

Chemistry - B.A.

 College of
Arts and Sciences

NOTE: Courses listed in parentheses after the course title are Kentucky Community and Technical College courses that have been approved to fulfill the equivalent UK requirement.

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 pages 101-103 of the 2007-2008 UK Bulletin.

University Studies Program Requirements

- I. Math (completed by Premajor Requirement)
- II. Foreign Language[^] (placement exam recommended) 0-8
- III. Inference-Logic (completed by Premajor Requirement)
- IV. Written Communication 0-4
- 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: 21-33

Graduation Writing Requirement

After attaining sophomore status, students must complete a Graduation Writing Requirement course. See "University Writing Requirement" on page 72 of the 2007-2008 UK Bulletin.

Graduation Writing Requirement Hours: 3

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 (MA 113 or MT 175)
or
 - MA 132 Calculus for the Life Sciences (MA 132) 3-4
 - MA 114 Calculus II (MA 114 or MT 185) 4
 - CHE 105 General College Chemistry I (CHE 105) 3
 - CHE 107 General College Chemistry II (CHE 107) 3
 - CHE 111 Laboratory to Accompany General Chemistry I
(CHM 105 preferred; or CHE 115 which fulfills CHE 111 and 113) 1
 - CHE 113 Laboratory to Accompany General Chemistry II
(CHM 107 preferred; or CHE 115 which fulfills CHE 111 and 113) 2
- Premajor hours:** 16-17

Major Requirements

Major Core Requirements

- CHE 226 Analytical Chemistry (CHE 226) 3
- CHE 230 Organic Chemistry I (CHE 230) 3
- CHE 231 Organic Chemistry Laboratory I (CHE 231) 2
- CHE 232 Organic Chemistry II (CHE 232) 3
- CHE 233 Organic Chemistry Laboratory II (CHE 233) 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, CME, CS, GLY, MA, MI, MSE, PAT, PGY, PHA, PHR, PHY, PM, RM, or STA. At least 5 of these hours must be in CHE courses; 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 (PHY 211/213)
or
- PHY 231/232 General University Physics (PHY 231/232) and
PHY 241/242 General University Physics
Laboratory (PHY 241/242) 10

Other Major hours: 31

Total Minimum Hours Required for Degree 120

[^]Any language may be used to satisfy the USP and College Foreign Language requirements - German is recommended.

Chemistry (B.A.) • 2

Curriculum for B.A. in Chemistry

Freshman Year

First Semester	Hours
CHE 105 General College Chemistry I (CHE 105)	3
CHE 111 Laboratory to Accompany General Chemistry I (CHM 105 preferred; or CHE 115 which fulfills CHE 111 and 113)	1
ENG 104 Writing: An Accelerated Foundational Course	4
MA 113 Calculus I (MA 113 or MT 175)	4
University Studies	3
Second Semester	
CHE 107 General College Chemistry II (CHE 107)	3
CHE 113 Laboratory to Accompany General Chemistry II (CHM 107 preferred; or CHE 115 which fulfills CHE 111 and 113)	2
MA 114 Calculus II (MA 114 or MT 185)	4
University Studies	3
Elective	3

Sophomore Year

First Semester	Hours
CHE 230 Organic Chemistry I (CHE 230)	3
CHE 231 Organic Chemistry Laboratory I (CHE 231)	2
PHY 211 General Physics (PHY 211)	5
University Studies	3
University Studies or Second-Tier Writing Requirement	3
Second Semester	
CHE 226 Analytical Chemistry (CHE 226)	3
CHE 232 Organic Chemistry II (CHE 232)	3
CHE 233 Organic Chemistry Laboratory II (CHE 233)	2
PHY 213 General Physics (PHY 213)	5
University Studies	3

Junior Year

First Semester	Hours
CHE 440G Introductory Physical Chemistry	4
Foreign Language I†	4
University Studies	3
Major Field Option*	3
Second Semester	
CHE 441G Physical Chemistry Laboratory	2
CHE 572 Seminar	1
Foreign Language II†	4
University Studies	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	3
Second Semester	
CHE 572 Seminar	1
Major Field Options*	6
Foreign Language IV†	3
Electives	6

*Major field options (21 credits) must be chosen from courses at the 300- to 500-level with the prefixes CHE, ANA, BCH, BIO, CME, CS, 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. At least 5 of these hours must be in CHE courses; at least 4 of the 21 credits must be taken in non-CHE courses. 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.