Curriculum in Chemistry – B.A. Degree 2017-2018 Catalog

Freshman Year

Cr.	Fall
4	General Chemistry - Chem 177[2] OR
5	Advanced General Chemistry - Chem 201[1,2,F]
1	General Chemistry Laboratory - Chem 177N[2.F] or 201L[2,F]
1	Orientation to the Chemistry Learning - Chem 101A[3]
4	Calculus I – Math 165
3	Freshman Composition – Engl 150
1	Library – Lib 160
	Electives

Cr.	Spring
3	General Chemistry – Chem 178[2]
2	Quantitative & Environmental Analysis – Chem 211
2	Quantitative & Environmental Analysis Analysis Lab – Chem 211L
1	Orientation to the Chemistry Learning Community –Chem 101B[3]
4	Calculus II – Math 166
	Electives

Sophomore Year

Cr.	Fall
3	Organic Chemistry – Chem 331 for majors
2	Organic Chemistry Lab – Chem 333L[2,F]
1	Cutting Edge Chemistry: Research and Career Opportunities – Chem 110[F] (strongly recommended)
5	Classical Physics I – Phys 221[2]
	Electives

Cr.	Spring
3	Organic Chemistry – Chem 332 for majors
2	Organic Chemistry Lab – Chem 334L[2,S]
5	Classical Physics II – Phys 222[2]
3	Engl 250
	Electives

Junior Year

Cr.	Fall
3	Chemical Thermodynamics – Chem 325 OR Introductory Quantum Mechanics – Chem 324
4	Foreign Language[4] – first semester of any foreign language accepted
	Electives

Cr.	Spring
3	Introductory Quantum Mechanics – Chem 324 OR Chemical Thermodynamics – Chem 325
2	Physical Chemistry Lab – Chem 321L[S]
2	Inorganic Chemistry – Chem 301[S]
4	Foreign Language[4] – second semester
1	Safety in the Chemical Laboratory – Chem 550[S] (strongly recommended)
	Electives

Senior Year

Cr.	Fall
2	Instrumental Methods of Chemical Analysis – Chem 316[F]
2	Instrumental Analysis Lab – Chem 316L[F]
3	Technical Communication – Engl 314
	Electives

Cr.	Spring
3	Survey of Biochemistry - BBMB 301 (strongly recommended)
3+	Chem 399 (strongly recommended)
	Electives

[1] Advanced high school chemistry and strong algebra skills are necessary for success in Chem 201. Math ACT of 24 or greater is strongly recommended.

[2] Students may substitute the following courses, if necessary.
Chem 201 for 177 AND 178; Chem 177L for 177N or 201L;
Phys 111 and 112 for 221 and 222; however, Phys 221 and 222 are highly recommended.
Chem 331L and 332L for 333L and 334L.
Chem 322L for 321L.

[3] Required of Chemistry Learning Community Members.

[4] Completion of three years of a foreign language in high school fulfills this requirement.

[F] Class offered Fall Semester only.

[S] Class offered spring Semester only.

Individuals earning a B.A. degree in Chemistry can obtain American Chemical Society certification by taking BBMB 301 (or other biochemistry course) and Chem 402.

Electives in Required Categories

Group I. Arts and Humanities:* ..... minimum credits: 12

Group III. Social Sciences:* ..... minimum credits: 9

*Lists of approved courses are available from advisers or the Office of the Dean. Required electives include four courses from Group I (Arts and Humanities) and three courses from two different departments in Group III (Social Sciences).

* * * * * * * * * * * * * * * * * *

To fulfill the 120 total credits required for graduation, the program outlined above consists of:

73	in required courses: Chemistry 37 cr; English 150, 250; Library 160; Math and Physics 18 cr; English 314; Foreign Language 8 cr
12	in Group I electives
9	in Group III electives
26	in freely selected electives

The LAS minimum requirements in Group II (Mathematical Disciplines and Natural Sciences) are more than met by the required courses in these groups listed on the first page.

Students entering after the 1997-99 catalog must take 3 credits to fulfill the U.S. Diversity requirement and 3 credits to fulfill the International Perspective requirement. These courses may also be used to meet Group Requirements.

The College of Liberal Arts and Sciences requires that all students demonstrate writing proficiency in English prior to graduation. An average grade of C or better in English 150, 250 and 314 or a grade of C- or better in each of English 150, 250 and 314 satisfies this requirement.

A minimum of 45 credits in courses numbered 300 or higher is required by the LAS College. The required courses listed on page 1 contain 27 credits in courses numbered 300 or higher. **YOU MUST CHOOSE YOUR COURSES WISELY TO MAKE SURE YOU MEET THE LAS COLLEGE REQUIREMENT OF 45 CREDITS FOR COURSES NUMBERED 300 OR HIGHER.**

To fulfill the requirements for graduation in the College of Liberal Arts and Sciences a major must attain at least 8 credits in chemistry courses taken at Iowa State University that are numbered 300 above and in which the student's grade is C or higher.

In addition, the average grade in all courses listed under major on the degree audit must be 2.00 or higher.