

Richard L. Bready Applied Learning Laboratories

With our 27,000-square-foot, three-story, state-of-the-art Richard L. Bready Applied Learning Laboratories building (opened in spring 2020), our students apply classroom theory and gain hands-on experience with equipment used in today's industry.

Engineering students have access to:

- Collaborative workspaces
- Project rooms
- Innovation 'Maker Space'
- The Applied Engineering and Fabrication lab
- The Fluid Mechanics lab
- The Electrical Engineering lab
- The Mechanics of Materials lab



ENGINEERING

Engineering at RWU is unique in its structure: a broad, liberal arts-infused foundation of math, science and engineering layered with an in-depth specialization in civil, computer, electrical or mechanical engineering or a customized study. Our approach allows you to diversify your resume by studying a wide variety of engineering practices in addition to focusing on your area of interest. Through this program, accredited by the Engineering Accreditation Commission of ABET, you'll develop the creativity and flexibility employers are looking for, to solve practical problems that benefit humanity in our complex and rapidly changing world.

STUDENT EXPERIENCE

Learn and Do More at RWU

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

- Build and program a robot that can think and act on its own.
- Partner with education students to teach fourth-graders to build small-scale wind turbines through project-based courses.
- Study abroad in Ireland, Scotland or Australia, or travel to countries like the Dominican Republic and Ecuador with Engineers Without Borders to solve real-world problems and help communities in need.

You will also have the opportunity to network with industry professionals, attend national and local conferences and receive technical training through workshops via the following societies:

- Society of Women Engineers (SWE)
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- Institute of Electrical and Electronics Engineers (IEEE)



- + Did you spend countless hours playing and creating with Legos as a child?
- + Do you tinker with machines, wanting to know how they work or how you might improve them?
- + Are you passionate about coming up with creative solutions that will benefit your community?

CAREER OUTLOOK

RWU Engineering alumni are working as:

- Environmental Engineers
- Manufacturing Engineers
- Design Engineers
- Electronics Engineers
- Applications Engineers
- Site Engineers

ALUMNI SPOTLIGHT

I was able to apply to so many more jobs and internships because of the way that the Engineering program is lined up at Roger Williams. I have the vast background of electrical, environmental, and computer components. I can approach a problem with all those different mindsets.

Raquel Santos '21
Major: Engineering
Entry Level Systems Engineer at
General Dynamics - Mission Systems





Internships

With help from RWU's Center for Career and Professional Development and their faculty advisor, virtually all of our Engineering students find paid internships within their specialization field during the summer after their sophomore and junior years. These internships often lead to full-time job offers.

Faculty

Our faculty are invested in your success. As experts in the field, they teach you the skills, practices and techniques needed to succeed in the industry. Each Engineering student is assigned a faculty advisor to mentor you throughout your four years. Your faculty advisor will get to know you academically, personally and professionally. They're always available to help you work through challenging assignments, guide you through research or design projects and help you to find internships and jobs.

Research

Through research projects, Engineering students at RWU work collaboratively with faculty developing new techniques for evaluating the strength of bridges, creating new models for managing water supplies, and improving the way that lasers function.

CURRICULUM

We offer a unique course of study that blends Liberal Arts with the technical foundations of Math, Science and Engineering; we're educating the engineers of tomorrow. Our students develop the knowledge, creativity and flexibility to analyze, design and develop solutions that solve practical challenges and benefit the community around them.

During the first two years of study, you will learn fundamental engineering skills such as working within teams and using proper equipment and computer software. Every student takes calculus, physics, mechanics of materials, thermodynamics and circuit theory before choosing a specialization. With the strong emphasis on Math courses, all Engineering students graduate with a minor in Mathematics.

