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.

You will also discover the process for scientific inquiry, become proficient in modern laboratory procedures, understand the practical and ethical applications of chemical principles in society, take part in cutting-edge research projects.

Your core curriculum includes fundamental courses in chemistry, math and physics as well as specialized courses such as Biomolecules and Metabolism, Gene Expression and Replication, Plant Biochemistry and The Science of Food that enable you to customize your education based on your specific interests.

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

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
- Pharmacy Intern I / METHODIST WOMEN’S HOSPITAL
- Principle Scientist 1 / NOVARTIS
- Product Associate / LI-COR BIOSCIENCES
- Quality Management Chemist / CARGILL
- Technical Services / EPIC SYSTEMS CORPORATION

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### CHEMISTRY

#### FIRST SEMESTER
- CHEM 113: Fundamental Chemistry I (ACE 4) 4
- CHEM 101: Career Opportunities in Chemistry 1
- MATH 106: Calculus I (ACE 3) 5
- ACE 1: Written Texts/Research & Knowledge Skills 3
- Language Requirement - 201 Level (CDR E) 3
- **Total Hours**: 16

#### SECOND SEMESTER
- CHEM 114: Fundamental Chemistry II 3
- CHEM 221: Elementary Quantitative Analysis 4
- MATH 107: Calculus II 4
- Language Requirement - 202 Level (CDR E) 3
- **Total Hours**: 16

#### THIRD SEMESTER
- CHEM 261: Organic Chemistry 3
- CHEM 263: Organic Chemistry Laboratory (CDR BL) 2
- PHYS 211: General Physics I 4
- MATH 208: Calculus III 4
- CDR A: Written Communication 3
- **Total Hours**: 16

#### FOURTH SEMESTER
- CHEM 262: Organic Chemistry II 3
- CHEM 264: Organic Chemistry II Laboratory 2
- PHYS 212: General Physics II 4
- ACE 2: Communication Skills 3
- Elective/Minor/Secondary Major/Science/Pre-Professional 3
- **Total Hours**: 16

#### FIFTH SEMESTER
- CHEM 481: Physical Chemistry I 4
- BIOC 431: Structure & Metabolism 3
- BIOC 433: Biochemistry Laboratory 2
- CHEM 399: Undergraduate Research in Chemistry 1
- ACE 6: Social Sciences 3
- Elective/Minor/Secondary Major/Science/Pre-Professional 1
- **Total Hours**: 16

#### SIXTH SEMESTER
- CHEM 482: Physical Chemistry II 4
- CHEM 484: Physical Chemical Measurements 3
- CHEM 399: Undergraduate Research in Chemistry 1
- ACE 5: Humanities 3
- Elective/Minor/Secondary Major/Science/Pre-Professional 3
- **Total Hours**: 16

#### SEVENTH SEMESTER
- CHEM 441: Inorganic Chemistry 3
- CHEM 443: Inorganic Chemistry Laboratory 2
- ACE 8: Ethics/Civics/Stewardship 3
- CDR C: Humanities 3
- Elective/Minor/Secondary Major/Science/Pre-Professional 3
- **Total Hours**: 16

#### EIGHTH SEMESTER
- ACE 7: Fine Arts 3
- ACE 9: Global Awareness & Human Diversity 3
- CDR D: Social Sciences 3
- Elective/Minor/Secondary Major/Science/Pre-Professional 3
- **Total Hours**: 16

**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.