



Department of Computer Science and Engineering  
College of Engineering and Computer Science

**Computer Science Computational Science Concentration and Elective Options**

**Program Requirements:**

**Part C(on Checksheet). Required Laboratory Science Sequence (12-16 hours)**

Select one of the following three quarter laboratory science sequences:

CHM 121,122,123	15
BIO 111, 112, 115	12
PHY 240/200, 242/202, 244/204	16
GL 251/252, 253/254, 255/256	13

**Part D(on Checksheet). Computational Science Elective Courses (12-16 hours)**

Select courses from science, mathematics, computer science, or computer engineering. There must be a total of at least 28 hours in areas C and D. This total must include at least 18 hours of natural science courses. Courses must be chosen to ensure a minimum of 45 hours in mathematics or science courses.

Take additional math or science courses for engineering or science majors. **The course may be selected from any category listed below.** To continue courses in the laboratory science sequences, follow the recommendations below.

**Additional Natural Science Electives to Achieve 18 Hours Minimum**

Students who have taken PHY 240/200, 242/202, 244/204 should take one more course:

PHY 260 (4) Intro to Modern Physics or PHY 371 (3) Analytical Mechanics

Students who have taken CHM 121, 122, 123 should take one more course:

CHM 302 (4) Environmental Chemistry

Students who have taken BIO 111, 112, 115 should take two more courses:

BIO 210 (4) Molecular Biology and BIO 271(4) Intro to Bioinformatics

Students who have taken GL 251/252, and intend to complete 253/254, 255/256 should take two more courses:

GL 380 (1) Earth Materials I: Crystallography and GL 381 (4.5) Earth Materials I: Minerals and Rocks

**Computational Science Elective Courses (Select 10 hours minimum)**

CS 407	(3)	Optimization Techniques
CS 470	(4)	Systems Simulation
CEG 416	(4)	Matrix Computations
CEG 476	(4)	Computer Graphics I
CEG 477	(4)	Computer Graphics II