit restrictions noted on page 14. Note also that not every course will help you meet course requirements in CE. If you are planning to take a course elsewhere to meet a graduation requirement, check with your advisor or the Associate Department Head to make sure the course will satisfy a graduation requirement before you sign up for and take the course. The following website gives information about how to transfer in credit for courses taken at other colleges and universities: http://web2.uconn.edu/transfer/transfercredits_uconn.html
You can also search for courses offered at colleges and universities in Connecticut that transfer as UConn courses at the following webpage: http://transfer.uconn.edu/search.php.

Can I substitute another course for one that is required?

Following is a list of automatic course substitutions that do not require special approval. Simply cross out the course number on the POS and write in the course you are using to meet the requirement. Other substitutions may be granted under special circumstances. You may petition the Associate Head of CEE and the Director of Advising for SoE for any other course substitutions before taking the substituted course.

Instead of taking …	**… you may substitute**
ENGL 1010 or 1011	ENGL 91002 and ENGL 91003 (transferred courses)
ENGR 1000 or ENGR 1166	The equivalent credits in any engineering courses
MATH 1131Q	(MATH 1125Q and 1126Q*) **or** MATH 1151Q
MATH 1132Q	MATH 1152Q
MATH 2110Q	MATH 2130Q
MATH 2410Q	MATH 2420Q
MATH 1131Q, 1132Q, 2110Q & 2410Q	MATH 2141Q and 2142Q and 2143Q and 2144Q
CHEM 1127Q	CHEM 1124Q and 1125Q*
CHEM 1127Q and CHEM 1128Q	CHEM 1124Q and 1125Q and 1126*
CHEM 1127Q and CHEM 1128Q	(CHEM 1137Q and 1138Q) **or** (CHEM 1147Q and 1148Q)
PHYS 1501Q and PHYS 1502Q	PHYS 1201Q and 1202Q and (1230Q or 1530Q)*
PHYS 1501Q and PHYS 1502Q	PHYS 1401Q and 1402Q
CE 2210 or ENVE 2330	(STAT 3025Q and CE 2211) **or** (CE 2251 and 2211)
ME 2233	CHEG 2111
CE 2010 (twice) and CE 4910W	CE 4900W and CE 4920W

*the credits for MATH 1125Q, CHEM 1124Q and 3 credits of the PHYS may not be counted on the POS.

Can I Get a Minor in Another Subject?

Yes! Many CE students choose a minor in another subject that complements their program in CE. Contact the department or office listed in the Catalog or web-page for the minor program in which you are interested to find the courses required. Share this information with your Advisor, and together you can select courses to meet the requirements for both your major and the minor. Some minors in particular are popular as they can be satisfied easily along with the CE program or complement your study. These are discussed here. Note: please confirm this information with the program offering the minor in case changes have been made since this document was prepared.

Minor in Environmental Engineering

It is very easy to fulfill the requirements for the ENVE Minor within the requirements for the CE degree. Here is how to do it without having to use any free electives or extra courses:

Course	On CE POS	On ENVE Minor POS
CE 2210 or ENVE 2330 Decision Analysis in CEE	Required course	Elective course
ENVE 2310 Environmental Engineering Fundamentals	Required course	Required course
ENVE 3220 Water Quality Engineering	Choose instead of CE 3610	Required course
CE 3510 Soil Mechanics	Required course	Elective course
ENVE 4310 Environmental Modeling	ENVE proficiency in Professional Requirements	Required course
ENVE 3230 Introduction to Air Pollution	Choose as 5th Professional Requirement course	Required course

Minor in Engineering Management

This undergraduate minor provides an opportunity for non-business majors to obtain knowledge in the principles of managing organizations. Following are the required courses (check http://www.engr.uconn.edu/minorengrmgmt.php for updates):

- Core courses:
  A. MEM 2221 Principles of Engineering Management
  B. OPIM 3801 Project Management
  C. either MEM 2211 or MEM 3221
- Two elective courses from the following: BADM 3741; BADM 3742; BADM 3710; BADM 3730; BADM 3750; either BADM 3760 or OPIM 3103 but not both; MEM 3221; OPIM 4895 other than Project Management.

Can I Get a Minor ….? (continued)

Minor in Mathematics

The requirements for this minor are 15-18 credits of Mathematics, following one of two tracks:

1. Five courses chosen from among the following courses: MATH 2110Q (or 2130Q or 2143Q), 2210Q (or 3210 or 2144Q), 2360Q, 2410Q (or 2420Q or 2144Q), 3146, 3150 (or 4110), 3160, 3230, (or 4210), 3240, 3250, 3260, 3330 (or 4310), 3370, 3510, 3710, 4735 or certain sections of 3094, 3795, and 3799 approved by the department head.
2. Math 2141Q, 2142Q, 2143Q and 2144Q.

Note that MATH 2110Q and 2410Q are required by the CE Program. Therefore a CE student must take only three more courses to get a MATH minor. One of these courses can be used as the fifth professional requirement course, and the other two can be chosen as free electives. The following courses are relevant for CE majors:

- MATH 2210 Applied Linear Algebra
- MATH 3146 Complex Variables
- MATH 3150 Analysis
- MATH 3160 Probability
- MATH 3410 Differential Equations for Applications
- MATH 3430 Applied Analysis
- MATH 3510 Numerical Analysis
- MATH 3710 Mathematical Modeling

Electronics & Systems Minor Program

The broad field of electronics and systems - which involves the analysis and design of all forms of electrical, electronic, and photonic devices as well as systems incorporating such devices - has engineering applications as diverse as wireless communication, power systems, biomedical imaging, and information systems. A minimum of 15 credits of coursework are required, as follows:

ECE 2001W Electrical Circuits
ECE 3101 Signals & Systems or BME 3400 Biosystems Analysis
3 additional 2000-level or above ECE courses

For more information contact the Electrical & Computing Department or visit http://www.ee.uconn.edu/pdf/ECEMinor09.pdf.

Can I Get a Minor ….? (continued)

Materials Science and Engineering (MSE) Minor

This minor provides a firm basis for understanding the relationships between the structure of all classes of materials, the processing conditions, and the properties of these materials that are critical to science and engineering. It requires the completion of 16 credits including the following:

- MSE 2001 (or 2101) and 2002 (or 2102)
- 9 credits selected from MSE 3000-level courses, MSE 4000-level courses (but not more than 3 credits of independent study or directed research), BME 3700 and CHEG 3156.

Nanomaterials Minor

This minor offers the fundamentals and understanding in nanoscale materials physics and chemistry, synthesis and characterization techniques, nanodevices fabrication, testing and applications, which are derived from the latest progress and documentation in the nanoscience and nanotechnology. It requires the completion of 16 credits including the following:

- MSE 2001 (or 2101) and 2002 (or 2102)
- 9 credits selected from Group II courses containing **MSE 4001**, **4240**, **4241**, and **4095** (if related to nanomaterials)

Note: Group II courses cannot be simultaneously used towards the Materials Science & Engineering Minor and the Nanomaterials Minor.

For more information about the MSE or Nanomaterials Minor, contact the Director of the Materials Science and Engineering program or visit http://www.cmbe.engr.uconn.edu/mse_minors.html.

What if I Want to Do a COOP or Study Abroad?

COOPS and Internships

Most of our students are able to find employment during the summer break at local engineering firms or government offices. The ASCE student chapter and the School of Engineering schedule Career Fairs once each semester at which dozens of companies come to campus looking for students to fill both permanent and temporary positions. Watch your engineering email address for announcements about these career fairs. Many employers contact faculty directly about job opportunities as well. These opportunities will also be posted on bulletin boards on the third floor of the Castleman Building and to the student engineering email list. You can learn more about coop and internship opportunities at this link: <http://www.engr.uconn.edu/coopsandinternships.php>

Study Abroad

UConn participates in a number of study abroad programs. The EuroTech Program is one that is administered by the School of Engineering and the German Language and Culture Program. You can learn more about EuroTech at this link: <http://www.engr.uconn.edu/EUROTECH/>

You can learn more about the Study Abroad programs available to UConn students at this link: <http://studyabroad.uconn.edu/>

Note that when taking a semester away from UConn, if you want to still graduate in four years it is critical to discuss your plans with your advisor as soon as possible to make sure you can meet all course requirements. The next two pages provide suggested adjustments to the usual course sequence corresponding to going abroad in various semesters. These sequences assume that your semester abroad will be used to meet free electives and GenEd requirements only, and they are prepared for the catalog of 2013-14. For the catalog of 2012-13, replace one of the Professional Requirements with CE 2120.

