

COLLEGE OF NATURAL AND SOCIAL SCIENCES

CHEMISTRY

The Periodic Table of the Elements

Legend:

- alkali metals
- alkaline metals
- other metals
- transition metals
- lanthanoids
- actinoids
- metalloids
- nonmetals
- halogens
- noble gases
- unknown elements

Notes:

- * All of the elements in this table have an official name designated by the IUPAC.
- * Elements with a 000000 are not yet named.
- * All elements are listed by their atomic number.

CHEMISTRY Bachelor of Arts

The faculty in the University of Nebraska at Kearney Department of Chemistry believe in a “hands-on” science experience. In the program students are provided with the best laboratory experience possible through access to state-of-the-art equipment and participation in active undergraduate research programs. This program models a liberal arts degree and leaves room to explore an unrelated minor or second major.

Majors will learn modern laboratory techniques from expert professors, receive hands-on training with instruments chemists use every day, and benefit from research opportunities leading to presenting and publishing results.

Personal traits needed for success in chemistry

- Eats, lives and breathes chemistry
- Asks questions
- Uses logical reasoning
- Pays attention to details
- Perseveres
- Solves problems
- Communicates well
- Enjoys math
- Knows fundamental computer skills
- Works independently and collaborates on a team

Careers in

- Chemical labs
- Chemical sales
- Organic synthesis
- Environmental monitoring

Did you know?

Student-faculty relationships are a focal point of the UNK experience.

Faculty interact on a personal basis with students as teachers, advisors, mentors and friends both inside and outside the classroom, and from your freshman year to graduation and beyond.

Student profile

When Molly O'Brien from Overland Park, Kan. shopped for colleges, UNK was on the top of her list primarily for playing collegiate volleyball, but academics was a priority too.

The eager high school senior learned UNK has flourished in the Midwest, is recognized for its ongoing research and thrives in the areas she was interested in – majoring in chemistry and minoring in biology and Spanish.

“Choosing UNK was the easy choice due to its higher level of academic success and opportunity, and having such a great department to learn from has definitely been the cherry on top.”

O'Brien says the small student-to-faculty ratio in the chemistry department has advantages. “I know every chemistry faculty member and am perfectly comfortable talking with any one of them. We are a small but close-knit group, which makes it easy to form study groups, ask questions and get help.”



MOLLY O'BRIEN

Reasons to study chemistry at UNK

- The 11 chemistry faculty members have expertise in each of the major areas of chemistry (analytical, biochemistry, inorganic, organic and physical).
- Students can establish relationships with faculty members through classes, research and projects.
- Majors are encouraged to work with a faculty member in “hands-on training” doing chemistry research.
- Learning chemistry is fun and useful in modern facilities using advanced equipment and instrumentation.

CHEMISTRY Bachelor of Arts**FOUR YEAR CLASS SCHEDULE**

The schedule is a guideline for progress toward a degree. Consult with your academic advisor.

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| <p>Semester 1 (15 credits)</p> <p>CHEM 160/160L General Chemistry MATH 115 Portal 188 (your choice) ENG 101 English Composition</p> | <p>Semester 2 (15 credits)</p> <p>CHEM 161/161L General Chemistry MATH 202 ENG 102 Writing & Research Oral Communication</p> |
| <p>Semester 3 (14 credits)</p> <p>CHEM 360/360L Organic Chemistry CHEM 269 Sophomore Seminar in Chem PHYS 275/275L General Physics I Democracy elective</p> | <p>Semester 4 (15 credits)</p> <p>CHEM 301/301L Analytical Chemistry PHYS 276/276L General Physics II Democracy elective Democracy elective</p> |
| <p>Semester 5 (10* credits)</p> <p>CHEM 480/480L Physical Chemistry General Studies Dist General Studies Dist</p> | <p>Semester 6 (7* credits)</p> <p>CHEM 351/351L Biochemistry General Studies Dist</p> |
| <p>Semester 7 (10* credits)</p> <p>CHEM electives Electives Capstone 388 (your choice)</p> | <p>Semester 8 (* credits)</p> |

*NOT SHOWN – Language requirements (6 minimum) AND minor/second major (24 minimum)

UNK Chemistry Club

Students will be exposed to:

- Different fields in chemistry
- Cutting-edge jobs as they become available
- Visits from world-renowned chemistry educators that include demonstrations
- Plenty of pizza

Research apprentice program

Many faculty in the chemistry department have continuing research projects that involve students. A small stipend is paid to freshman and sophomore chemistry majors when they first join a project.

Scholarships available

- DeeAnna Delaet Endowed Scholarship
- Donald E. Fox Scholarship
- Donald L. Liehs Scholarship Endowment
- Dr. Mary L. Morse Memorial Scholarship

F.Y.I – For your information

High school students thinking about studying chemistry in college should take courses in all science disciplines, like chemistry, physics and biology, as well as math. This will provide a foundation for their college coursework.

UNK chemistry graduates are employed as doctors, dentists, pharmacists, university professors, middle and high school science teachers, research and industrial chemists, environmental scientists, and salespeople, as well as in other science and technology fields.

**YOU CAN BE PART OF
THE UNK EXPERIENCE**

For more information, contact:

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ALUMNI PROFILE – Justin Buchanan

For Justin Buchanan, one or two majors were not enough, but three seemed like the perfect number. In 2013, Buchanan graduated from UNK with a chemistry bachelor of arts degree, two bachelor's of science in education degrees – subject endorsements in chemistry 7-12 and biology 7-12 – and a minor in biology.

After graduating, Buchanan says doors opened quickly. “I was offered a high school position teaching science, but I declined to go to graduate school.”

Buchanan wants to be a college professor. “The teachers were often good role models for the kind of professor that I want to be,” Buchanan said. Buchanan is in graduate school at the University of Nebraska–Lincoln studying biological science.