

# CHEMISTRY

Chemistry is the study of matter – what it's made of and how it behaves, down to the molecular level. Chemists use math, theory and experimentation to create chemical compounds and invent applications for their use in our lives.

## STUDENT EXPERIENCE

### Learn and Do More at RWU

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

- Work on original research or in collaboration with faculty who are experts in their fields. Our undergraduate Chemistry majors conduct graduate-level research and can receive credit for their research experience working in a laboratory.
- Use sophisticated lab instrumentation and running experiments on their own including working on instruments such as Nuclear Magnetic Resonance (NMR), Inductively Coupled Plasma (ICP), Gas Chromatography-Mass Spectrometry (GC-MS), and High Performance Liquid Chromatography (HPLC).
- Present research at the national meeting of the American Chemical Society, National Aeronautics and Space Administration R.I. Space Grant, National Science Foundation C-AIM, and many local symposiums. These conferences help students see how their work contributes to society and provide time for networking, often leading to a job opportunity or invitation to apply to a graduate program.



- + Ever curious about how soap works to clean?
- + Ever read a food label and wonder how the nutrition facts are determined, or why some ingredients are added?
- + Did you ever think about how gasoline is converted to exhaust by your car?

## CAREER OUTLOOK

RWU Chemistry alumni are:

- Enrolled in doctoral programs in various areas of Chemistry, including materials science, inorganic, organic and biochemistry
- Working as physician assistants and nurses
- Enrolled in medical, veterinary and pharmacy schools
- Working in the pharmaceutical industry
- Working in the biotech industry in university, corporate, and start-up settings

## ALUMNI SPOTLIGHT

👏 Roger Williams allowed me the freedom to customize my experience. I had multiple majors, research opportunities, and was lucky enough to study abroad, all in my four years at RWU. All I had to do was ask, and I received the support I needed to make it work. In the end, I had developed a diverse set of skills that prepared me for my next steps, as a scientist and as a well-rounded individual. 🗨️

Lauren Salerno '12  
Senior Associate, Process Development, Amgen

## CURRICULUM

### Two Degree Options

The School of Social and Natural Sciences offers the choice of a Bachelor of Science (B.S.) degree or Bachelor of Arts (B.A.) degree in Chemistry.

- Both programs provide the laboratory, critical thinking and research skills to succeed in graduate school, medical school or a career in Chemistry. Students can collaborate with faculty on research as early as their first year, presenting their research at Chemistry meetings across the U.S.
- The B.S. program is certified by the American Chemical Society and provides a deep and comprehensive curriculum in Chemistry, including organic, inorganic, quantum, analytical, chemical thermodynamics and biochemistry. It also includes breadth into calculus and physics.
- Students in the B.A. program take the same foundational courses in Chemistry and work on research, while choosing from an array of electives in the sciences and liberal arts. The curriculum is designed so that students can easily add a second major or study abroad.
- Each course is paired with a lab, connecting the lesson from textbooks to hands-on experiments. Students apply the concepts from the lecture into a visual transformation of what's happening in the flask.

### Research Projects

Students spend hundreds of hours conducting research in a lab setting. These are just some of their research areas:

- Developing a chemical testing method to combat cyanide fishing.
- Conducting reactions to synthesize small molecules for biological testing.
- Analyzing the degradation rate of halo-carbons into the atmosphere.
- Creating novel chemosensors for environmental monitoring.

### Get a Great Internship

As a Chemistry major, you'll gain real-world experience through an internship, which often leads to full-time employment. Our students have interned at:

- R.I. Department of Environmental Management
- Pfizer, Inc.
- Genzyme
- Woods Hole Oceanographic
- New England Aquarium
- Cambridge Isotope Laboratories

### Earn a Pharm.D. in 7 Years

Instead of taking eight years to get a Pharm.D., the 3+4 Biology-Pharm.D. dual degree program enables students to earn a B.S. in biology at RWU and a Pharm.D. from the Albany College of Pharmacy and Health Sciences in only seven years.

**OVER 80% OF  
RWU STUDENTS  
GRADUATE WITH  
MORE THAN JUST  
A SINGLE MAJOR**

RWU students have paired **Chemistry** with:

- Biology
- Marine Biology
- Applied Mathematics
- Environmental Science
- Economics
- Engineering
- Psychology