

Chemistry, A.C.S.,^f Biochemistry Emphasis, B.S., Comprehensive Major

The following is a hypothetical schedule, based on the 2019-2020 catalog. It assumes no transferred credits, no requirements waived by placement tests, no courses taken in the summer or winter, and no remedial courses that may be required. UW-Eau Claire cannot guarantee all courses will be offered as shown, but will provide a range of courses that will enable prepared students to fulfill their requirements in a timely period. This is just a guide. Please consult your advisor, your degree audit, and the catalog to create your personalized degree plan. Note: In order to complete their degrees in four years, students should plan to take 15 credits each semester or 30 credits each year.

FIRST YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 115 ^a	Chemical Principles (K1L) (Fall Only)	6	CHEM 213	Quantitative Analysis (S3)	4
			CHEM 218	Introduction to Inorganic Chemistry (Spring Only)	3

SOME TIME IN THE FIRST YEAR:

Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 114 ^b	Calculus I (S2)	4	MATH 215 ^b	Calculus II	4
WRIT 114 or 116	Blugold Seminar (S1)	5	LE Core Elective	Social Science (K2)	3
			TOTAL FIRST YEAR		30

SECOND YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 325	Organic Chemistry I with Lab	4	CHEM 326	Organic Chemistry II with Lab	4
PHYS 231	University Physics I (K1L)	5	PHYS 232	University Physics II (K1L)	5

SOME TIME IN THE SECOND YEAR:

Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
LE Core Elective	Social Science (K2)	3	LE Core Elective	Fine Arts (K4)	3
LE Core Elective	Humanities (K3)	3	LE Core Elective	Civic, Social, Environmental Responsibility (R3)	3
			TOTAL SECOND YEAR		30

SOME TIME IN THE FIRST OR SECOND YEAR

Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 114 ^b	Calculus I (S2)	4	MATH 215 ^b	Calculus II	4
PHYS 231	University Physics I (K1L)	5	PHYS 232	University Physics II (K1L)	5
CHEM 213	Quantitative Analysis (S3)	4	CHEM 218	Introduction to Inorganic Chemistry (Spring Only)	3

THIRD YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 452	Biochemistry I (Fall Only)	3	CHEM 454	Biochemistry II (Spring Only)	3
			CHEM 318 or 361	Bioinorganic Chemistry (Even Springs Only) or Molecule and Medicine (Odd Springs Only)	3

SOME TIME IN THE THIRD YEAR

Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 420 ^c	Advanced Synthesis Lab (Fall Only)	2	CHEM 453 ^c	Biochemistry Lab	2
LE Core Elective	Communication (S1)	3	LE Core Elective	Equity, Diversity, Inclusivity (R1)	3
LE Core Elective	Humanities (K3)	3			
			TOTAL THIRD YEAR		30

FOURTH YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 433	Physical Chemistry I	4	CHEM 318 or 361	Bioinorganic Chemistry (Even Springs Only) or Molecule and Medicine (Odd Springs Only)	3

SOME TIME IN THE FOURTH YEAR

Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
CHEM 420 or 453 ^c	Advanced Synthesis Lab (Fall Only) or Biochemistry Lab	2	CHEM 438 ^c	Physical Analysis Lab (Spring Only)	2
CHEM Elective ^d		3	LE Core Elective	Integration (I1)	3
LE Core Elective	Integration (I1)	3	LE Core Elective	Global Learning (R2)	3
LE Core Elective	Equity, Diversity, Inclusivity (R1+DD)	3	ELECTIVES ^e		6
			TOTAL FOURTH YEAR		30

RECOMMENDATIONS FOR HIGH IMPACT PRACTICES (HIPs)

The University of Wisconsin-Eau Claire encourages all students to participate in High Impact Practices. The following information identifies any specific recommendations that faculty in this major have concerning which HIPs might be most beneficial to students, and any recommendations about when those HIPs best fit into the degree plan. Students should also consult their faculty advisor for information on HIPs. There are many additional high impact opportunities available. Talk to your academic advisor for more information about incorporating HIPs like [Study Abroad](#), [Intercultural Immersion](#), [Internship](#), and/or [Student/Faculty Collaborative Research](#) into your time at UW-Eau Claire.

NOTES

Liberal Education Core (LE Core)

The LE Core comprises 17 learning experiences across 11 learning outcomes. Students must complete a minimum of 36 credits in courses approved for the LE Core.

- K1 – Natural Sciences; two experiences (one lab science experience is required in K1 or K2).
- K2 – Social Sciences; two experiences (one lab science experience is required in K1 or K2).
- K3 – Humanities; two experiences.
- K4 – Fine Arts; one experience.
- S1 – Written and Oral Communication; two experiences (one experience must satisfy the University writing requirement).
- S2 – Mathematics; one experience (must satisfy the University math competency requirement).
- S3 – Creativity; one experience (can be fulfilled in a student's major).
- R1 – Equity, Diversity, and Inclusivity; two experiences (one experience must meet the UW System Design for Diversity (DD) requirement).
- R2 – Global Perspectives; one experience.
- R3 – Civic and Environmental Issues; one experience.
- I1 – Integration; two experiences (one experience can be fulfilled in a student's major).
- SL—Service Learning; 30 hours

Additional LE Core Information

- Most LE Core learning experiences are course based, and many courses meet more than one learning outcome (e.g., K3 and R2 or K1 and R3).
- Some learning experiences can also be met outside of a traditional course (e.g., undergraduate research (S3), study abroad (I1)).
- S1 – An English placement score that fulfills the University writing requirement fulfills one S1 experience.
- S1 – A foreign Language placement score that qualifies the student to enter the 102 level satisfies one S1 experience.
- S1, R2 – A foreign language placement score that qualifies the student to enter the 202 level satisfies one experience in S1 and the R2 experience.
- S2 – A math placement score that qualifies the student to enter Math 111, 112, 113 or 114 fulfills the S2 experience.
- S3 – Completion of two credits from any approved music ensemble fulfills the S3 experience.
- I1 – Any semester long study abroad program can fulfill one I1 experience.

Course Suggestions (if applicable)

- CHEM 105, CHEM 106 (K1) and CHEM 109 may be taken in place of CHEM 115, but only 6 of the 9 credits will count towards the major.
- Students planning for graduate studies in chemistry (especially those interested in physical chemistry) are encouraged to take additional courses in mathematics (MATH 216, MATH 311, and/or MATH 324) and physics.
- All three of the upper-level labs need to be taken, including CHEM 420, CHEM 438 and CHEM 453. Students should plan to take these in different semesters.
- Select at least 3 credits from the following: CHEM 304, 318, 361, 397, 399, 401, 411, 426, 442, 444, 460, 491, 495, 497, and 499
- Electives need to be carefully selected to ensure that a student's degree comprises at least 39 credits of upper division courses (300-400 level). While students are encouraged to take additional courses in chemistry, electives can be selected from any discipline as long as the student meets the course prerequisites.
- The A.C.S. designation indicates that this major meets the certification guidelines of the American Chemical Society.