Study Abroad Course Sequencing Options

Note the following abbreviations in these tables:
CA = Content Area; PR = Professional Requirement
Boldface indicates change in course sequence.

PREFERRED SCHEDULE 1: STUDY ABROAD SPRING 3RD YEAR

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
FALL	CHEM 1127 MATH 1132 ENGR 1000 CSE 1010 ENGL 1010 or 1011	PHYS 1501 MATH 2110 CE 2110 CE 2410 PHIL 1104	CE 2210 CE 3510 ENVE 2310 ENVE 3120 **ME 2233**	CE 4900W PR or CE 3640 PR PR PR PR
SPRING	CHEM 1128 MATH 1132 ENGR 1116 CA 1 CA 2	PHYS 1502 MATH 2410 CE 2710 CE 3110 **Sci. Elec.**	CA 2 CA 4 CA 4 FREE (4 credits)	CE 4920W **CE 3520 or ENVE 3200** **CE 3610 or ENVE 3220** **CE 3630 or PR** PR

PREFERRED SCHEDULE 2: STUDY ABROAD SPRING 2ND YEAR

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
FALL	CHEM 1127 MATH 1132 ENGR 1000 CSE 1010 ENGL 1010 or 1011	PHYS 1501 MATH 2110 CE 2110 CE 2410 **MATH 2410**	CE 2210 **CE 3110** CE 3510 ENVE 2310 ENVE 3120	PR or CE 3640 PR PR **Sci. Elec.** **PHIL 1104**
SPRING	CHEM 1128 MATH 1132 ENGR 1116 CA 1 CA 2	CA 2 CA 4 CA 4 FREE (4 credits)	CE 3520 or ENVE 3200 CE 3610 or ENVE 3220 CE 3630 or PR **CE 2710** **PHYS 1502**	CE 4910W ME 2233 PR PR PR

Study Abroad Course Sequencing Options (cont.)

LESS PREFERRED SCHEDULING OPTIONS:

STUDY ABROAD FALL 3RD YEAR

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
FALL	CHEM 1127 MATH 1132 ENGR 1000 CSE 1010 ENGL 1010 or 1011	PHYS 1501 MATH 2110 CE 2110 CE 2410 **CE 2210**	CA 2 CA 4 CA 4 FREE (4 credits)	**ENVE 2310** **ENVE 3120** **CE 3510** PR or CE 3640 PR
SPRING	CHEM 1128 MATH 1132 ENGR 1116 CA 1 CA 2	PHYS 1502 MATH 2410 CE 2710 CE 3110 **Sci. Elec.**	CE 3520 CE 3610 CE 3630 or PR PR **PHIL 1104**	CE 4910W ME 2233 PR PR PR

STUDY ABROAD FALL 4TH YEAR

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
FALL	CHEM 1127 MATH 1132 ENGR 1000 CSE 1010 ENGL 1010 or 1011	PHYS 1501 MATH 2110 CE 2110 CE 2410 PHIL 1104	CE 2210 CE 3510 ENVE 2310 ENVE 3120 **ME 2233**	CA 2 CA 4 CA 4 FREE (4 credits)
SPRING	CHEM 1128 MATH 1132 ENGR 1116 CA 1 CA 2	PHYS 1502 MATH 2410 CE 2710 CE 3110 **Sci. Elec.**	CE 3520 or ENVE 3200 CE 3610 or ENVE 3220 CE 3630 **PR** **PR**	**CE 4900W*** CE 4920W PR PR PR PR

*Exception must be granted in advance to take CE 4900W and CE 4920W simultaneously

What Is the Course Sequence for EuroTech and CE?

The following course sequence is one that will meet the requirements of the CE (catalog of 2013-14) and German programs, including the study and work period abroad during the 4th year. Note that it is possible to take courses in Germany to meet some of your course requirements.

1st YEAR FALL	**1ST YEAR SPRING**
CHEM 1127Q (4)	CHEM 1128 (4)
MATH 1131Q (4)	MATH 1132 (4)
CSE 1010 (3)	ENGR 1166 (3)
ENGR 1000 (1)	ENGL 1010/1011 (4)
GERM 1131 (4)	*GERM 1132 (4)*
2ND YEAR FALL	**2ND YEAR SPRING**
PHYS 1501 (4)	PHYS 1502 (4)
MATH 2110 (4)	MATH 2410 (3)
CE 2110 (3)	CE 3110 (3)
CE 2410 (4)	CE 2710 (3)
GERM 1133 (4)	*GERM 1134 (4)*
GERM 3220 (1)	*GERM 3221 (1)*
3RD YEAR FALL	**3RD YEAR SPRING**
CE 2310 (3)	CE 3520 OR CE 3300 (3)
CE 2210 (3)	CE 3610 OR CE 3320 (3)
CE 3120 (3)	CE 3630 (4)
CE 3510 (4)	PHIL 1104 (CA 1–D) (3)*
GERM 3233 (3)	*GERM 3234 (3)*
GERM 3222 (1)	*GERM 3261W (CA 1-A & CA 4) (3)*
4TH YEAR FALL (Study in Germany)	**4TH YEAR SPRING (Work in Germany)**
*GERM 3293 (study abroad courses) (6)***	*GERM 3292 (German language practicum) (6)*
(Other study abroad courses) (12)**	ENGR 3181 (0)
5TH YEAR FALL	**5TH YEAR SPRING**
CE 4900W (2)	CE 4920W (2)
(Prof. Req.) (3)	*GERM 4246 (3)*
(Prof. Req.) (3)	(Prof. Req.) (3)
(Prof. Req.) (3)	(Prof. Req.) (3)
*(CA 1-C) (3)**	*(CA 1 - NOT GERM OR PHIL)* (3)*
(CA 2) (3)*	(CA 2) (3)*
GERM 3255W (CA 1-B) (3)	

*In order to avoid taking more than 5 courses in any given semester, we recommend taking PHIL 1104 and two of the General Education courses during the summer or intersession period.

**We recommend taking courses in Germany to meet the following requirements as it is easiest to approve substitutions for them: *GERM 3251 or 3258 (CA 4) (3),* the Science Requirement (3), any upper division engineering or science courses to satisfy one of the professional requirements (3) and any thermodynamics course to substitute for ME 2233 (3).

What If I Am Choosing between CE and Another Major?

It is possible to take courses for both CE and either Mechanical Engineering or Environmental Engineering for the first two years without deciding which of the two majors you want to follow. Here is a course sequence that will let you do that (for the catalog of 2013-14). Note that you must have settled on CE or one of the other majors by the end of the 2nd year. The courses listed in **boldface** are taken out of the normal sequence for CE.

Choosing between Mechanical and Civil Engineering

	1st YEAR	2nd YEAR	3rd YEAR	4th YEAR
FALL	CHEM 1127	**PHYS 1502**	CE 2210	CE 4900W
	MATH 1132	MATH 2110	**CE 2410**	PR or CE 3640
	ENGR 1000	CE 2110	CE 3510	PR
	CSE 1010	PHIL 1104	ENVE 2310	Sci. Elec.
	ENGL 1010 or 1011	**ME 2233**	ENVE 3120	**CA 4**
SPRING	**PHYS 1501**	**CHEM 1128**	**CE 2710**	CE 4920W
	MATH 1132	MATH 2410	CE 3520 or ENVE 3200	PR
	ENGR 1116	CE 2120*	CE 3610 or ENVE 3220	PR
	CA 1	**CE 3110**	CE 3630 or PR	PR
	CA 2	CA 2	CA 4	FREE (4 credits)

*Use as a Professional Requirement if you choose CE.

