

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. Chemistry Majors develop the laboratory, critical thinking, and research skills to succeed in graduate school, medical school, or a career in chemistry.

STUDENT EXPERIENCE

Learn and Do More at RWU

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

- Work on original research or in collaboration with faculty who are experts in their fields. Our undergraduate Chemistry majors conduct graduate-level laboratory research and receive credit for their research experience.
- Use sophisticated lab instrumentation and run experiments on their own, including working with 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 understand how their work contributes to society and provide opportunity for networking, often leading to a job offer or invitation to apply to a graduate program.



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

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

“With so much of the education at RWU, you're put into positions that take you outside of your comfort zone – not knowing what challenges may arise and having to make decisions on your feet, and that's excellent preparation for real-world experiences. Roger gave me the foundation to move on to grad school and to this fellowship.”

ELIZABETH LeMASTERS '10
Microbiology, Quality and Compliance specialist at Centers for Disease Control and Prevention Public Health Laboratories, Atlanta, Ga.
Major: Chemistry

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 intern at organizations including::

- 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**

Design your experience with your passion and have a unique career advantage with a minor or double major. Many students combine **Chemistry** with:

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

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