You will complete a year-long senior design project that provides a solution to a real-world Engineering problem. These projects are presented to outside clients, and at competitions and conferences such as the Northeast American Society of Engineering Education or Eastern Colleges Science Conference. Past projects have included:

- Pizza delivery robot
- Arthroscopic surgery suturing device
- Bike path bridge and foundation design
- Human powered vehicle competition
- Wearable blood oxygen meter
- Stormwater modeling and retention design

Our students are encouraged and supported to take the Fundamentals of Engineering exam and become an Engineer In Training (EIT), a professional designation from the National Council of Examiners for Engineering and Surveying (NCEES) and a key step toward licensure as a Professional Engineer. Our program provides courses and exam prep during your senior year.

SPECIALIZATIONS

Beginning in your third year, you will have the flexibility to tailor your education to your own Engineering interests by selecting a specialization. Students may choose from civil, computer, electrical, environmental, or mechanical, or can consult their faculty advisor to create a custom specialization.

Civil Specialization

From the roads, highways and bridges we drive on to the clean water we drink and the buildings we see in the skyline, Civil Engineering is found everywhere. Civil engineers work to design, build and maintain the infrastructure that makes modern life possible.

Computer Specialization

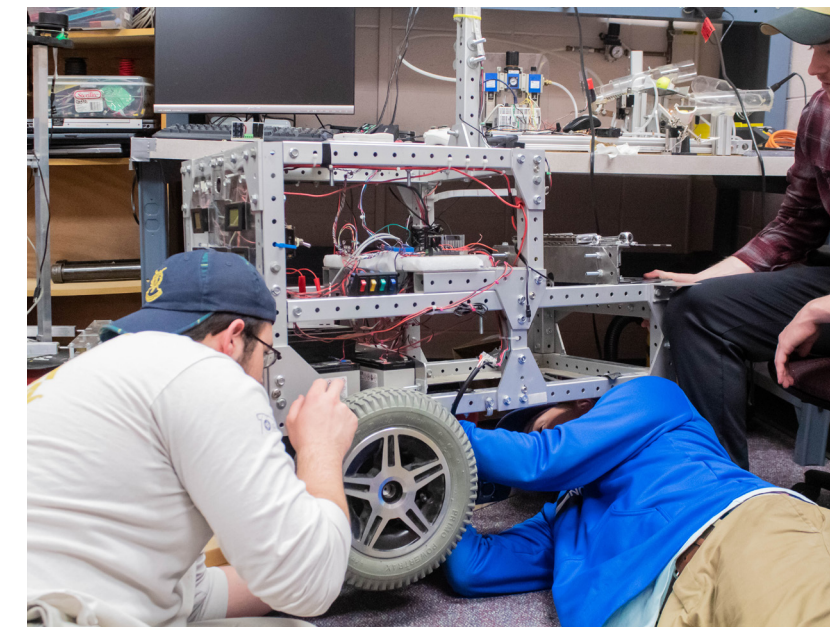
The rapid advances in today's computer technology are largely the result of the research, development and design efforts of computer engineers. Computer engineers work with everything from computer hardware like computer chips, circuit boards, microprocessors, and routers to other computer-related equipment such as keyboards and printers.

Electrical Specialization

In a world where technology is constantly growing and evolving, Electrical Engineering is becoming more essential. Lighting and wiring in building, electric motors for automobiles, machinery controls and navigation systems are just some examples of the equipment electric engineers develop.

Environmental Specialization

Passionate about public health, climate change and sustainability, environmental engineers develop solutions to local, national and global environmental issues. Environmental engineers work on solutions to water and air pollution, design water supply and wastewater treatment systems, and study the effects that acid rain, global warming, and automobile emission have on our everyday lives.



Mechanical Specialization

The work of mechanical engineers can be found all around us. From power-producing machines like wind turbines, hydroelectric generators, and internal combustion engines to power-using machines like cars, planes, robots, and medical devices, mechanical engineers are constantly designing and developing life-changing mechanisms.

Custom Specialization

Students interested in more than one type of Engineering, or those who want to prepare for an emerging field not defined by a traditional specialization, can work with their faculty advisor to design a custom specialization perfectly tailored to their interests.