Choosing between Environmental and Civil Engineering

	1st YEAR	2nd YEAR	3rd YEAR	4th YEAR
FALL	CHEM 1127	PHYS 1501	CE 2210	CE 4900W
	MATH 1132	MATH 2110	**CE 2410**	PR or CE 3640
	ENGR 1000	CE 2110	CE 3110	PR
	CSE 1010	**ENVE 2310**	CE 3120	PR
	ENGL 1010 or 1011	PHIL 1104	CE 3510	**CA 4**
SPRING	CHEM 1128	**CHEG 2111***	**CE 2710**	CE 4910W
	MATH 1132	PHYS 1502	Sci. Elec.	**PR**
	ENGR 1116	MATH 2410	CE 3610 or ENVE 3220	PR
	CA 1	**ENVE 3200**	CE 3630 or PR	PR
	CA 2	CA 2	CA 4	FREE (4 credits)

*substitute for ME 2233

Note that it is possible to double major in CE and ENVE with only 134 credits and finish in eight semesters without taking more than 19 credits in any semester. The next page shows the course sequence for doing this.

SEMESTER BY SEMESTER COURSE SEQUENCE FOR DOUBLE MAJOR IN CIVIL ENGINEERING AND ENVIROMENTAL ENGINEERING (134 credits)

FIRST YEAR - First Semester	**Cr.**	**Second Semester**	**Cr.**
CHEM 1127Q General Chemistry	4	**CHEM 1128Q** 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	GenEd	3
ENGL 1010 Seminar in Academic Writing **or ENGL 1011** Sem. in Writing thru Lit.	4	GenEd	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		**Second Semester**	
PHYS 1501Q Physics for Engineers I	4	**PHYS 1502Q** Physics for Engineers II	4
MATH 2110Q Multivariable Calculus	4	**MATH 2410Q** Elem. Differential Equations	3
CE 2110 Applied Mechanics I	3	**CE 3110** Mechanics of Materials	3
ENVE 2310 Env. Engineering Fundamentals	3	**CHEG 2111** Chemical Engineering Thermo.	3
CE 2410 Geomatics & Spatial Measurement	4	**ENVE 3200** Environmental Engineering Lab	3
TOTAL	**18**	**TOTAL**	**16**

THIRD YEAR - First Semester		**Second Semester**	
CE 2210 Decision Analysis in CEE	3	**ENVE 2320** The Environmental Debate	1
ENVE 3120 Fluid Mechanics	3	**ENVE 3220** Water Quality Engineering	3
ENVE 3270 Environmental Microbiology	3	**ENVE 3230** Introduction to Air Pollution	3
ENVE 4210 Environ. Engineering Chemistry	3	**CE 2710** Transportation Engineering	3
CE 3510 Soil Mechanics	4	**CE 3630** Steel Structure Design or Prof. Req.	4(3)
		ENVE 3530 Eng and Env Geology or **ENVE 4820** Hydraulic Engineering	3
TOTAL	**16**	**TOTAL**	**17(16)**

FOURTH YEAR – First Semester		**Second Semester**	
ENVE 4910W Env. Engr. Design I	2	**ENVE 4920W** Env. Engr. Design II	2
ENVE 4320 Ecological Principles and Engr.	3	**ENVE 4310** Environmental Modeling	3
ENVE 4886 Thesis I	1	**ENVE 4896** Thesis II	2
ENVE 4810 Eng Hydrology or **NRE 4135** Groundwater Hydrology	3	**CE 4210** Operations Research	3
NRE 3155 or **3105**	3	**PHIL 1104** Philosophy and Ethics	3
GenEd	3	GenEd	3
Prof. Req. or **CE 3640** Rein. Concrete Design	3(4)		
TOTAL	**18(19)**	**TOTAL**	**16**

NOTES:

(1) This schedule assumes that 5 GenEd courses are taken, i.e. one course is used for double-dipping.

(2) Either NRE 4135 or ENVE 3530 must be taken to meet ENVE Program Requirements and will also satisfy the CE science elective. NRE 3155 or 3105 must also be taken to meet ENVE Program Requirements.

(3) Either CE 3630 or 3640 must be taken to meet CE Program Requirements.

(4) The four areas of CE are satisfied by CE 4210 (Construction), ENVE 4310 (Environmental), ENVE 4810 or 4820, and a single course from one of the following remaining possible areas:

a) Geotechnical: CE 4510 Foundation Design (S - even) or CE 4530 Geoenvironmental Engineering (S - odd) or CE 4541 Advanced Soil Mechanics (F - even)

b) Structural: CE 3630 (S) or 3640 (F) (whichever one has not been used to satisfy CE core requirements)

c) Surveying/Geodetic: CE 4410 Computer Aided Site Design (S)

d) Transportation: CE 4710 Case Studies in Transp. Engr. (F) or CE 4720 Street and Highway Design (S) or CE 4750 Pavement Design (F – even)

What Do I Need to Pay Attention to This Semester?

First Year

- Be sure to pass MATH 1132Q (formerly MATH 116Q) by the end of your 2nd semester to avoid getting behind with your engineering courses next year. Consider taking it in the summer if you were not able to pass it in the spring semester.
- Determine which GenEd requirements you have met, and make sure that your choices for GenEd courses for the next year do not duplicate any requirements.

Second Year

- Be sure to pass the following courses by the end of the 4th semester to avoid getting behind in your 3rd and 4th year engineering courses:
    - CE 2110 (formerly CE 211)
    - MATH 2110Q and MATH 2410Q (formerly MATH 210Q and 211Q); these may be taken simultaneously and are also often offered in the summer or may be taken at another institution.
    - CHEM 1128Q (formerly 128Q); this is often offered in the summer or may be taken at another institution.
- Make sure you are on track to satisfy the Gen Ed requirements, including a W course, by the end of the third year.

Third Year

- Complete your POS with your course advisor and plan out which courses you want to take for your professional requirements and free electives.
- Be sure to submit your POS in the spring when you register for your 7th semester courses.

Fourth or Final Year

- Make sure the courses you take each semester are all on your POS.
- Meet with your advisor in the first week of your last semester to make sure you have passed or are registered in all of the courses listed on your POS. If necessary revise and re-submit the POS at that time.

FAQ's about the POS and Major Course of Study

How do I revise my POS?

Once your POS is approved, you may revise it once without re-filling it out from scratch. You do NOT need to complete it again from scratch! Hold all of your revisions until the beginning of your final semester, and then do the following:

1. Make the corrections on a copy of the approved version and initial next to each revision (both the student and the advisor).
2. Both the student and advisor sign again next to the original signatures, with the new date.
3. Submit the form to the CE Director of Advising, with a copy of the student's unofficial transcript.

How do I change my major?

As you take more and more courses, you may find that your declared major is not a good match for you and your educational or career objectives. After thinking about it, see your Advisor for an additional point of view. Following is a suggested course of action:

1. Contact the department offering the major you are considering changing to. Find out what the course requirements for that major are.
2. Consider taking courses for one semester that will advance you towards either major, taking one or more courses in the new major to try it out. Do this by consulting with your advisor and with an advisor for the new major. This way if you find the new major does not suit you, you have not fallen behind in your current major.
3. If you decide to change majors, please request the change on-line at www.ppc.engr.uconn.edu. This change will be processed through the Undergraduate Dean's office.

How do I add a second major or degree?

Contact the department offering that major or the Director of Advising in the SoE (for majors in SoE), to get assigned an advisor in that program. You will have to file a second POS for that major, but you may use the same courses to meet both major requirements. A second **major** (within SOE) only requires you to meet all of the requirements for both degrees. A second **degree** (e.g., B.A. in German for EuroTech) requires an additional 30 credits of 2000-level or higher courses beyond the CE degree, for a minimum of 158 credits.

