

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

COMPUTER SCIENCE



College of Science and Technology

Computer science is the study of computers and computational systems, including concepts such as algorithms, software engineering, computer architecture, data structures, operating systems, networks, artificial intelligence and image processing.

COMPUTER SCIENCE

Bachelor of Arts and Bachelor of Science

Program Choices

Students can pursue a bachelor of arts or a bachelor of science. The BA is designed for students whose major interest is the general study of computer science, which includes object-oriented programming, data structures, computer architecture, operating systems and computer theory. The BS offers more opportunities to focus on a particular application area, such as: databases, computer networks, wireless networks and security, web and mobile application development, automata, artificial intelligence, programming languages and image processing. Both programs require a very strong foundation in math and the ability to apply theoretical principles to difficult programming problems.

Courses include:

- Automata, Computability and Languages
- Web Application Development
- Client Side Web Scripting
- Mobile Application Development
- User Experience Design
- Digital Forensics
- Ethical Hacking
- Data Science
- Introduction to Artificial Intelligence
- Compiler Design
- Computer Networks and Communications
- Cooperative Education Experience in Computer Science
- Principles of Database Systems
- Wireless Networks and Security

Research Opportunities

Real-world, hands-on research means students learn the latest scientific techniques, from the necessary basics to high-tech analysis to potential scientific breakthroughs. The Department of Computer & Information Sciences is strong in data mining for spatial, temporal and distributed data and applications of these techniques to large biomedical databases.

Additionally, the department has a robust research program centered on networked computing, which includes wireless networks and mobile computing, security, resource and system management, and parallel and distributed systems. The wireless-network and mobile-computing areas focus on innovative network architecture, delay-tolerant network design and protocol design.

Career Options

Computer Science graduates are hired as system analysts, software developers and programmers by companies in healthcare, investments, insurance, computer software/hardware and scientific research as well as government agencies. Many graduates quickly move into roles such as technical lead or project manager. Some graduates work for computing consulting companies, become independent consultants or start their own technology companies.

Faculty Contacts

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