

# Bachelors in Chemistry

0918



## WHAT DO STUDENTS LEARN?

Chemists and material scientists study and analyze the basic materials of matter. To some degree, all science relies on chemistry. At Chatham, you will become familiar with many advanced pieces of equipment used for chemical analysis. You will also learn how to use computers to analyze chemical data and to create models of drug interaction. Beyond the lab, you will develop your written and oral communication skills, critical thinking, and information literacy.

## WHAT DO GRADUATES GO ON TO DO?

After completing your BS in Chemistry, you'll be well equipped to face the challenges of graduate school including professional study in health-related programs; chemical or pharmaceutical research and development for the government or for industry; or other possibilities. The US Bureau of Labor Statistics reports good job growth in this field, both nationally and for the mid-Atlantic region. With a BA in Chemistry, you'll have the flexibility to earn your teaching certification for secondary education.

The intimate classroom settings will help you build close bonds with your professors and fellow students. Many students who begin individual projects in their first year continue to work with the same faculty members throughout their time here. You will be required to complete a sequence of courses and a capstone seminar. This seminar does two things: It integrates the knowledge that you've accumulated, and it allows you to channel that knowledge into a discipline-specific project under close faculty guidance.



## PROGRAM HIGHLIGHTS

- The Science Complex is Chatham's 10,000 square-foot laboratory building, which features a three-story glass atrium and a modern greenhouse in addition to individual, specialized research spaces, laboratories and classrooms,-a range of modern analytical equipment including cell and tissue culture facilities, spectrometers (nuclear magnetic resonance, UV-VIS, IR, etc.), and one of the few drift tube mass spectrometers in the country.
- Students have opportunities to conduct research with peers and faculty, and have published and presented at conferences.
- Students receiving B.S. degrees in chemistry are able to have their degrees certified as meeting the rigorous standards of the American Chemical Society. Fewer than 700 of the 5,000 American colleges and universities have achieved this privilege.
- You can apply for Research Experiences for Undergraduates (REU) positions, sponsored by the National Science Foundation or others. This program allows undergraduate students to participate in active research projects during the summer before their junior or senior year.
- You can also leverage Pittsburgh's tight-knit academic and medical community through connections our faculty has around the region.
- Chatham has a robust Pre-Med Advising program to support and mentor students interested in applying to medical-related graduate programs.

## SAMPLE COURSES

### Chemical Analysis Laboratory

This laboratory teaches the proper design, implementation and analysis of modern techniques in instrumental chemistry, encompassing spectroscopy, electrochemistry, and separation science. In addition, several inorganic compounds are synthesized and characterized. Student-originated research projects are used extensively throughout this course.

### Environmental Chemistry

This course is an advanced study of the chemical principles underlying common environmental problems. It aims to deepen the student's knowledge of chemistry and its role in the environment and shows the power of chemistry as a tool to help us comprehend the changing world around us.

### Computational Drug Design

Study of computational techniques of importance in contemporary drug design. Topics include molecular docking, ligand binding free energy calculations, de novo drug design, pharmacophore elucidation, quantitative structure-activity relations, and combinatorial library design.

► [www.chatham.edu/chemistry/curriculum.cfm](http://www.chatham.edu/chemistry/curriculum.cfm)

## AFTER GRADUATION

Graduate schools to which students have been accepted:

- University of Colorado
- University of Virginia
- University of Pittsburgh
- University of Washington

Places of employment:

- Apex Systems
- Mylan
- RJ Lee Group
- Informa Pharma
- EMSL Analytical, Inc.

## FUNDING

Through Chatham's Summer Undergraduate Research Program, you can apply to participate in 10-week summer work-study programs to gain more laboratory experience prior to your senior year.

## ACCREDITATION

The Chatham Chemistry program is accredited by the American Chemical Society (ACS), a sought-after designation that identifies high-quality academic programs across the nation. This means that Chatham students can receive ACS Certified Degrees in Chemistry and in Biochemistry.