FAQ's about Course Registration Issues

How Do I drop a course?

First, discuss the implications of dropping the course with your Advisor. Review the Catalog and the Registrar's website for more information. The Office of the Registrar and the Office of the Assistant Dean of Engineering can give you the required forms and tell you the signature requirements.

What happens if I take a course before one of its prerequisites?

Very bad idea! Don't take courses out of sequence, even if someone gives you a permission number to register for the course, PeopleSoft allows you to register for it and the instructor lets you in. The credits won't count for the pre-requisite course when you eventually take it. So what happens is if the pre-requisite course is also required, you still have to take it BUT you will have to take an additional course to get enough credits to graduate!

What happens if I don't drop a course?

Drop any course you are not attending because if you leave a course on your schedule, don't attend, and don't take the final exam you will get an "F" and you're stuck with it! Make sure, however, that dropping the course does not mess up your financial aid if it depends on maintaining "full-time" status.

What If I decide I want to take a different course after seeing my advisor?

Contact your advisor before signing up for a different course schedule than what you agreed upon in your advising session. Making a change in your schedule without talking to your advisor could result in missing a critical graduation requirement and postponing your graduation by a semester or even a year.

How many credits may I take per semester?

Engineering students may take up to 19 credits in one semester. To enroll in 20 or more credits you must get an overload approval form signed by your advisor (or the Associate Head of CEE) and the Associate Dean of Engineering.

FAQ's about Other Academic and Grade Issues

How do I get put on probation or dismissed?

When your GPA falls below 2.0, you may be put on Scholastic Probation or eventually dismissed. Refer to the "Scholastic Standards" section of the Catalog for details. The School of Engineering has "Supplementary Academic Standards" also listed in the Catalog.

What if I get lower than a "C- " in a required course?

The CE program requirements in the catalogs of 2011-12 and later state "A minimum grade of C- is required in each of the following courses: ENVE 2310, CE 2110, 2210, 2410, 2710, 3110, 3120, 3510 and 4910W". If you receive a grade lower than "C-" in any of these courses, you must retake it and earn a grade of at least "C-".

May I take graduate courses as an undergraduate student?

Yes! You will need to get a permission number from the instructor teaching the course. He/she will ask if you have the necessary preparation or pre-requisites that would be expected of graduate students taking the course. Most CE seniors have the preparation necessary to take entry-level graduate courses in the Department. In general, if you have a GPA of at least 3.0, and have the necessary preparation courses, you should be able to successfully complete a graduate course as an undergraduate. There are two ways you might apply a graduate course to your academic record:

1. As a regular course on your CE undergraduate POS. You may use it either as a Professional Requirement course or as a free elective. If you choose this option you may reduce the credit requirements for a MS degree in CE at UConn up to a total of 6 credits if you earn at least a B+ in the same number of graduate credits used on an undergraduate POS.
2. If you don't need it for your undergraduate POS, then you can take it as an extra course and save it to use for a graduate degree at UConn or another institution.

APPENDICES

A. CE Curriculum - Catalog of 2009-2010

B. CE Curriculum - Catalog of 2011-2012

C. CE Curriculum - Catalog of 2012-2013

D. CE Curriculum – Catalog of 2013-2014

E. Curriculum Flowchart (pre-requisite chart) - Catalog of 2009-2010

F. Curriculum Flowchart (pre-requisite chart) - Catalog of 2011-2012

G. Curriculum Flowchart (pre-requisite chart) - Catalog of 2012-2013

H. Curriculum Flowchart (pre-requisite chart) - Catalog of 2013-2014

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT
(Catalog of 2009-2010)

NORMAL 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) CA 1 (_____)	3
(1) **ENGL 1010** Seminar in Academic Writing **or ENGL 1011** Sem. in Writing thru Literature	4	(1)(2) CA 2 (_____)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		Second Semester	
PHYS 1501Q Physics for Engineers I	4	**PHYS 1502Q** Physics for Engineers II	4
MATH 2110Q Multivariable Calculus	4	**MATH 2410Q** Elem. Differential Equations	3
CE 2110 Applied Mechanics I	3	**CE 2120** Applied Mechanics II	3
CE 2410 Geomatics & Spatial Meas.	4	**CE 2710** Transportation Engineering	3
PHIL 1104 Philosophy & Ethics (CA 1)	3	(2) CA 2 (_____)	3
TOTAL	**18**	**TOTAL**	**16**

THIRD YEAR - First Semester		Second Semester	
(3) **CE 2010** C&EE Professional Issues Seminar	0	(3) **CE 2010** C&EE Professional Issues Seminar	0
CE 2210 or ENVE 2330 Decision Analysis in CEE	3	**CE 3520** Civil Engineering Materials **or ENVE 3200** Environmental Engineering Lab	3
ENVE 2310 Environmental Engineering Fundamentals	3	**CE 3610** Basic Structural Analysis **or ENVE 3220** Water Quality Engineering	3
CE 3110 Mechanics of Materials	3	(4) **CE 3630** Steel Structure Design or (5) Prof. Req. (_____)	4 (3)
CE 3120 or ENVE 3120 Fluid Mechanics	3	(2) GenEd: CA 4 (_____)	3
CE 3510 Soil Mechanics I	4	(2) GenEd: CA 4 (_____)	3
TOTAL	**16**	**TOTAL**	**16(6)**

FOURTH YEAR – First Semester		Second Semester	
ECE 3002 Electrical Engineering Principles	3	**CE 4910W** Civil Engineering Projects	3
(5) Prof. Req. (_____)	3	**ME 2233** Thermodynamic Principles	3
Or (4) **CE 3640** Rein. Concrete Struc. Design	(4)	**Or CHEG 2111** Chem. Engrg. Thermodynamics	
(5) Prof. Req. (_____)	3	(5) Prof. Req. (_____)	3
(5) Prof. Req. (_____)	3	(5) Prof. Req. (_____)	3
Elective (_____)	2	Elective (_____)	3
TOTAL	**14(6)**	**TOTAL**	**15(6)**

NOTES:

(1) These courses may be taken either semester in the first year.

(2) CA = Content Area in General Education (GenEd) Requirements (For current lists of GenEd courses, visit http://geoc.uconn.edu). These courses must include one W course and may be taken at any time.

(3) You must complete two semesters of CE 2010 with satisfactory grade **before taking** CE 4910W.

(4) All students must take either CE 3630 or 3640.

(5) Professional Requirements must be chosen to include at least one course from four of the following technical areas: Construction Management (CE 4210), Environmental/Sanitary (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 CE 3640), Surveying/Geodetic (CE 4410), and Transportation (CE 4710). The remaining course may be any 2000-level or higher course in engineering, mathematics or science not already used to satisfy another requirement or MGMT 5335.

(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, the number of free elective credits is reduced by one.

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT
(Catalog of 2009-2010)

PROFESSIONAL REQUIREMENTS

The professional requirements are satisfied by fifteen (15) credits of 3000-level or higher courses in engineering, science or mathematics, including at most one course at the 2000-level and MGMT 5335. Following are specific restrictions on these courses:

Proficiency in 4 CE Areas (12 Credits): All CE students must take one course in each of the seven 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 different of these areas listed as "Proficiency Courses". (F) and (S) indicates if the course is typically offered in the First or Second semester.

