

# ***Computer Engineering Requirements and Sample Schedule***

(from the 2009-2010 Union College Academic Register)

**Requirements for the Major:** a total of 40 courses including the following:

- Math and Science: (Math 113\*, 115, Physics 120, 121) or (IMP 111, 112, 113); Math 130, (Math 197 or 199); one math elective from (Math 117\*\*, 127, 138, 221, 235, or 340); one science elective numbered 100 or higher (Chemistry 101, Physics 122, or Physics 123 are recommended);  
\* Other calculus sequences are possible depending upon a student's background.  
\*\* Math 117 may be taken only by students who did not take IMP 113.
- Engineering Science: ESc 100;
- Computer Engineering Core: ECE 118, 225, 240, 241, 248, 351; one from (CSc 103-109), CSc 150, 250, 260, 270, (333 or 335); ECE/CSc 318, (336 or 337), 352;
- Computer Engineering Electives: 3 additional CSc or ECE courses numbered 300 or higher. Students may also enroll in graduate engineering courses offered through Union Graduate College. Please see the Union Graduate College catalog for course descriptions and joint degree program options.
- Capstone Design: ECE 497 (1/2), 498 (1/2), 499.
- Electives and General Education: 10 courses should be chosen in consultation with the student's advisor to enhance one or more of the program objectives and meet remaining general education requirements.

**Requirements for the Minor:** The following six courses — ECE 118, 225; one from (CSc 103-109), CSc 150; one from (ECE/CSc 318, 352) and one other from (ECE/CSc 318, 336, 337, 352, CSc 250, 270).

**Requirements for Honors in Computer Engineering:** In addition to meeting all of the general college requirements for honors, candidates for honors in computer engineering must present their senior project at the Steinmetz Symposium.

**Sample schedule starting with Math 113:** Students with different math backgrounds will have slightly different math sequences. ECE and CSC courses should be taken in the indicated terms to meet program prerequisites.

## **First Year**

Fall: Elective\*, Esc100, MTH 113

Winter: Elective\*, MTH 115, PHY 120, CSc 103-109\*\*

Spring: Elective\*, MTH 130, PHY 121,

## **Second Year**

Fall: ECE 118, ECE 225, Math 197 or 199\*\*

Winter: Elective\*, CSc 150, ECE 240, Science elective

Spring: Elective\*, CSc 250, ECE 241

## **Third Year**

Fall: Term abroad option\*\*\* or Electives\*

Winter: CSc 260, CSc 270, ECE/CSc 318

Spring: ECE/CSc 352, Elective, CSc 335, ECE 497 (1/2)

## **Fourth Year**

Fall: Elective\*, ECE 351, ECE/CSc 336 or 337, ECE 498 (1/2)

Winter: ECE or CSc elective, ECE or CSc elective, ECE 499

Spring: Elective\*, ECE or CSc elective, ECE248, Math elective

\* Electives should be chosen to enhance one or more of the program objectives and meet remaining general education requirements. Students should work with their academic advisor to develop an appropriate plan of study.

\*\* One course from CSc 103-109 and either Math 197 or 199 should be taken **before** the winter term of the second year.

\*\*\* The fall term of the third year is the recommended term for going on a full term abroad.