CHEMISTRY, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences in Chemistry

Chemistry is the study of matter at the molecular level. Professional chemists

- make new compounds, like pharmaceuticals,
- develop new ways to measure chemical reactions at the limits of space and time, and
- create new theoretical frameworks to understand and predict molecular behavior.

Through classwork and hands-on laboratory learning, you'll develop the skills to tackle a variety of technical problems in environments that range from the chemical industry to aerospace. You'll also have the opportunity to join research labs and take part in internships at various companies.

When you apply, you can choose to apply to either

- Chemistry BS: Bachelor of Science in Chemistry (Specialized Curriculum), or
- Chemistry BSLAS: Bachelor of Science in Liberal Arts and Sciences Major in Chemistry.

The Chemistry BSLAS degree has fewer technical requirements than the Chemistry BS degree, which allows for more flexibility and elective hours to pursue other interests, frequently in the health sciences. This program is well-suited for majors pursuing careers in medicine, pharmacy, dentistry, government, law, business, and teaching.

Undergraduate Degree Programs in Chemistry

For the Degree of Bachelor of Science in Liberal Arts and Sciences

- Major in Computer Science & Chemistry (Sciences and Letters) (http://catalog.illinois.edu/undergraduate/eng_las/computer-science-chemistry-bslas/)
- Major in Chemistry (Sciences and Letters) (p. 1)

For the Degree of Bachelor of Science in Chemistry

- Major in Chemistry (Specialized Curriculum) (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/)
- Major in Chemistry (Specialized Curriculum), Environmental Chemistry Concentration (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/environmental-chemistry/)

for the degree of Bachelor of Science in Liberal Arts and Sciences in Chemistry

The Department of Chemistry will supply, upon request, a brochure showing recommended semester-by-semester programs for the completion of the curriculum.

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have a UIUC coursework major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75 respectively. Final decisions on awarding Distinction honors will be made by the Head or designee.

Graduation Requirements

Minimum hours required for graduation: 120 hours.

University Requirements

Minimum of 40 hours of upper-division coursework, generally at the 300- or 400-level. These hours can be drawn from all elements of the degree. Students should consult their academic advisor for additional guidance in fulfilling this requirement.

The university and residency requirements can be found in the Student Code (https://studentcode.illinois.edu/article3/part8/3-801/) (§ 3-801) and in the Academic Catalog (http://catalog.illinois.edu/general-information/degree-general-education-requirements/).

General Education Requirements

Follows the campus General Education (Gen Ed) requirements (https://courses.illinois.edu/gened/DEFAULT/DEFAULT/). Some Gen Ed requirements may be met by courses required and/or electives in the program.

Code	Title	Hours
Composition I		4-6
Advanced Composition		3
Humanities & the Arts (6 hours)		6
Natural Sciences & Technology (6 hours)		6
fulfilled by CHEM 102 & CHEM 104 or CHEM 202 & CHEM 204; PHYS 101 & PHYS 102 or PHYS 211 & PHYS 212		
Social & Behavioral Sciences (6 hours)		6
Cultural Studies: Non-Western Cultures (1 course)		3
Cultural Studies: US Minority Cultures (1 course)		3
Cultural Studies: Western/Comparative Cultures (1 course)		3
Quantitative Reasoning (2 courses, at least one course must be Quantitative Reasoning I)		6-10
fulfilled by MATH 220 or MATH 221, MATH 231, MATH 241; PHYS 101 & PHYS 102 or PHYS 211 & PHYS 212		
Language Requirement (Completion of the fourth semester or equivalent of a language other than English is required)		0-20

Code	Title	Hours
Orientation and Professional Development		
LAS 101	Design Your First Year Experience	1
OR		
LAS 100 & LAS 101	Success in LAS for International Students and Design Your First Year Experience	3
OR		
LAS 102	Transfer Advantage	1
Total Hours		**1 or 3**