Technical Areas	**Required Courses**	**Proficiency Courses** (4 required @ 1 each from 4 Areas)
Construction Management	CE 2210 or ENVE 2330 Decision Analysis in CEE (F)	CE 4210 Operations Research in CEE (S)
Environmental	ENVE 2310 Environmental Engineering Fundamentals (F)	ENVE 3220* Water Quality Engineering (S) or ENVE 4310 Environmental Modeling (S)
Geotechnical	CE 3510 Soil Mechanics I (F)	CE 4510 Foundation Design (S) or CE 4541 Soil Mechanics II (F)
Hydraulic / Water Resources	CE 3120 or ENVE 3120 Fluid Mechanics (F)	ENVE 4810 Engineering Hydrology (F) or ENVE 4820 Hydraulic Engineering (S)
Structural	CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)	**CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)
Surveying / Geodetic	CE 2410 Geomatics and Spatial Measurement (F)	CE 4410 Computer Aided Site Design (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transportation Engineering (F)

*ENVE 3220 is permitted for Professional Requirements only if CE 3610 was also taken.
**To meet proficiency in the Structural area, the second of the two courses must be taken.

Restrictions on the Remaining Three Credits of Courses:

- CE 3520 Civil Engineering Materials (S) or ENVE 3200 Environmental Engineering Laboratory (S) may be used only if the other was taken for the laboratory requirement
- CE 3610 Basic Structural Analysis (S) or ENVE 3220 Water Quality Engineering (S) may be used only if the other was taken to meet CE requirements

Additional CE Courses that can be used for Professional Requirements:

- ENVE 3530 or CE 3530 or GSCI 3710 Engineering and Environmental Geology (S)
- CE 4610 Advanced Structural Analysis (F)

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT

(Catalog of 2011-2012)

NORMAL 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) CA 1 (_____)	3
(1) **ENGL 1010** Seminar in Academic Writing **or ENGL 1011** Sem. in Writing thru Literature	4	(1)(2) CA 2 (_____)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		Second Semester	
PHYS 1501Q Physics for Engineers I	4	**PHYS 1502Q** Physics for Engineers II	4
MATH 2110Q Multivariable Calculus	4	**MATH 2410Q** Elem. Differential Equations	3
CE 2110 Applied Mechanics I	3	**CE 2120** Applied Mechanics II	3
CE 2410 Geomatics & Spatial Meas.	4	**CE 2710** Transportation Engineering	3
PHIL 1104 Philosophy & Ethics (CA 1)	3	(2) CA 2 (_____)	3
TOTAL	**18**	**TOTAL**	**16**

THIRD YEAR - First Semester		Second Semester	
(3) **CE 2010** C&EE Professional Issues Seminar	0	(3) **CE 2010** C&EE Professional Issues Seminar	0
CE 2210 or ENVE 2330 Decision Analysis in CEE	3	**CE 3520** Civil Engineering Materials **or ENVE 3200** Environmental Engineering Lab	3
ENVE 2310 Environmental Engineering Fundamentals	3	**CE 3610** Basic Structural Analysis **or ENVE 3220** Water Quality Engineering	3
CE 3110 Mechanics of Materials	3	(4) **CE 3630** Steel Structure Design or (5) Prof. Req. (_____)	4 (3)
CE 3120 or ENVE 3120 Fluid Mechanics	3	(2) GenEd: CA 4 (_____)	3
CE 3510 Soil Mechanics I	4	(2) GenEd: CA 4 (_____)	3
TOTAL	**16**	**TOTAL**	**16(6)**

FOURTH YEAR – First Semester		Second Semester	
(5) Prof. Req. (_____)	3	**ME 2233** Thermodynamic Principles	3
Or (4) **CE 3640** Rein. Concrete Struc. Design	(4)	**Or CHEG 2111** Chem. Engrg. Thermodynamics	
(5) Prof. Req. (_____)	3	**CE 4910W** Civil Engineering Projects	3
(5) Prof. Req. (_____)	3	(5) Prof. Req. (_____)	3
(5) Prof. Req. (_____)	3	(5) Prof. Req. (_____)	3
Elective (_____)	2(6)	Elective (_____)	3(6)
TOTAL	**14(6)**	**TOTAL**	**15(6)**

NOTES:

(1) These courses may be taken either semester in the first year.

(2) CA = Content Area in General Education (GenEd) Requirements (For current lists of GenEd courses, visit http://geoc.uconn.edu). These courses must include one W course and may be taken at any time.

(3) You must complete two semesters of CE 2010 with satisfactory grade **before taking** CE 4910W.

(4) All students must take either CE 3630 or 3640.

(5) Professional Requirements must be chosen to include at least one course from four of the following technical areas: Construction Management (CE 4210), Environmental/Sanitary (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 4580 or 4710 or 4720). The remaining two courses may be any course in engineering, mathematics or science not already used to satisfy another requirement or MGMT 5335, with at most one course at the 2000-level.

(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, the number of free elective credits is reduced by one.

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT
(Catalog of 2011-2012)

PROFESSIONAL REQUIREMENTS

The professional requirements are satisfied by eighteen (18) credits of 3000-level or higher courses in engineering, science or mathematics, including at most one course at the 2000-level and MGMT 5335. Following are specific restrictions on these courses:

Proficiency in 4 CE Areas (12 Credits): 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 of these areas listed as "Proficiency Courses". (F) and (S) indicates if the course is typically offered in the First or Second semester.

Technical Areas	**Required Courses**	**Proficiency Courses** (4 required @ 1 each from 4 Areas)
Construction Management	CE 2210 or ENVE 2330 Decision Analysis in CEE (F)	CE 4210 Operations Research in CEE (S)
Environmental	ENVE 2310 Environmental Engineering Fundamentals (F)	ENVE 3220* Water Quality Engineering (S) or ENVE 4310 Environmental Modeling (S)
Geotechnical	CE 3510 Soil Mechanics I (F)	CE 4510 Foundation Design (S) or CE 4541 Soil Mechanics II (F)
Hydraulic / Water Resources	CE 3120 or ENVE 3120 Fluid Mechanics (F)	ENVE 4810 Engineering Hydrology (F) or ENVE 4820 Hydraulic Engineering (S)
Structural	CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)	**CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)
Surveying / Geodetic	CE 2410 Geomatics and Spatial Measurement (F)	CE 4410 Computer Aided Site Design (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transportation Engineering (F) or CE 4720 Highway Engineering – Design (S) or CE 4580 Pavement Design (F)

*ENVE 3220 is permitted for Professional Requirements only if CE 3610 was also taken.
**To meet proficiency in the Structural area, the second of the two courses must be taken.

Restrictions on the Remaining Six (6) Credits of Courses:

- CE 3520 Civil Engineering Materials (S) or ENVE 3200 Environmental Engineering Laboratory (S) may be used only if the other was taken for the laboratory requirement
- CE 3610 Basic Structural Analysis (S) or ENVE 3220 Water Quality Engineering (S) may be used only if the other was taken to meet CE requirements

Additional CE Courses that can be used for Professional Requirements:

- ENVE 3530 or CE 3530 or GSCI 3710 Engineering and Environmental Geology (S)
- CE 4610 Advanced Structural Analysis (F)

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT

(Catalog of 2012-2013)

NORMAL 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) CA 1 (_____)	3
(1) **ENGL 1010** Seminar in Academic Writing **or ENGL 1011** Sem. in Writing thru Literature	4	(1)(2) CA 2 (_____)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		Second Semester	
PHYS 1501Q Physics for Engineers I	4	**PHYS 1502Q** Physics for Engineers II	4
MATH 2110Q Multivariable Calculus	4	**MATH 2410Q** Elem. Differential Equations	3
CE 2110 Applied Mechanics I	3	**CE 2120** Applied Mechanics II	3
CE 2410 Geomatics & Spatial Meas.	4	**CE 2710** Transportation Engineering	3
PHIL 1104 Philosophy & Ethics (CA 1)	3	(2) CA 2 (_____)	3
TOTAL	**18**	**TOTAL**	**16**

