



CHEMISTRY

Academics

As a chemistry major you will gain a broad knowledge in the six major areas of chemistry: chemical education, organic, inorganic, physical, analytical and biochemistry.

Your core curriculum includes fundamental courses in chemistry, math and physics. Beyond that, dive deep and explore your particular interests while you discover the process for scientific inquiry, become proficient in modern laboratory procedures, understand the practical and ethical applications of chemical principles in society, and take part in cutting-edge research projects.

Beyond the core requirements, dive deep into one of two options to match your interests:

- *Professional*
- *Chemical Biology*

Opportunities

A major in chemistry opens the door to many careers. Some may be obvious, including pharmaceutical development, chemical research and manufacturing, analysis, and science education. Environmental science, medicine, pharmacy, forensics, plant science, and law are not as obvious. Here are examples of recent graduates' employment:

- Associate Scientist I / *TEVA PHARMACEUTICAL*
- Chemical Analyst / *PURAC AMERICA*
- Chemical Contractor / *ZOETIS*
- Chemistry Lab Technician / *ARKANSAS STATE UNIVERSITY*
- Civilian Scientist / *UNITED STATES NAVY*
- Laboratory Technician / *ENTHONE*
- Principle Scientist 1 / *NOVARTIS*
- Product Associate / *LI-COR BIOSCIENCES*
- Scientist / *CELERION*
- Quality Management Chemist / *CARGILL*

Experience

In the College of Arts and Sciences, we know experience is valuable and goes beyond the classroom. We strive to help you connect your academics with research, internships, education abroad, service learning and leadership experiences. Take advantage of opportunities in chemistry such as:

- Studying abroad in Peru with The GREEN Program water resource management
- Serving as the UNL Chemistry Club president
- Interning with Novartis, a global healthcare company
- Researching the "Development of Organic Radical Contrast Agents for Magnetic Resonance Imaging of Cancer"
- Volunteering with JDRF International



CHEM—SAMPLE 4-YEAR PLAN (BS, PROFESSIONAL OPTION)*

ACE = Achievement-Centered Education CDR = College Distribution Requirements

FIRST SEMESTER

CHEM 101: Career Opportunities in Chemistry	1
CHEM 113A, 113L: Fundamental Chemistry I with Lab (ACE 4)	4
MATH 106: Calculus I (ACE 3)	5
CDR: Language	5
Total Hours	15

SECOND SEMESTER

CHEM 114: Fundamental Chemistry II	3
CHEM 221A, 221L: Elementary Quantitative Analysis with Lab	5
MATH 107: Calculus II	4
CDR: Language	5
Total Hours	17

THIRD SEMESTER

CHEM 261, 263: Organic Chemistry with Lab (CDR)	5
PHYS 211: General Physics I	4
MATH 208: Calculus III or MATH 221: Differential Equations	4
CDR: Language	3
Total Hours	16

FOURTH SEMESTER

CHEM 262, 264: Organic Chemistry II with Lab	5
PHYS 212: General Physics II	4
Written Texts / Research & Knowledge Skills (ACE 1)	3
CDR: Language	3
Total Hours	15

FIFTH SEMESTER

CHEM 481: Physical Chemistry I	4
CHEM 398: Undergraduate Research in Chemistry	1
Humanities (ACE 5)	3
Social Sciences (ACE 6)	3
CDR: Written Communication	3
Total Hours	14

SIXTH SEMESTER

CHEM 482: Physical Chemistry II	4
CHEM 484: Physical Chemical Measurements	3
CDR: Human Diversity in U.S. Communities	3
Global Awareness & Human Diversity (ACE 9)	3
Total Hours	13

SEVENTH SEMESTER

CHEM 398: Undergraduate Research in Chemistry	1
Ethics / Civics / Stewardship (ACE 8)	3
Biochem / ChemBio Sequence Courses	5
Communication Skills (ACE 2)	3
Elective / Minor / Secondary Major / Science / Pre-Professional	4
Total Hours	16

EIGHTH SEMESTER

Fine Arts (ACE 7)	3
Chemistry Capstone	5
CDR: Social Science	3
Elective / Minor / Secondary Major / Science / Pre-Professional	3
Total Hours	14

*DISCLAIMER: This document represents a sample 4-year plan for degree completion with a major of interest in the College of Arts and Sciences. Actual course selection and sequence may vary and should be discussed individually with an academic advisor at the college and department level.