

## MASTER OF SCIENCE IN COMPUTER SCIENCE

### Mission Statement

*The mission of the Department of Computer Science is to provide a high-quality, student-oriented educational experience to undergraduate and graduate students in the Northwest Florida region. The department prepares students for successful careers in computing 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.*

### Student Learning Outcomes

The Computer Science Department offers a Master of Science program in Computer Science with three specializations: Computer Science (CS), Database Systems (DS), and Software Engineering (SE). Upon successful completion of the graduate program, students will be able to do the following:

#### Content

- Describe, compare, and evaluate at an expert level one or more contemporary topics of specialization in modern computing
- Apply computing principles to a specific problem domain (e.g., medical software, high-performance computing)
- (For students who choose the CS specialization) Develop and analyze relevant algorithms and their efficient implementation in a variety of environments
- (For students who choose the DS specialization) Analyze, prepare, configure, implement, and maintain large database systems.
- (For students who choose the SE specialization) Explain and adapt to the software life cycle, including communicating with users, developing requirements, testing and deploying systems, and managing the whole of the Software Engineering process

#### Critical Thinking

- Identify and analyze alternate approaches to solving computing problems
- Implement and analyze relevant algorithms in a variety of environments

#### Communication

- Employ effective and professional technical writing skills
- Present summary of thesis or project results using appropriate technologies

#### Integrity/Values

- Identify ethical issues and responsibilities within the computing profession

## **Project Management**

- Conceive, plan, organize, and execute a significant months-long project in computing
- Collaborate with team members where appropriate and defend results and outcomes at the end of the project timeline

## **Assessment of Student Learning Outcomes**

Computer Science graduate students will acquire advanced skills and knowledge that enable them to join the computing profession or continue a path of higher education towards a doctoral degree. They will gain expertise through courses in their chosen area of specialization: Computer Science or Software Engineering. They will be assessed in a capstone experience, thesis or project, which is required at the end of their program of study. The capstone requirement allows students to demonstrate an integrative grasp of the outcomes by developing a research thesis or software system of appropriate complexity that must abide by ethical standards and make a creative contribution to the field.

## **Job Prospects for Computer Science Graduates**

Computer Scientist  
Project Manager  
Senior Programmer / Analyst  
Network Administrator  
Database Administrator  
Computing Researcher

Software Engineer  
Software Consultant  
Systems Engineer  
Requirements Engineer  
Software Quality Assurance Engineer  
Advanced Graduate Studies

*For more information on the Computer Science Master's Program at UWF, please visit:*

<http://uwf.edu/computerscience/>