THIRD YEAR - First Semester		Second Semester	
(3) **CE 2010** C&EE Professional Issues Seminar	0	(3) **CE 2010** C&EE Professional Issues Seminar	0
CE 2210 or ENVE 2330 Decision Analysis in CEE	3	**CE 3520** Civil Engineering Materials **or ENVE 3200** Environmental Engineering Lab	3
ENVE 2310 Environmental Engineering Fundamentals	3	**CE 3610** Basic Structural Analysis **or ENVE 3220** Water Quality Engineering	3
CE 3110 Mechanics of Materials	3	(4) **CE 3630** Steel Structure Design or (5) Prof. Req. (_____)	4 (3)
CE 3120 or ENVE 3120 Fluid Mechanics	3	(2) GenEd: CA 4 (_____)	3
CE 3510 Soil Mechanics I	4	(2) GenEd: CA 4 (_____)	3
TOTAL	**16**	**TOTAL**	**16(6)**

FOURTH YEAR – First Semester		Second Semester	
(5) Prof. Req. (_____)	3	**ME 2233** Thermodynamic Principles	3
Or (4) **CE 3640** Rein. Concrete Struc. Design	(4)	**Or CHEG 2111** Chem. Engrg. Thermodynamics	
(5) Prof. Req. (_____)	3	**CE 4910W** Civil Engineering Projects	3
(5) Prof. Req. (_____)	3	(5) Prof. Req. (_____)	3
(7) Science Elective (_____)	3	(5) Prof. Req. (_____)	3
Elective (_____)	2(6)	Elective (_____)	3(6)
TOTAL	**14(6)**	**TOTAL**	**15(6)**

NOTES:

(1) These courses may be taken either semester in the first year.

(2) CA = Content Area in General Education (GenEd) Requirements (For current lists of GenEd courses, visit http://geoc.uconn.edu). These courses must include one W course and may be taken at any time.

(3) You must complete two semesters of CE 2010 with satisfactory grade **before taking** CE 4910W.

(4) All students must take either CE 3630 or 3640.

(5) Professional Requirements must be chosen to include at least one course from four of the following technical areas: Construction Management (CE 4210), Environmental/Sanitary (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 4580 or 4710 or 4720). The remaining two courses may be any course in engineering, mathematics or science not already used to satisfy another requirement or MGMT 5335, with at most one course at the 2000-level.

(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, the number of free elective credits is reduced by one.

(7)The Science Elective must be taken from the courses listed on the next page or a substitution approved by the Associate Head of Civil & Environmental Engineering.

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT
(Catalog of 2012-2013)

PROFESSIONAL REQUIREMENTS

The professional requirements are satisfied by fifteen (15) credits of 3000-level or higher courses in engineering, science or mathematics. At most one course may be at the 2000-level. MGMT 5335 is also acceptable as one of the courses. Following are specific restrictions on these courses:

Proficiency in 4 CE Areas (12 Credits): 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 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.

Technical Areas	**Required Courses**	**Proficiency Courses** (4 required @ 1 each from 4 Areas)
Construction Management	CE 2210 or ENVE 2330 Decision Analysis in CEE (F)	CE 4210 Operations Research in CEE (S)
Environmental	ENVE 2310 Environmental Engineering Fundamentals (F)	ENVE 3220* Water Quality Engineering (S) or ENVE 4310 Environmental Modeling (S)
Geotechnical	CE 3510 Soil Mechanics I (F)	CE 4510 Foundation Design (S) or CE 4541 Soil Mechanics II (F – even)
Hydraulic / Water Resources	CE 3120 or ENVE 3120 Fluid Mechanics (F)	ENVE 4810 Engineering Hydrology (F) or ENVE 4820 Hydraulic Engineering (S)
Structural	CE 3630 Steel Structure Design (S) or CE 3640 Rein. Concrete Structure Design (F)	**CE 3630 Steel Structure Design (S) or CE 3640 Rein. Concrete Structure Design (F)
Surveying / Geodetic	CE 2410 Geomatics and Spatial Measurement (F)	CE 4410 Computer Aided Site Design (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transp. Engr. (F) or CE 4720 Highway Engr. – Design (S – odd) or CE 4750 Pavement Design (F – even)

*ENVE 3220 is permitted for Professional Requirements only if CE 3610 was also taken.
**To meet proficiency in the Structural area, both courses must be taken.

Restrictions on the Remaining three (3) Credits of Courses:

- CE 3520 Civil Engineering Materials (S) or ENVE 3200 Environmental Engineering Laboratory (S) may be used only if the other one was taken for the laboratory requirement
- CE 3610 Basic Structural Analysis (S) or ENVE 3220 Water Quality Engineering (S) may be used only if the other one was taken to meet CE requirements

Additional CE Courses that can be used for Professional Requirements:

- ENVE 3530 or CE 3530 or GSCI 3710 Engineering and Environmental Geology (S)
- CE 4610 Advanced Structural Analysis (F)
- CE 4730 Transportation Planning (F – odd)
- CE 4740 Traffic Engineering Characteristics (F – even)

Science Elective: at least one of the following must be taken:

- BIOL 1107: Principles of Biology (4 credits with lab; recommended concurrent CHEM 1127)
- GSCI 1050 / 1051: Earth and Life Through Time (4 credits with lab / 3 credits);
- PSYC 1100: General Psychology I (3 credits)
- EEB 2208: Introduction to Conservation Biology (3 credits)
- GEOG 1300: Climate, Weather and the Environment (3 credits)
- GSCI 3710: Engineering and Environmental Geology (3 credits; recommended prep GSCI 1050 or 1051)
- ENVE 4320: Ecological Engineering (3 credits; recommended prep ENVE3220 and 4210)
- NRE 3105: Wetlands Biology and Conservation (3 credits; recommended prep BIOL 1107 and 1108)
- NRE 4135: Introduction to Ground-water Hydrology (4 credits with lab; prereq MATH 1122 or 1132 and GSCI 1050 or 1051 and 1052).

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT

(Catalog of 2013-2014)

NORMAL 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) CA 1 (_____)	3
(1) **ENGL 1010** Seminar in Academic Writing **or ENGL 1011** Sem. in Writing thru Literature	4	(1)(2) CA 2 (_____)	3
TOTAL	**16**	**TOTAL**	**17**

SECOND YEAR - First Semester		**Second Semester**	
PHYS 1501Q Physics for Engineers I	4	**PHYS 1502Q** Physics for Engineers II	4
MATH 2110Q Multivariable Calculus	4	**MATH 2410Q** Elem. Differential Equations	3
CE 2110 Applied Mechanics I	3	**CE 3110** Mechanics of Materials	3
CE 2410 Geomatics & Spatial Meas.	4	**CE 2710** Transportation Engineering	3
PHIL 1104 Philosophy & Ethics (CA 1)	3	(2) CA 2 (_____)	3
TOTAL	**18**	**TOTAL**	**16**

THIRD YEAR - First Semester		**Second Semester**	
CE 2210 / ENVE 2330 Decision Analysis in CEE	3	**CE 3520** Civil Engineering Materials **or ENVE 3200** Environmental Engineering Lab	3
CE / ENVE 2310 Environmental Engineering Fundamentals	3	**CE 3610** Basic Structural Analysis **or ENVE 3220** Water Quality Engineering	3
CE / ENVE 3120 Fluid Mechanics	3	(3) **CE 3630** Steel Structure Design or (4) Prof. Req. (_____)	4 or 3
CE 3510 Soil Mechanics I	4	(5) Science Elective (_____)	3 or 4
(2) GenEd: CA 4 (_____)	3	(2) GenEd: CA 4 (_____)	3
TOTAL	**16**	**TOTAL**	**16(6)**

FOURTH YEAR – First Semester		**Second Semester**	
CE 4900W Civil Engineering Projects I	2	**CE 4920W** Civil Engineering Projects II	2
(4) Prof. Req. (_____)	3	**ME 2233** Thermodynamic Principles	3
Or (3) **CE 3640** Rein. Concrete Struc. Design	or 4	**Or CHEG 2111** Chem. Engr. Thermodynamics	
(4) Prof. Req. (_____)	3	(4) Prof. Req. (_____)	3
(4) Prof. Req. (_____)	3	(4) Prof. Req. (_____)	3
Elective(s) (_____)	4(6)	(4) Prof. Req. (_____)	3
TOTAL	**15(6)**	**TOTAL**	**14(6)**

NOTES:

(1) These courses may be taken either semester in the first year.

