

# CHEMISTRY, BSLAS

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

## 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/](http://catalog.illinois.edu/undergraduate/eng_las/computer-science-chemistry-bslas/))
- Major in Chemistry (Sciences and Letters) (p. 1)
- Major in Chemistry (Sciences and Letters), Chemistry Teaching Concentration (<http://catalog.illinois.edu/undergraduate/las/chemistry-bslas/chemistry-teaching/>)

For the Degree of Bachelor of Science in Chemistry

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

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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.

**General education:** Students must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT/>) requirements including the campus general education language requirement.

**Minimum hours required for graduation:** 120 hours, to include a minimum of 40 hours of upper-division coursework generally at the 300 and 400 level. These hours can be drawn from all elements of the degree.

Code	Title	Hours
<b>Orientation and Professional Development</b>		
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
<b>Total Hours</b>		<b>1 or 3</b>

Code	Title	Hours
<b>Major Core Requirements</b>		
<b>Chemistry and biochemistry courses</b>		<b>30</b>

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 elect to take an additional 1 hour of 200 level or higher Chemistry, including CHEM 297, CHEM 397, CHEM 497, or CHEM 499.)
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### 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 and Physical Chemistry I
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### Mathematics courses

MATH 220 or MATH 221	Calculus and 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	

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### 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	Second Semester	Hours
Free elective course		1 CHEM/BIOC course	3
CHEM 150		1 CHEM/BIOC course	1
CHEM/BIOC course		3 MATH 231	3
CHEM/BIOC course		1 General Education course	3
MATH 220 or 221		4 General Education course or Composition I	3
Composition I or General Education course		4 Free elective course	3
	14		16

### Second Year

First Semester	Hours	Second Semester	Hours
MATH 241		4 CHEM/BIOC course	3
CHEM/BIOC course		3 General Education course	3
CHEM/BIOC course		3 Language Other Than English (4th level)	4
Language Other Than English (3rd level)		4 Free elective course	3
		Free elective course	2
	14		15

### Third Year

First Semester	Hours	Second Semester	Hours
CHEM 300- or 400- level course		4 CHEM 300- or 400- level course	4
PHYS 101 or 211		5 PHYS 102 or 212	5
General Education course		3 General Education course	3
General Education course		3 Free elective course	4
	15		16

### Fourth Year

First Semester	Hours	Second Semester	Hours
CHEM 440 or 442		4 General Education course	3
General Education course		3 Free elective course	3
Free elective course		3 Free elective course	3
Free elective course		3 Free elective course	3
Free elective course		2 Free elective course	3
	15		15

### Total Hours 120

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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.

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### 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/>)