

Computer Science

Introductory Advising Guide 2014 - 2015

About the major:

Computer Science is all about the application of computational technology (both software and hardware) to the solution of problems in today's society. Computer Science can be used to solve problems in many different areas, including science, government, health care, research and business. For example, computer software is used to translate communications into different languages, match protein sequences, and help deliver large medical images across the world! Computer Science involves not only technology but also teamwork, critical and creative thinking, communication, and leadership.

Majors:

- Computer Science, Software Engineering
- Computer Science, Comprehensive

Minors:

- Computer Science
- Web Design & Development
- Computational Science

Essential Courses:

Completion of Math 114, CS 145 and CS 146.

Computer Science Prerequisites

- CS 145 (Introduction to Object Oriented Programming) is the first programming course for all majors offered by the Department, and CS 146 (The Big Picture in Computer Science) is a one-credit seminar course that introduces students to the major and the profession. Students majoring in Computer Science are strongly advised to take CS 145 and CS 146 concurrently.
- CS 145 is a prerequisite for CS 245 (Advanced Programming and Data Structures) which is the second course for all majors offered by the Department.

Mathematics Corequisites

- Registration in or placement beyond Math 109 (Algebra for Calculus) is a corequisite for CS 145.
- Registration in or placement beyond Math 112 (Precalculus) or 113 (Trigonometry) is a corequisite for CS 245, the second course for all majors offered by the department.

Required GE or University courses:

Computer Science majors choose a Bachelor of Art or a Bachelor of Science degree within the College of Arts and Science. The General Education requirements differ depending on the degree, so the student should consult the Catalog.

Category IA: For CS: Software Engineering or the Comprehensive Major in Computer Science, CJ 202 (Fundamentals of Speech) or Engl 305 (Technical Writing) or Engl 308 (Scientific Communication for Expert Audiences) are required if a student has not satisfied Category IA on entry to the university. Engl 305 or Engl 308 are strongly recommended.

Category IB: Satisfied by Math 114 (Calculus) (required).

Required GE or University courses continued:

Category II: For the CS: Software Engineering major, there is no change from College of Arts & Sciences requirements.

For the Comprehensive Major in Computer Science, students must complete at least 12 credits of science including: Phys 211 (General Physics I) or Phys 231 (University Physics I); and Phys 212 (General Physics 2) or Phys 232 (University Physics II); and electives from the list of approved science courses.

Approved Science Courses: Biol 110 (Ecology and Evolution), Biol 111 (Essentials of Cell Biology and Genetics), Biol 320 (Studies in Tropical Environments), Biol 326 (Economic Botany), Biol 330 (Population and Community Ecology), Biol 353 (Biotechnology), Biol 356 (Wisconsin Wildlife), Biol 392 (Horticultural Botany), Chem 103, Chem 104, Chem 115 (Chemical Principles); Geog 104 (Physical Environment), Geog 178 (Conservation of Environment), Geog 345 (Quaternary Environments), Geog 368 (Landscape Analysis: Physical), Geol 110 (Physical Geology), Geol 115 (Environmental Geology), Geol 301 (Earth Resources), Geol 303 (Rocky Mountain Field Studies), Geol 308 (Water Resources), Phys 211, Phys 212, Phys 226 (Solar System), Phys 229 (Stars/Galaxies), Phys 231, Phys 232

Category III: No change from College of Arts & Sciences requirements.

Category IV: For CS: Software Engineering there is no change from College of Arts & Sciences requirements.

For the Comprehensive Major in Computer Science, Phil 308 (Ethics in Computing and Engineering) is required in Category IVB.

CS Courses that do not Count Toward the CS Major: CS 163 (Introduction to Programming in C++), CS 170 (Computing for Sciences/Mathematics), CS 318 (Web Design), CS 319 (Web Programming), and CS 320 (Web Database Design/Implementation) do not count for credit toward the major, but are still worth university credit.

Helpful Tips:

Computer Science (CS) courses are sequential. The course sequencing and prerequisite requirements are such that all programs within the Department of Computer Science require a minimum of 2.5 years to complete, even for those students who already have a degree in some other discipline. All students, including new freshmen, transfers and second degree students, should expect to take approximately 2.5 years to complete the major.

Messages for New Majors: The Department of Computer Science provides computer labs for the exclusive use of students taking Computer Science courses. The student chapter of the ACM (SACM) and the Women in Information Technology Systems (WITS) student groups are both active organizations of Computer Science majors.

Contact information:

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For instructions about how to declare this major:
www.uwec.edu/Registrar/student/chgofmajor/index.htm

UW-Eau Claire respects individual differences. This guide complements rather than substitutes for individual advising.

An example of a 4 year plan in computer science can be found at:

www.uwec.edu/AcadAff/degreeplans/compsci.htm

