Career Preparation and Opportunities

Computer scientists are employed as systems and applications programmers, systems and programmer analysts, researchers, network specialists, computer system designers, and educators. Opportunities for these careers exist in business, industry, government, education, and the military. In addition, many alumni enter graduate school for further study of computer science.

The BS Science program prepares students for careers in computing and graduate school by focusing on:
- Effective oral, written, technical, and team communication;
- Ethical and professional training;
- Algorithms and data structures;
- Software development;
- Proficiency in programming and software development;
- Exposure to multiple programming languages and platforms;
- Foundations of theoretical computing;
- Hardware and operating systems;
- Teamwork productivity and effectiveness;
- Analysis and design;
- Research and preparation of technical papers.

Rowan University

Rowan University, a leading public institution located in the heart of Southern New Jersey, is ranked among the best public universities in the North by *U.S. News & World Report*.

Opportunities

For more information please contact:
computerscience@rowan.edu
856-256-4805

Rowan University
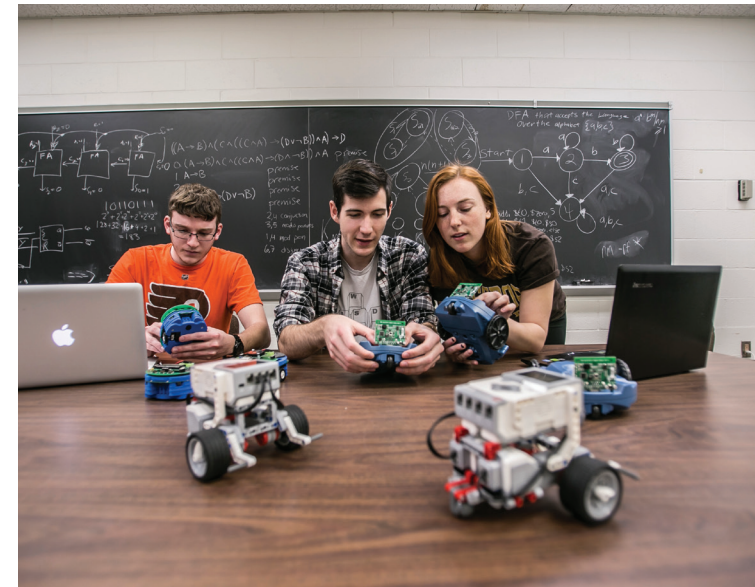
COLLEGE OF SCIENCE & MATHEMATICS

Department of Computer Science
201 Mullica Hill Road
Glassboro, NJ 08028-1701

rowan.edu/csm

Bachelor of Science

Computer Science

About the program

The B.S. in Computer Science develops flexible professionals who are equipped to learn new technologies and principles essential for success in a rapidly evolving field. Students learn how to apply advanced scientific and industrial methodologies to develop computing solutions and demonstrate these skills through presentations, written work, and projects.

The department is committed to creating a student-centered learning environment that promotes close student-faculty relationships and enhances intellectual development.

This degree has been accredited by the Computing Accreditation Commission of ABET, Inc., the recognized accreditor of college and university programs in applied science, computing, engineering, and engineering technology.

Accelerated Program

Highly motivated students have the opportunity to streamline their academic career and earn a bachelor's degree and a master's degree in five years rather than the traditional six. This "4+1" program requires 12 credits fewer to receive both degrees simultaneously, saving students both time and tuition. The B.S./M.S. program allows students to pursue either a thesis track or a non-thesis track to complete the degree requirements.

Curriculum

The curriculum consists of a set of core courses covering such areas as:
• Discrete mathematics;
• Calculus and linear algebra;
• Probability and statistics;
• Object-oriented programming;
• Data structures and algorithms;
• Computer architecture and hardware fundamentals;
• Computer science theory;
• Design and analysis of algorithms;
• Software engineering;
• Programming languages;
• Operating systems.

Specializations

For those Computer Science majors with specific areas of interests, there are concentrations offered on a wide range of topics. Those specializations include:
• Artificial intelligence;
• Cyber-security;
• Graphics and visualization;
• Mobile applications development;
• Information technology;
• Networking and operating systems;
• Programming languages and compilers;
• Software engineering.

Advanced Electives

In addition to the core pillars of computer science, students will choose from over 30 electives on a wide variety of topics including:
• Computer game development;
• Computer animation;
• Robotics;
• Artificial intelligence;
• Database systems;
• Object-oriented design;
• Data communication and networking;
• Cyber-security;
• Mobile and web development;
• Distributed systems;
• Human-computer interaction.

Research and Internship Opportunities

The faculty are actively involved in research throughout many areas of computer science including:
• Cybersecurity and cryptography;
• Computer networks;
• Compiler design;
• Software engineering;
• Artificial intelligence;
• Data mining and pattern recognition;
• Computer graphics;
• Theory of computer science;
• Simulation and visualization.

Students are encouraged to engage in hands-on research activities and industry-sponsored projects. These career-driven and faculty-supported activities include:
• Developing applications for the Federal Aviation Administration;
• Creating innovative and flexible customer loyalty programs;
• Engineering unmanned quadcopters for the Civil Air Patrol;
• Utilizing machine learning algorithms for pharmaceutical data analysis;
• Developing mobile applications for the Rowan University School of Osteopathic Medicine.