

Secondary Chemistry Education

Courses required for the first year: CHEM-131, CHEM-132; PSYC-100; second language requirement
Courses recommended for the first year: BIOL-130, BIOL-140; Courses Designated with a PA, PP, PL, or G;
Contact: Dr. Patrick Crawford, Chemistry Advisor (patrickcrawford@augustana.edu) or Education advisor Charlotte Shepherd, (charlotteshepherd@augustana.edu)*

*Students interested in this major are strongly encouraged to contact Prof. Shepherd prior to registration for Spring Semester.

The Major in Secondary Chemistry Education

32 credits, including CHEM-131, CHEM-132, CHEM-321, CHEM-322, CHEM-255, CHEM-361 or CHEM-365, CHEM-441, and CHEM-435. Required supporting courses (36 credits): ASTR-145, BIOL-130 and BIOL-140, PHYS-151 or PHYS-211, PHYS-152 or PHYS-212, GEOL-101, GEOG-105, and MATH-160, MATH-220 and MATH-230.

Candidates can also earn licensure to teach science in grades 5-8 by completing the major in Middle Grades: Science.

Required Courses in Chemistry

Course Number	Course Name	Learning Perspective	Prerequisites	Credits
CHEM-131*	General Chemistry 1			4
CHEM-132*	General Chemistry 2		CHEM-131	4
CHEM-321	Organic Chemistry I		CHEM-132	4
CHEM-322	Organic Chemistry II		CHEM-321	4
CHEM-255	Quantitative Analysis		CHEM-132	4
CHEM-441	Biochemistry I		CHEM-322, BIOL-130	4
CHEM-361 or CHEM-365	Physical Chemistry 1 or Physical Chemistry 2		CHEM-131, PHYS-152 or PHYS-212, MATH-220	4
CHEM-435	Advanced Inorganic Chemistry			4

*Depending on high school preparation, students may take CHEM 235 instead.

Required Supporting Courses

Course Number	Course Name	Learning Perspective	Prerequisites	Credits
ASTR-145	Stars and Galaxies			4
BIOL-130	Molecules to Cells			4
BIOL-140	Organisms to Ecosystems			4
PHYS-151 or PHYS-211	Principles of Physics I or Foundational Physics I			4
PHYS-152 or PHYS-212	Principals of Physics II or Foundational Physics II		PHYS-151 or PHYS-212	4
GEOL-101	Physical Geology			4
ESGE-200 or ESGE-225	Intro to Environmental Science Weather, Climate and Society			4
MATH-160	Calculus			4
MATH-220	Integration Methods		MATH-160	2

Education Professional Sequence (Required)

Course Number	Course Name	Learning Perspective	Prerequisites	Credits
EDUC-301	Educational Psychology and Assessment			4
EDUC-310	Computers in Education		EDUC 301; Retention in Teacher Education	1
EDUC-340	Methods of Inclusion	D	EDUC 301; Retention in Teacher Education	4
EDUC-370	General Methods		EDUC 301; Retention in Teacher Education	4
EDUC-386	Methods 5-8 Science		EDUC 301; Retention in Teacher Education	4
EDUC-396	Clinical Experience 5-8		EDUC 301 and EDUC 340; Retention in Teacher Education	1
EDUC-397	Clinical Experience 9-12		EDUC 301 and EDUC 340; Retention in Teacher Education	1
EDUC-412	Methods of Literacy: 5-12		EDUC 301; Retention in Teacher Education	4
INTR-EDA90	Student Teaching	PH	EDUC 396 and EDUC 397; Retention in Teacher Education	10
EDUC-422	Clinical Seminar	PH	Co-requisite: Student Teaching and EDUC 450	1
EDUC-450	School and Society	PH	Co-requisite: Student Teaching and EDUC 422	2

Major Overview

This major is required for teaching licensure in Illinois in grades 9-12. Students completing this major along with all other licensure requirements are eligible for high school teaching positions in science (Biology, Chemistry, and Physics) in Illinois. Students who complete this major will have met most requirements for licensure to teach science in grades 5-8.

Updated June 2026 (PC)