**Minor in Chemistry**

**Why study chemistry?**

At KU Chemistry, we have faculty dedicated to mentoring both undergraduate and graduate students and to helping each student achieve scientific maturity. In addition to required classroom and laboratory courses, options exist for doing research in exciting areas of mainstream chemistry, including emerging fields of microfluidics, precision medicine and sustainable catalysis.

**Undergraduate Program**

The undergraduate program in the Department of Chemistry has two primary missions. One of these is to help its majors attain a mastery of the discipline in preparation for further study in chemistry or a chemical science, or for immediate employment in chemistry. The other is to provide an opportunity for students majoring in other disciplines to acquire a basic knowledge of the fundamental areas of chemistry.

The curriculum leading to the Bachelor of Science (B.S.) degree, a rigorous program certified by the American Chemical Society, consists of a full spectrum of chemistry courses as well as supporting courses in mathematics and physics, and is designed to prepare students for a professional career in chemistry. The Bachelor of Arts (B.A.) degree program, with fewer required courses, allows students to obtain a broader knowledge of areas outside of chemistry, or to tailor their chemistry program for specific or unique objectives. We also offer a Minor in chemistry for those seeking a secondary area of study.

**Requirements for the Minor**

The minor allows students outside the department to obtain a strong, distributed background in the discipline. It is particularly useful for students anticipating careers in medicine, health professions, biological sciences, environmental sciences, chemical engineering, business, law, secondary education, or any career in which a basic understanding of the molecular sciences is helpful. A total of 23 credit hours is required, including 13 hours of upper-division work and at least 2 upper-division laboratories. Students should see a chemistry department advisor early in the junior year.

Chemistry Minor Course Requirements

Students selecting this minor must complete the following:

**Mathematics and Physics (14-21)**

Mathematics: (choose one of the following (MATH 115 & MATH 116 6-12 recommended))

- MATH 115 Calculus I
- MATH 116 and Calculus II
- MATH 125 Calculus I
- MATH 126 and Calculus II
- MATH 127 and Calculus III

Physics: (Choose one of the following (PHSX 114 & PHSX 115 8-9 recommended))

- PHSX 114 College Physics I
- PHSX 115 and College Physics II
- PHSX 211 General Physics I
- PHSX 216 and General Physics I Laboratory
- PHSX 212 and General Physics II
- PHSX 236 and General Physics II Laboratory

**Chemistry Courses (15)**

- Chemistry for the Chemical Sciences I. Satisfied by one of the following:
  - CHEM 170 Chemistry for the Chemical Sciences I
  - CHEM 130 General Chemistry I
  - CHEM 190 Foundations of Chemistry I, Honors
  - CHEM 191 Foundations of Chemistry I Laboratory, Honors
- Chemistry for the Chemical Sciences II. Satisfied by one of the following:
  - CHEM 175 Chemistry for the Chemical Sciences II
  - CHEM 135 General Chemistry II
  - CHEM 195 Foundations of Chemistry II, Honors
  - CHEM 196 Foundations of Chemistry II Laboratory, Honors
- Organic Chemistry I. Satisfied by one of the following:
  - CHEM 310 Fundamentals of Organic Chemistry
  - CHEM 330 Organic Chemistry I
  - CHEM 380 Organic Chemistry I, Honors
- Organic Chemistry Lab I. Satisfied by:
  - CHEM 331 Organic Chemistry I Laboratory

**Chemistry Required Elective Group I (10)**

Students selecting this minor must complete one of the following:

- Analytical Chemistry Lecture and Laboratory. Satisfied by:
  - CHEM 400 Analytical Chemistry
  - CHEM 401 and Analytical Chemistry Laboratory
- Biological Physical Chemistry Lecture and Laboratory. Satisfied by:
  - CHEM 520 Biological Physical Chemistry with Laboratory

**Chemistry Required Elective Group II (3-4)**

Students selecting this minor must complete one of the following:

- Biological Physical Chemistry. Satisfied by:
  - CHEM 510 Biological Physical Chemistry
- Physical Chemistry I. Satisfied by:
  - CHEM 530 Physical Chemistry I
- Systematic Inorganic Chemistry. Satisfied by:
  - CHEM 660 Systematic Inorganic Chemistry

*Students who elect to take CHEM 520 from Option Group 1 cannot take CHEM 510 or CHEM 530 from Option Group 2.

**Minor Hours & Minor GPA**

While completing all required courses, minors must also meet each of the following hour and GPA minimum standards:

- **Minor Hours**
  - Satisfied by 23-24 hours of minor courses.
- **Minor Hours in Residence**
  - Satisfied by a minimum of 9 hours of KU resident credit in the minor.
- **Minor Junior/Senior Hours**
  - Satisfied by a minimum of 13 hours from junior/senior courses (300+) in the minor.
- **Minor Junior/Senior Graduation GPA**
  - Satisfied by a minimum of 2.0 KU GPA in all departmental courses in the field of study.
study including F's and repeated courses. See the Semester/Cumulative GPA Calculator (http://clas.ku.edu/undergrad/tools/gpa).