

DEPARTMENT OF CHEMISTRY

CHEMISTRY.MINES.EDU



PROGRAM SCOPE

The Department of Chemistry offers an outstanding educational environment for undergraduate students. Our chemistry major gives students hands on experiences in their classes, access to world-class laboratory facilities, opportunities to participate firsthand in innovative research and preparation for careers in chemistry, medicine, energy, environmental work and beyond.



AREAS OF STUDY

The undergraduate chemistry major grounds students in the fundamentals of modern chemistry, provides hands-on experience with contemporary instrumentation in the field and involves students in research. The core coursework introduces the disciplines of organic, analytical, inorganic, biological and physical chemistry, supported by a variety of practical experimental experiences in the laboratory.

DEGREE TRACKS

- ✓ Chemistry ✓ Biochemistry ✓ Environmental Chemistry

AMERICAN CHEMICAL SOCIETY

With more than 150,000 members, the American Chemical Society is the largest professional society in the world. The American Chemical Society Student Chapter at Mines brings students interested in chemistry and its value in society together. By bringing in chemists to speak about their research, helping perform outreach for the university and community and engaging students in a social setting outside of the classroom, the chapter brings the undergraduate chemistry experience to life.



CAREER OPPORTUNITIES

Professional chemists apply their knowledge in areas ranging from environmental processes to medical professions to the development of new materials for renewable energy initiatives.

Starting salaries are up to \$75K for a BS chemistry degree, with highest salaries determined by the specific field and/or geographic location. Many of our chemistry majors attend graduate or professional school, which greatly increases earning potential.

POTENTIAL JOB TITLES

- Agricultural or Food Scientist
- Biochemist or Biophysicist
- Chemical Engineer
- Chemist
- Chief Technical, Program Managers and/or Operating Officer
- College Professor or High School Teacher
- Entrepreneur
- Environmental Scientist
- Geoscientist
- Materials Engineer
- Medical Doctors, Dentists, Veterinarians

AT LEAST HALF OF MINES CHEMISTRY FACULTY PARTICIPATE IN RESEARCH ACTIVITIES WITH NATIONAL LABORATORIES.

100% PLACEMENT OUTCOMES WITHIN THREE MONTHS OF GRADUATION*

LEARNING & RESEARCH AREAS



At Mines, your career-building experiences start on day one, with peer group activities in the classroom and hands-on laboratory experiments. Each class is taught by a PhD chemist with years of experience in both chemistry research and in teaching students of all interests.

We offer the opportunity for sustained, in-depth undergraduate research with faculty invested in your future. Undergraduate research offers insights into career possibilities by exposing you to topics and concepts not covered in the classroom.

CHEMISTRY RESEARCH AREAS OF FOCUS

- Reducing nuclear waste by recycling nuclear fuel
- Improving battery and fuel cell properties through development of novel materials
- Developing new nanoscale catalysts for energy utilization and environmental contaminant mitigation
- Measuring pollutants in the environment and assessing their biological effects
- Genetically engineering algal microorganisms for targeted biomolecule production
- Quantifying the affect of (bio) geochemistry on naturally-occurring processes and the environmental response to human-induced changes to air, water and soil
- Advancing analytical techniques for bacterial identification and separations
- Developing new materials for gas storage, focusing on hydrogen and carbon dioxide
- Designing new materials for drug delivery, biological imaging and isotope detection

