

CHEMISTRY

Mission Statement

The mission of the Chemistry Department is to offer outstanding programs and coursework for students in chemistry and other disciplines, by providing individualized instruction, hands-on laboratory experience, and research opportunities. The faculty is committed to quality teaching, research and service; cooperation with other departments in undergraduate and graduate interdisciplinary programs; collaboration with local industry; and the support of science education.

Student Learning Outcomes

UWF Chemistry graduates should be able to do the following:

Content

- Recognize, describe, and apply the concepts and principles from the following areas in chemistry: Analytical Chemistry, Biological Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, and related fields (e.g. mathematics and physics)
- Demonstrate competence in practical aspects of chemistry, including
 - Laboratory skills
 - Selection and proper use of modern instruments
 - Proper calibration practices, and
 - Computer-based data acquisition
- Use chemical terminology accurately

Critical Thinking

- Solve problems using scientific methods
 - Identify relevant factors to define problem
 - Develop and evaluate methods
 - Employ appropriate statistical analysis and instrumentation
 - Draw reasonable conclusions
- Use chemical literature effectively and efficiently
 - Demonstrate basic techniques in on-line searches for specific reference/review articles
 - Complete comprehensive subject/author searches
 - Describe importance of patents and search for relevant information
 - Select resources based on quality standards and currency

Communication

- Communicate professionally about chemistry through writing in an accepted scientific format and orally in a public venue
- Read the chemical literature with comprehension

Integrity/Values

- Identify principles in the American Chemical Society Ethics Code
- Recognize ethical components in complex situations
- Analyze complex ethical situation and design solutions appropriate to professional standards
- Articulate the responsibilities of a chemist to society

Project Management

- Design and execute projects reasonably for available time constraints
- Develop back-up planning skills
- Collaborate effectively with team members

Hazard/Risk Management

- Demonstrate vigilance about safety
- Adopt measures to minimize exposure or reduce risk
- Handle hazardous materials safely
- Follow correct procedures for the disposal of hazardous waste

Assessment of Student Learning Outcomes

Throughout the undergraduate chemistry program, you will have the opportunity to demonstrate what you have learned not just in traditional examinations but through the varied and interesting activities related to the production of research. The department emphasizes effectiveness as a member of a scientific team. Advanced research courses provide a perfect showcase for you to synthesize your knowledge and skills from across the curriculum.

Job Prospects for Chemistry Graduates

Chemists work in all kinds of contexts. Some occupations require additional education in graduate school, but many careers are possible on completing undergraduate work.

Research Chemist	Industrial Chemist	University Professor
High School Teacher	Physician	Dentist
Veterinarian	Physician's Assistant	Environmental Scientist
Chemical Oceanographer	Forensic Scientist	Crime Laboratory Technician
Pharmacist	Pharmaceutical Sales	Chemical Engineer
Environmental Engineer	Scientific Instrument Sales	Portfolio Manager
Environmental Health and Safety Officer		

Find out more about Chemistry at UWF:

<http://uwf.edu/chemistry>

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College of Arts and Sciences