

COMPUTING AND INFORMATION SCIENCES

Mission Statement

The mission of the Department of Computer Science is to provide a high-quality, student-oriented educational experience to our undergraduate and graduate students. The department prepares students for successful computing careers by empowering them with the knowledge and skills to contribute responsibly and creatively to a complex and ever-changing world, and to continue professional development and life-long learning.

The Department of Computer Science offers a Bachelor's of Science in Computing and Information Sciences with four specializations: Computer Information Systems, Computer Science, Software Engineering and Cybersecurity.

Program Descriptions

Computer Information Systems

The Computer Information Systems (CIS) program emphasizes analytical thinking and problem solving from an applications-development perspective. This program builds strong programming skills and prepares students for successful careers in the Computer Information Systems fields.

Computer Science

The Computer Science (CS) program emphasizes analytical thinking and problem solving involving scientific applications. Concentration areas include artificial intelligence, distributed software architecture, net-centric computing, programming languages, and security.

Software Engineering

The Software Engineering (SE) program incorporates theoretical foundations of computer science with the study of principles and practices regarding the development of high-quality software systems that meet client needs. This specialization places emphasis on the development of complex, large-scale software systems, software process, and project management.

Cybersecurity

The Cybersecurity specialization focuses on the techniques, policies, operational procedures, and technologies that secure and defend the availability, integrity, authentication, confidentiality, and non-repudiation of information and information systems in local as well as large networks.

Student Learning Outcomes

Student learning outcomes for students in the Computing and Information Sciences program are listed below. Content outcomes are specific to each specialization, and all other outcomes are common to the four specializations. UWF Computing and Information Sciences graduates should be able to do the following:

Content

Specialization	Outcomes
Computer Information Systems	Identify, analyze, and employ computing concepts and methods in the design, implementation, and evaluation of information systems
Computer Science	Identify, analyze, and employ algorithmic concepts, principles, and theories in the design, implementation, and evaluation of computing systems
Software Engineering	Identify, analyze, and employ engineering concepts, principles, and theories in the design, implementation, testing, and maintenance of software systems
Cybersecurity	Identify and analyze threats and vulnerabilities in systems, and develop secure computing solutions

Critical Thinking

- Employ computing strategies to analyze and solve problems

Communication

- Create and deliver effective oral presentations and written reports with appropriate tools and technologies

Integrity/Values

- Describe ethical issues and responsibilities that relate to a computing professional

Project Management

- Employ effective project-management skills to develop computing solutions either individually or through interdisciplinary teams within a global and societal context.

Assessment of Student Learning Outcomes

Students pursuing undergraduate Computing and Information Science degrees will demonstrate skills specific to their specialization. Several upper-level courses will give you the opportunity to identify and reflect on your content, critical thinking, communication, integrity, and project management skills through the completion of assignments that meet departmental standards and integrate what you have learned. Opportunities to showcase your work will become available as your study progresses, and these include the opportunity to participate in undergraduate research projects with faculty, or to present the results of your work at university or external events.

Job Prospects for Computing and Information Sciences Graduates

Programmer
Computer scientist

Network administrator
Network programmer

Systems designer
Software engineer
Software consultant
Software systems tester
Software development project manager
Embedded systems programmer
Forensics specialist
Scientific engineer/programmer
Systems architect
Web architect
Security analyst

Applications programmer
Database administrator
Database developer
Data analyst
Application systems analyst
Business requirements analyst
Operations manager
Network manager
Project manager
Web developer
Cyber security analyst

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Sciences at UWF:***

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