School of Engineering, Computing and Construction Management (SECCM) Labs

With the new state-of-the-art School of Engineering, Computing and Construction Management (SECCM) Labs building (opened spring 2020), our students apply classroom theory and gain hands-on experience with equipment used in today's industry. Computer Science students have access to:

- Collaborative workspaces
- Project rooms
- Design labs
- The Computer Science Software Experimentation Lab
- The CM Emerging Technologies Lab
- The Innovation Lab

BACHELOR OF SCIENCE
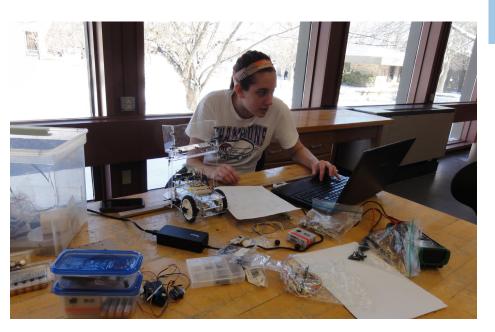# COMPUTER SCIENCE

Computer Science majors learn to understand and evaluate the organization, design, and construction of hardware and software for computing. Students pursuing a Bachelor of Science in Computer Science use their strong mathematical backgrounds and knowledge of computing to design and build systems that keep organizations functioning, and keep people healthy and safe.

STUDENT EXPERIENCE
Learn and Do More at RWU

With a focus on experiential learning at RWU, Computer Science majors can:

- Build and execute code to design games, write a web or phone app, and make machines think for themselves.
- Learn how to diagnose problems and fix code to resolve issues.
- Work with outside clients to establish project requirements, and meet deadlines and expectations. Working with clients teaches our students how to communicate with non-technical professionals to achieve results.

- + Are you a tech wiz with computers and able to fix technical problems when they arise?
- + Have you ever wondered how computer games or apps on your phone are built?
- + Do you have a particular interest within the Computer Science field such as artificial intelligence or human-computer interaction?

CAREER OUTLOOK

RWU **Computer Science** alumni are working as:

- Systems Programmers
- DevOps Engineers
- Software Engineers
- Computer Engineers

ALUMNI SPOTLIGHT

Everything I've learned - from all the techniques and programming languages - applied heavily [during my internship with the Navy.]

Jake Souza '19
Software engineer at
Naval Undersea Warfare Center

Roger Williams University

APPLICATION DEADLINES
Early Action, November 15
Regular Decision, February 1

Apply online using the Common Application at **you.rwu.edu/apply** or www.commonapp.org
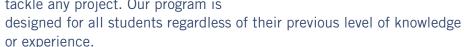
www.rwu.edu

Roger Williams University
www.rwu.edu

▼ visit **rwu.edu/go/computer-science** for program information

Faculty

As experts in the field, our faculty provide students with the knowledge they need to enter the modern industry. With small class sizes, faculty get to know their students on an academic, personal, and professional level. Students receive one-on-one advising, and guidance to find internships and jobs aligned with their career interests.

CURRICULUM

Our program allows you to tailor your education to your specific interests. Students gain a strong technical background in Computer Science, in addition to the communication and problem-solving skills they need to tackle any project. Our program is designed for all students regardless of their previous level of knowledge or experience.
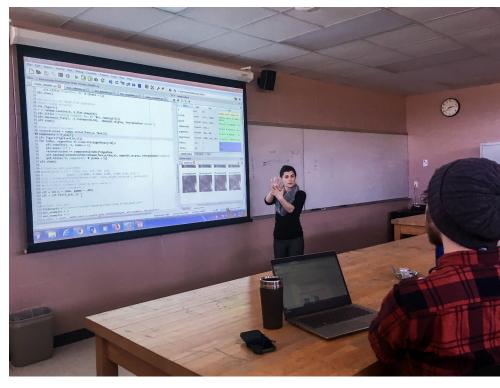
During the first two years, you will be learning the basics of Computer Science: from how a computer works, how it stores data, and the fundamental hardware parts of a computer to how a programming language is written and how to analyze algorithms.

During your senior year, you will complete a year-long design project, building a significant software system for a real client. These projects may include:

- Building a test bed for COMSC 110 for teachers to grade computer programs through an automated test program.
- A program for parking lots to determine when spaces are available.
- Creating a web-based app to take in data about preserving, repairing or tearing down buildings for the Bristol Historical Society.
- Developing an app for the Taunton State Hospital to manage therapy scheduling and attendance.

SPECIALIZATIONS

Beginning in your third year, you will have the flexibility to focus your education in a specific area by selecting a specialization. Students may choose from data science, digital systems, human-centered computing, intelligent and autonomous systems, mathematics, or can consult their faculty advisor to create a custom specialization.

Data Science Specialization

Data science looks at large and complex data and how to understand, organize, and manipulate it to create solutions that benefit organizations. This specialization is best for students who enjoy analyzing or building algorithms, and exploring large and complex data sets.

Digital System Specialization

This specialization focuses on the hardware of a computer. Students will take a close look at circuits, learn how they are designed, and understand how they interact with software in devices like cell phones.

Human-Centered Computing Specialization

Humans and computers interact on a daily basis and human-centered computing focuses on how humans adapt and organize their lives around technology. This specialization allows students to better understand how to design, develop, and implement computing systems that support human activities.

Intelligent and Autonomous Systems Specialization

Devices like Alexa, Google Home, and Siri are all adapted by learning how computer systems can make decisions and behave autonomously. This specialization allows students to learn about artificial intelligence, and how to build programs and systems to perform certain tasks.

Mathematics Specialization

Data analytics uses a combination of Computer Science, mathematics, and statistics to gain valuable knowledge from data. The application of analytics can be used in a variety of ways for any industry. This specialization is for students who wish to pursue a double major in mathematics, or those who want to pursue studies or careers in the analytical side of computing.

Custom Specialization

Students interested in more than one focus of Computer Science, or those who want as broad an educational experience as possible can work with their faculty advisor to design a custom specialization perfectly tailored to their interests.