

# Chemistry - B.A.

College of  
Arts and Sciences

The Department of Chemistry offers the Bachelor of Arts degree program for students who want flexibility in the selection of courses in other fields of science in addition to basic education in chemistry. The B.A. program is designed particularly for students planning to enter the professional health fields, teach in secondary schools, or work in such areas as technical service, patent law, or ecology.

### 120 hours (minimum)

Any student earning a Bachelor of Arts (BA) degree must complete a minimum of 39 hours at the 300+ level. These hours are generally completed by the major requirements. However, keep this hour requirement in mind as you choose your course work for the requirements in the major. Please also note that the Organic Chemistry Sequence (CHE 230/231/232/233) will count towards completion of this requirement. A complete description of College requirements for a Bachelor of Arts degree can be found on page 85 of the 2003-2004 UK Bulletin.

### University Studies Program Requirements

- I. Math (completed by Premajor Requirement)
- II. Foreign Language<sup>A</sup> (placement exam recommended) ..... 0-8
- III. Inference-Logic (completed by Premajor Requirement)
- IV. Written Communications ..... 3-6
- V. Oral Communications\* (partially completed by Major Requirement) ..... 1
- VI. Natural Sciences (completed by Premajor Requirements)
- VII. Social Sciences ..... 6
- VIII. Humanities ..... 6
- IX. Cross-Cultural (choose a Humanities course) ..... 3
- X. Electives (choose 2 Social Science courses) ..... 6

**USP hours:** ..... 25-36

### A&S College Requirements

- I. Foreign Language (placement exam recommended) ..... 0-6
- II. Disciplinary Requirements
  - a. Natural Science (completed by Major Requirements)
  - b. Social Science (completed by USP Elective Requirement)
  - c. Humanities (partially completed by USP Cross-Cultural Requirement) ..... 3
- III. Laboratory or Field Work (completed by Premajor Requirement)
- IV. Electives ..... 6

**College Requirement hours:** ..... 9-15

### Premajor Requirements

- MA 113 Calculus I
- or
- MA 132 Calculus for the Life Sciences ..... 3-4
- MA 114 Calculus II ..... 4
- CHE 105 General College Chemistry I ..... 3
- CHE 107 General College Chemistry II ..... 3
- CHE 115 General College Chemistry Laboratory ..... 3

**Premajor hours:** ..... 16-17

### Major Requirements

#### Major Core Requirements

- CHE 226 Analytical Chemistry ..... 3
- CHE 230 Organic Chemistry I ..... 3
- CHE 231 Organic Chemistry Laboratory I ..... 2
- CHE 232 Organic Chemistry II ..... 3
- CHE 233 Organic Chemistry Laboratory II ..... 2
- CHE 440G Introductory Physical Chemistry ..... 4
- CHE 441G Physical Chemistry Laboratory ..... 2
- CHE 572 Communication in Chemistry (2 semesters) ..... 2

**Major Core hours:** ..... 21

### Other Course Work Required for the Major

#### Chemistry Major Field Options

Choose 21 hours at the 300+ level with a prefix of ANA, BCH, BIO, CHE, CS, CME, GLY, MA, MI, MSE, PAT, PGY, PHA, PHR, PHY, PM, RM, or STA. At least 4 hours must be taken outside CHE. Up to 9 hours of CHE 395 are recommended for students having a minimum GPA of 3.0 in CHE courses. Other courses may be approved by the Undergraduate Program Committee. Students working towards teaching accreditation may count 6 hours taken at the 300+ level from the College of Education. A maximum of 9 hours in undergraduate research or reading courses may be counted; such courses require approval of the Undergraduate Program Committee if the courses do not carry the CHE prefix ..... 21

#### From the Physics Department

- PHY 211/213 General Physics
- or
- PHY 231/232 General University Physics and
- PHY 241/242 General University Physics Laboratory ..... 10

**Other Major hours:** ..... 31

**Total Minimum Hours Required for Degree** ..... 120

<sup>A</sup>Any language may be used to satisfy the USP and College Foreign Language requirements - German is recommended.

\*COM 199 + 2 semesters of CHE 572 satisfy the USP Oral Communications Requirement.

## Curriculum for B.A. in Chemistry

### Freshman Year

First Semester	Hours
CHE 105 General College Chemistry I	3
ENG 101 Writing I	3
MA 113 Calculus I	4
University Studies (VIII)	3
<b>Second Semester</b>	
CHE 107 General College Chemistry II	3
CHE 115 General Chemistry Laboratory	3
ENG 102 Writing II	3
MA 114 Calculus II	4
University Studies (VIII)	3

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## Sophomore Year

First Semester	Hours
CHE 230 Organic Chemistry I .....	3
CHE 231 Organic Chemistry Laboratory I .....	2
PHY 211 General Physics .....	5
University Studies (VII) .....	3
Humanities/Social Science .....	3

  

Second Semester	Hours
CHE 226 Analytical Chemistry .....	3
CHE 232 Organic Chemistry II .....	3
CHE 233 Organic Chemistry Laboratory II .....	2
PHY 213 General Physics .....	5
University Studies (VII) .....	3

## Junior Year

First Semester	Hours
CHE 440G Introductory Physical Chemistry .....	4
Foreign Language I† .....	4
COM 199 Presentational Communication Skills†† .....	1
University Studies .....	3
Major Field Option* .....	3

  

Second Semester	Hours
CHE 441G Physical Chemistry Laboratory .....	2
CHE 572 Seminar†† .....	1
Foreign Language II† .....	4
University Studies (IV or V) .....	3
Major Field Option* .....	6

## Senior Year

First Semester	Hours
Free Elective (A&S) .....	3
Foreign Language III† .....	3
Major Field Option* .....	6
University Studies (IV or V) .....	3

  

Second Semester	Hours
CHE 572 Seminar†† .....	1
Major Field Options* .....	6
Foreign Language IV† .....	3
Free Elective (A&S) .....	3

\*Major field options (21 credits) must be chosen from courses at the 300- to 500-level with the prefixes CHE, ANA, BCH, BIO, CS, CME, GLY, MA, MI, MSE, PAT, PGY, PHA, PHR, PHY, PM, RM or STA. Credit will not be given for both BCH 401G and CHE 550 or CHE 552. Other courses may be approved as Major Field Options by the Undergraduate Program Committee. Students working towards teaching accreditation may count six credits in courses taken at or above the 300-level in the College of Education. Six credits of CHE 395 are recommended for students having a minimum 3.0 GPA in chemistry courses. Oral and written reports are required from CHE 395 students during their final semester of registration in CHE 395. A maximum of nine credits in undergraduate research or reading courses may be counted; such courses require approval of the Undergraduate Program Committee if the courses do not carry the CHE prefix.

†Any foreign language sequence satisfying the College of Arts and Sciences requirement in foreign languages may be taken. German is recommended.

††COM 199 and two credits of CHE 572 satisfy the University Studies requirement for Oral Communication.