



# B.A. and B.S. Degrees in Computer Science



The Computer Science Department offers both the Bachelor of Science (B.S.) and the Bachelor of Arts (B.A.) degree in Computer Science. The B.A. degree program provides an emphasis on practical skills in problem solving that can be applied in diverse professional settings. The focus of the program is to produce well-rounded graduates with good technical and communication skills who are ready to assume employment in a variety of business and technical environments. Students in the B.A. program have an opportunity to integrate their study of computer science with a career track emphasis in fields such as high technology, business, and health information systems. The B.S. degree program is a comprehensive program that prepares students for either professional employment in the field or for further studies in graduate school. It provides a more comprehensive background in mathematics, science and underlying principles of computer science. The Computer Science Department maintains an active dialog with its industrial supporters and alumni through advisory boards and by other means in order to make sure that all of its programs remain relevant and current.

Required Computer Science Courses for B.A. Degree	Required Computer Science Courses for B.S. Degree
Algorithmic Problem Solving and Programming Laboratory Data Structures Switching Theory and Computer Organization Database Management Systems Software Engineering I Systems Programming Computer Networks and the Internet Introduction to Developing e-Business Systems Ethical and Professional Issues in Computer Science	Algorithmic Problem Solving and Programming Laboratory Introduction to Algorithms and Data Structures Advanced Data Structures and Data Abstraction Switching Theory and Computer Organization Organization of Programming Language Software Engineering I Software Engineering II Theory of Automata and Linguistics Operating Systems I Ethical and Professional Issues in Computer Science

Required Math for the B.A. Degree	Required Math for the B.S. Degree
College Algebra or Applied Math for Decision Making Discrete Mathematical Structures Elementary Statistical Methods I	College Algebra or Applied Math for Decision Making Discrete Mathematical Structures Computational Linear Algebra Calculus I Calculus II Elementary Statistical Methods I Elementary Statistical Methods II
Other Requirements for the B.A. Degree	Other Requirements for the B.S. Degree
6 s.h. of computer science electives 8 s.h. of science 12 s.h. of a foreign language Minor (e.g. Business or Health Information Systems)	15 s.h. of computer science electives 12 s.h. of science Writing for Business and Industry

**Coops/Internships:** The Department of Computer Science encourages students, starting in their freshman year, to participate in ECU's Cooperative Education/Intern program, and offers academic credit for qualifying co-op/internships in the computer science field. Using co-op and internships, students can integrate classroom study with professional experiences in the major. Opportunities include alternating semesters of full time work and full time study, part-time work while taking classes, summer work, and

**For more information contact:**

Dr. John Placer - Chair

Phone: 252-328-9680

Email: [placerj@ecu.edu](mailto:placerj@ecu.edu)