(2) 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.

(3) All students must take either CE 3630 or 3640.

(4) Professional Requirements must be chosen to include at least one course from four of the following technical areas: Construction Management (CE 4210), Environmental/Sanitary (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 4580 or 4710 or 4720). The remaining two courses may be any course in engineering, mathematics or science not already used to satisfy another requirement or MGMT 5335 at the 2000-level or higher. 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).

CIVIL ENGINEERING PROGRAM – University of Connecticut, Storrs, CT
(Catalog of 2013-2014)

PROFESSIONAL REQUIREMENTS AND SCIENCE ELECTIVE

The professional requirements are satisfied by eighteen (18) credits of 2000-level or higher courses in engineering, science or mathematics, including MGMT 5335. Following are specific restrictions on these courses:

Proficiency in 4 CE Areas (12 Credits): 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 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.

Technical Areas	**Required Courses**	**Proficiency Courses** (4 required @ 1 each from 4 Different Areas)
Construction Management	CE 2210 or ENVE 2330 Decision Analysis in CEE (F)	CE 4210 Operations Research in CEE (S)
Environmental	ENVE 2310 Environmental Engineering Fundamentals (F)	ENVE 3220* Water Quality Engineering (S) or ENVE 4310 Environmental Modeling (S)
Geotechnical	CE 3510 Soil Mechanics (F)	CE 4510 Foundation Design (S – even) or CE 4530 Geoenvironmental Engr (S – odd) or CE 4541 Soil Mechanics II (F – even)
Hydraulic / Water Resources	CE 3120 or ENVE 3120 Fluid Mechanics (F)	ENVE 4810 Engineering Hydrology (F) or ENVE 4820 Hydraulic Engineering (S)
Structural	CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)	**CE 3630 Steel Structure Design (S) or CE 3640 Reinforced Concrete Structure Design (F)
Surveying / Geodetic	CE 2410 Geomatics and Spatial Measurement (F)	CE 4410 Computer Aided Site Design (S)
Transportation	CE 2710 Transportation Engineering (S)	CE 4710 Case Studies in Transp. Engr. (F) or CE 4720 Highway Engr. – Design (S – odd) or CE 4750 Pavement Design (F – even)

*ENVE 3220 is permitted for Professional Requirements only if CE 3610 was also taken.
**To meet proficiency in the Structural area, the second of the two courses must be taken.

Restrictions on the Remaining Six (6) Credits of Courses:

- CE 3520 Civil Engineering Materials (S) or ENVE 3200 Environmental Engineering Laboratory (S) may be used only if the other was taken for the laboratory requirement
- CE 3610 Basic Structural Analysis (S) or ENVE 3220 Water Quality Engineering (S) may be used only if the other was taken to meet CE requirements

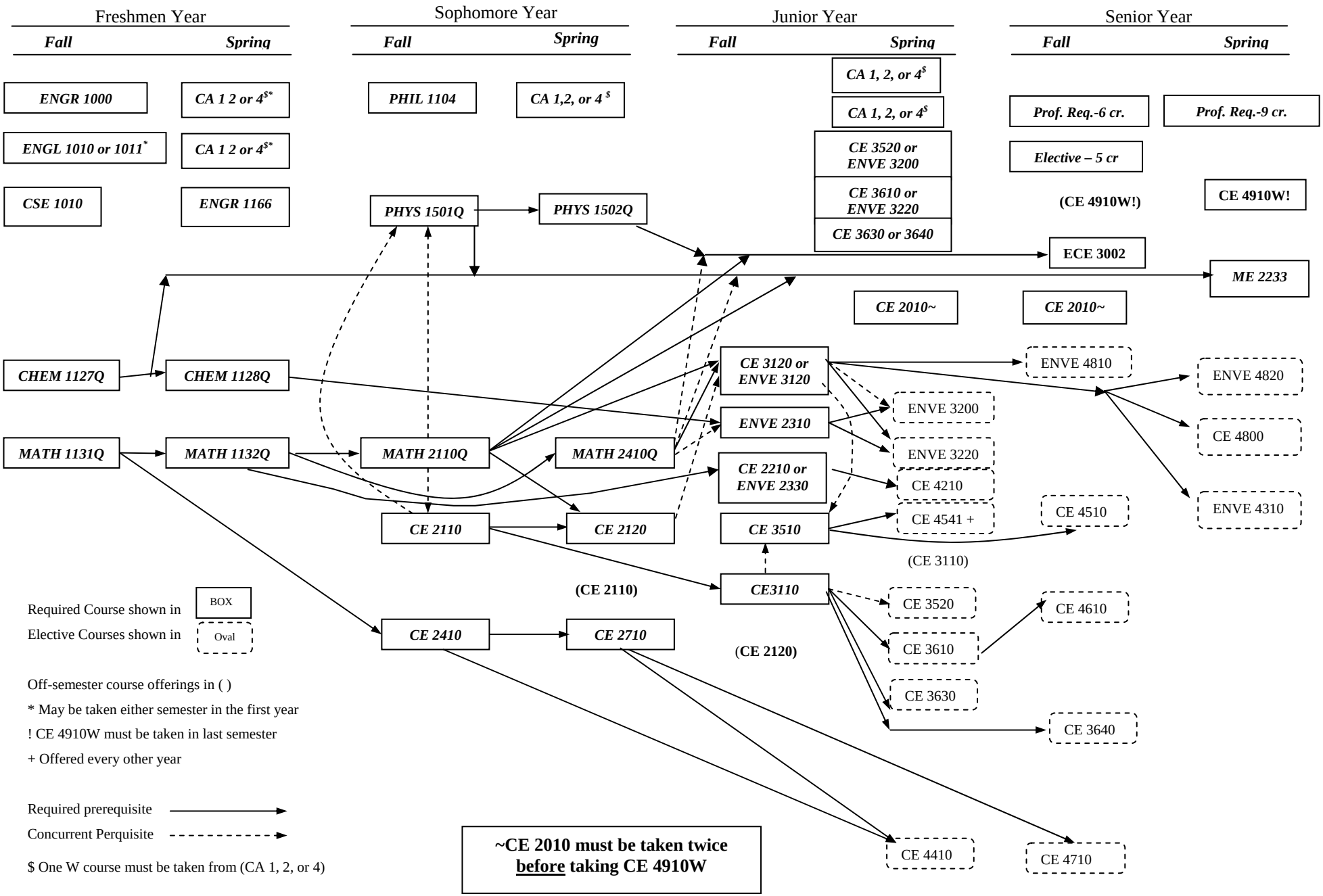
Additional CE Courses that can be used for Professional Requirements:

- ENVE 3530 or CE 3530 or GSCI 3710 Engineering and Environmental Geology (S - odd)
- CE 4610 Advanced Structural Analysis (F)
- CE 4730 Transportation Planning (F – odd)
- CE 4740 Traffic Engineering Characteristics (F – even)

