

# DEPARTMENT OF COMPUTER SCIENCE



Information Technology jobs remain one of the fastest growing sectors in Louisiana, especially New Orleans. Forbes recently named New Orleans the No. 1 metro area for IT job growth. UNO's CS department is uniquely positioned as the only accredited Computer Science program in the Greater New Orleans area offering both Baccalaureate and Graduate degrees. Our graduates are recruited by industry leaders such as GE Capital, IBM, Google, and many more.

## Accreditations

*Computing Accreditation Commission of ABET*

ABET is the recognized U.S. accreditor of college and university programs in applied science, computing, engineering, and technology.



## Job Placement

The CS department has a full-time industry liaison who ensures students have access to local, regional, and national IT companies. We regularly host industry partners to highlight job offerings. We coordinate with several IT firms to offer paid internships which provide valuable workplace experience in software development before graduation. Our premier program is the GE Capital Software Engineering Apprenticeship Program (SWEAP) of which 100% of students whom have participated, are now employed as software engineers



## Student Organizations

The CS department sponsors several professional, academic, and social student organizations offering students the opportunity to get involved, develop leadership skills, and attend networking events. There are clubs specializing in robotics, web dev, and game development. The Association for Computing Machinery host multiple social events throughout the year, enabling students to interact with one another, alumni, and industry members in both formal and informal settings. STARS Alliance is a leadership program where students help grow the local tech community.

## Facilities

The CS department is actively involved in cutting-edge research

### GNOCIA

The Greater New Orleans Center for Information Assurance is nationally renowned and holds a CAE-Cyber Operations designation from the NSA, an honor that only thirteen institutions share.

### GULFSCEI

Canizaro Livingston Gulf States Center for Environmental Informatics uses computer science techniques to develop systems to better manage environmental projects

### NIL

The Narrative Intelligence Lab is a highly interdisciplinary research group that investigates how computers can more naturally interact with people.

### BMLL

Bioinformatics Machine Learning Lab computationally models protein interactions in 3d space to better predict behaviors in pursuit of curing diseases.



Association for  
Computing Machinery



STARS  
COMPUTING CORPS



igda international game  
developers association

## COMPUTER SCIENCE DEPARTMENT

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# Computer Science

## Concentrations

We offer many avenues towards a Computer Science degree, with 4 different options: the general track or the choice of specializing in 3 different concentrations



### Bioinformatics

Bioinformatics is the application of Computer Science techniques towards solving problems in biology, chemistry, and medicine. Students work hands on with professors in pursuit of scientific discovery and learn valuable research skills. Bioinformatics encompasses: Machine learning, Pattern recognition, Data mining and Molecular biology.



### Game Development

Video game development draws on all aspects of Computer Science and provides a fun, engaging, and creative path to a bachelor's degree. This concentration prepares students to design & build their own interactive visual artifacts for entertainment, training, and education. Courses include: Computer Graphics, Game Development, Mobile Applications.



### Information Assurance (IA)

IA is concerned with deeply understanding threats to computer systems, such as viruses and computer criminals, and formulating and deploying solutions to protect cyberspace. Information Assurance encompasses work in Operating Systems Internals, Cryptography, Penetration Testing, Reverse Engineering, Digital Forensics, and Social Engineering. UNO is a NSA/DHS-designated Center of Academic Excellence in Information Assurance Education (CAE), Information Assurance Research (CAE-R), and one of only 13 schools designated as a CAE in CyberOps.

## Course Offerings

- Software Design
- Data Structures
- Assembly Language
- Computer Organization
- Theory of Computation
- Analysis of Algorithms
- Databases
- Cryptography
- Web Applications
- Software Engineering
- Game Development
- Computer Networks
- Distributed Software
- Operating Systems
- System Administration
- Artificial Intelligence
- Bioinformatics
- Machine Learning
- Computer Security
- Reverse Engineering
- Computer Forensics
- Computer Graphics
- Image Processing
- Mobile Applications



## Curriculum Objective

We work closely with industry partners to ensure our curriculum reflects current demands. Students develop analytical skills and learn problem-solving techniques required to formulate their own solutions to computing problems. They train in high-level programming languages such as Java, low-level programming languages such as Assembly, and master operating systems including shell scripting and command line. They learn strategies for developing scalable, flexible, and robust software systems using an object-oriented

approach, top-down iterative design and test-driven implementation. We emphasize an application-driven philosophy of learning by doing. Students implement both server-side and client-side applications using standard communication protocols and databases. Students work in team-based environments using agile methodologies.

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ENROLLMENT SERVICES

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Privateer Enrollment Center | 105 Earl K. Long Library  
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