Code	Title	Hours
Major Core Requirements		
Chemistry and biochemistry courses		**30**
Chemistry and biochemistry courses are any courses in CHEM or BIOC.		
No more than 10 hours of the following courses may count toward the 30 hours: CHEM 197, CHEM 297, CHEM 397, CHEM 497, and CHEM 499. The following courses do not count towards the 30 hours: CHEM 101, CHEM 108, and CHEM 199.		
At least 12 of the 30 hours must be at the 300 or 400 level, including at least one course outside physical chemistry. These 12 hours must include CHEM 440 or CHEM 442 and may include MCB 354 or MCB 450.		
CHEM 150	First Semester Success in Chemistry (Transfer students may substitute 1 hour of 200 level or higher Chemistry, including CHEM 297, CHEM 397, CHEM 497, or CHEM 499, for the 1 hour of CHEM 150.)	
General chemistry courses		
Select one of the following:		
CHEM 102 & CHEM 103 & CHEM 104 & CHEM 105	General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II	
CHEM 202 & CHEM 203 & CHEM 204 & CHEM 205	Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II	
Organic chemistry courses		
Select one of the following:		
CHEM 232 & CHEM 233	Elementary Organic Chemistry I and Elementary Organic Chem Lab I	
CHEM 236 & CHEM 237	Fundamental Organic Chem I and Structure and Synthesis	
Physical chemistry course		
CHEM 440 or CHEM 442	Physical Chemistry Principles Physical Chemistry I	
Mathematics courses		
MATH 220 or MATH 221	Calculus Calculus I	4-5
MATH 231	Calculus II	3
MATH 241	Calculus III	4
Physics courses		
Select one of the following:		8-10
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	
PHYS 211 & PHYS 212	University Physics: Mechanics and University Physics: Elec & Mag	

for the degree of Bachelor of Science in Liberal Arts and Sciences in Chemistry

Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a fourth level of a language other than English. See the corresponding section on the Degree and General Education Requirements page *(*http://catalog.illinois.edu/general-information/degree-general-education-requirements/*).*

First Year

First Semester	**Hours**
Free Elective course	1
CHEM 150	1
CHEM/BIOC course	3
CHEM/BIOC course	1
MATH 220 or 221	4
Composition I or General Education course	4
	14

Total Hours 14

First Year

Second Semester	**Hours**
CHEM/BIOC course	3
CHEM/BIOC course	1
MATH 231	3
General Education course	3
General Education course or Composition I	3
Free Elective course	3
	16

Total Hours 16

Second Year

First Semester	**Hours**
MATH 241	4
CHEM/BIOC course	3
CHEM/BIOC course	3
Language Other Than English (3rd level)	4
	14

Total Hours 14

Second Year

Second Semester	**Hours**
CHEM/BIOC course	3
General Education course	3
Language Other Than English (4th level)	4
Free Elective course	3

Free Elective course	2
	15

Total Hours 15

Third Year

First Semester	**Hours**
CHEM 300- or 400- level course	4
PHYS 101 or 211	5
General Education course	3
General Education course	3
	15

Total Hours 15

Third Year

Second Semester	**Hours**
CHEM 300- or 400- level course	4
PHYS 102 or 212	5
General Education course	3
Free Elective course	4
	16

Total Hours 16

Fourth Year

First Semester	**Hours**
CHEM 440 or 442	4
General Education course	3
Free Elective course	3
Free Elective course	3
Free Elective course	2
	15

Total Hours 15

Fourth Year

Second Semester	**Hours**
General Education course	3
Free Elective course	3
Free Elective course	3
Free Elective course	3
Free Elective course	3
	15

Total Hours 15

Total Hours: 120

for the degree of Bachelor of Science in Liberal Arts and Sciences in Chemistry

Students graduating with the BSLAS in Chemistry (Sciences & Letters) will have:

1. A thorough knowledge of the basic principles of chemistry, including atomic and molecular structure, chemical dynamics and the chemical and physical properties of substances.
2. An exposure to the subfields of chemistry, such as analytical, organic, physical, materials, inorganic, as well as chemical biology.
3. The ability to read, evaluate, interpret, and present (via oral and written communication) numerical, chemical and general scientific data, information and literature.
4. The ability to carry out experiments, use appropriate experimental apparatus effectively, and demonstrate proper laboratory safety skills.

Undergraduate Degree Programs in Chemistry

For the Degree of Bachelor of Science in Liberal Arts and Sciences

- Major in Computer Science & Chemistry, BSLAS (http://catalog.illinois.edu/undergraduate/eng_las/computer-science-chemistry-bslas/)
- Major in Chemistry (Sciences and Letters) (p. 1)

For the Degree of Bachelor of Science in Chemistry

- Major in Chemistry (Specialized Curriculum) (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/#degreerequirementstext)
- Major in Chemistry (Specialized Curriculum), Environmental Chemistry Concentration (http://catalog.illinois.edu/undergraduate/las/chemistry-bs/environmental-chemistry/)

for the degree of Bachelor of Science in Liberal Arts and Sciences in Chemistry

Chemistry

Chemistry website (https://chemistry.illinois.edu)
Chemistry Faculty (https://chemistry.illinois.edu/directory/faculty-by-type/)
SCS Academic Advising (http://advising.scs.illinois.edu/)

College of Liberal Arts & Sciences

Liberal Arts & Sciences College & Admissions requirements (http://catalog.illinois.edu/schools/las/)
LAS website (https://las.illinois.edu/)