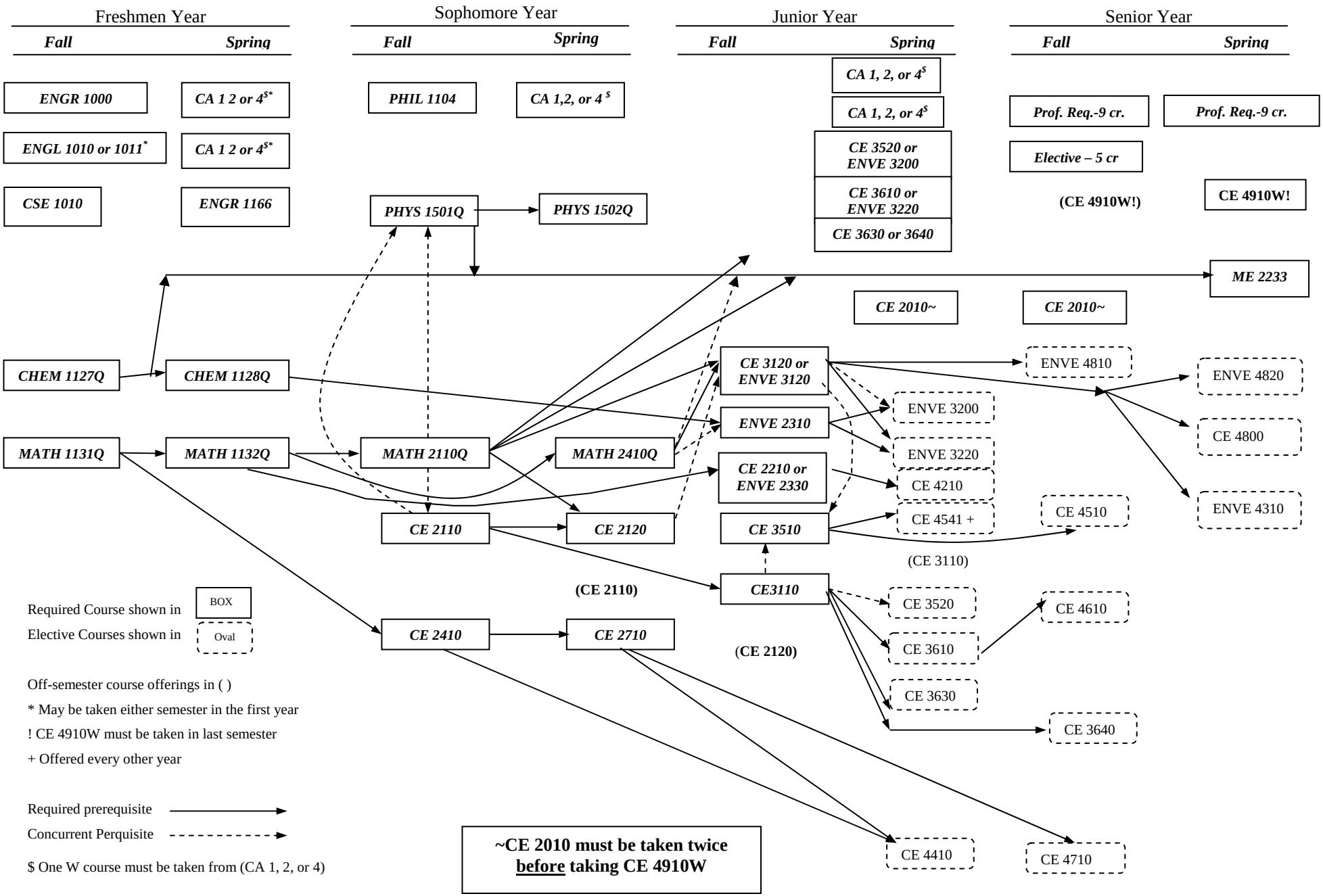
Science Elective: at least one of the following (or an approved substitution) must be taken:

- BIOL 1107: Principles of Biology (4 credits with lab; recommended concurrent CHEM 1127)
- GSCI 1050 / 1051: Earth and Life Through Time (4 credits with lab / 3 credits);
- EEB 2208: Introduction to Conservation Biology (3 credits)
- GEOG 1300: Climate, Weather and the Environment (3 credits)
- GSCI 3710: Engineering and Environmental Geology (3 credits; recommended prep GSCI 1050 or 1051)
- ENVE 4320: Ecological Engineering (3 credits; recommended prep ENVE3220 and 4210)
- NRE 3105: Wetlands Biology and Conservation (3 credits; recommended prep BIOL 1107 and 1108)
- NRE 4135: Introduction to Ground-water Hydrology (4 credits with lab; prereq MATH 1122 or 1132 and GSCI 1050 or 1051 and 1052).

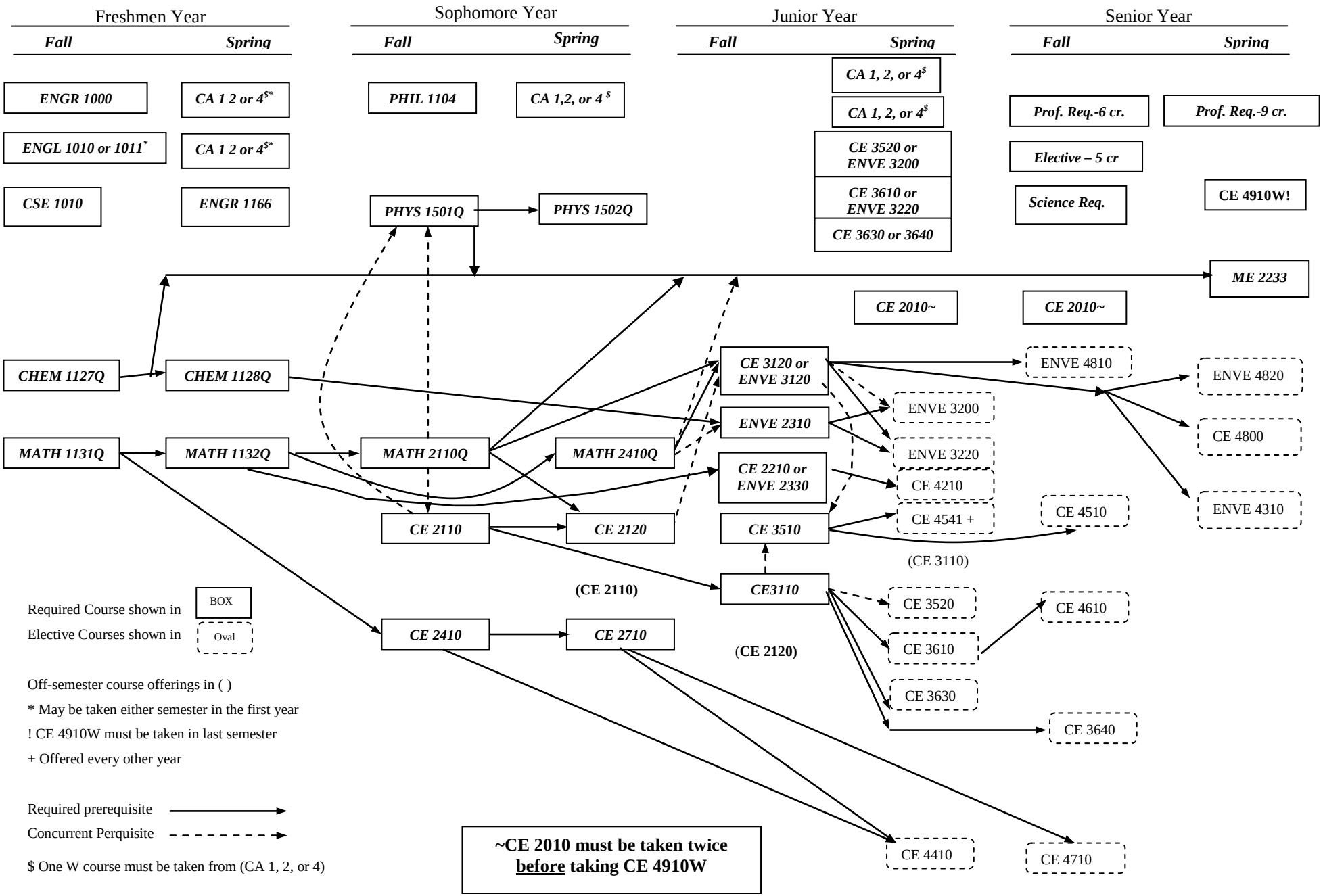
CEE Course Sequence with Prerequisites (Catalog of 2009-2010)



CEE Course Sequence with Prerequisites (catalog of 2011-2012)



CE Course Sequence with Prerequisites (catalog of 2012-2013)



CE Course Sequence with Prerequisites (catalog of 2013-2014)