

Bachelor of Science in Chemistry Program Requirements Check-List 2017 bulletin

1. B.S. IN CHEMISTRY MAJOR REQUIREMENTS¹

	Semester	Grade (must be C or higher)
CHEM A111 (General Chemistry I and Lab) ¹	(4) _____	_____
CHEM A112 (General Chemistry II and Lab)	(4) _____	_____
CHEM A310 (Methods of Research & Computers)	(1) _____	_____
CHEM A311 (Introduction Inorganic Chemistry)	(3) _____	_____
CHEM A311L (Introduction Inorganic Chemistry Lab)	(1) _____	_____
CHEM A321 (Quantitative Analysis)	(3) _____	_____
CHEM A321L (Quantitative Analysis Lab)	(1) _____	_____
CHEM A331 (Organic Chemistry I)	(3) _____	_____
CHEM A331L (Organic Chemistry I Lab)	(1) _____	_____
CHEM A541 (Physical Chemistry I)	(3) _____	_____
CHEM A541L (Physical Chemistry I Lab)	(1) _____	_____
CHEM A332 (Organic Chemistry II)	(3) _____	_____
CHEM A332L (Organic Chemistry II Lab)	(1) _____	_____
CHEM A542 (Physical Chemistry II)	(3) _____	_____
CHEM A542L (Physical Chemistry II Lab)	(1) _____	_____
CHEM A499 (Senior Research) ²	(2-3) _____	_____
CHEM A499 (Senior Research) ²	(1-3) _____	_____
_ two of the following 500 Level Chemistry Electives		
CHEM A511 (Advanced Inorganic Chemistry and Lab)	(4) _____	_____
CHEM A522 (Instrumental Analysis and Lab)	(5) _____	_____
CHEM A550 (Advanced Biochemistry and Lab)	(4) _____	_____

2. GENERAL EDUCATIONAL REQUIREMENTS

	Semester	Grade
_ Natural Sciences		
PHYS A211 (Calc Physics I) OR PHYS A201 (General Physics I)	(4) _____	_____
PHYS A212 (Calc Physics II) ³ PHYS A202 (General Physics II)	(4) _____	_____
BIOL A121 (Biology I) ⁴	(4) _____	_____

_ History of Western Civilization		
HIST A101 or HIST A102 (circle one)	(3) _____	_____

_ Social and Behavioral Sciences (at least 2 areas, at least 6 credits)⁵
 Psychology, Sociology, Anthropology, Economics, Political Science, Geography, Honors

Course Num.	Course Title	√ non-Western ⁵	Semester	Grade
_____	() _____	_____	() _____	_____
_____	() _____	_____	() _____	_____
Total _____				(required at least 6 credit hours)

_ Foreign Language (at least 2 semesters of the same language or direct placement into 210 and at least a C in the course)

Language:		Semester	Grade
circle	FREN / GERM / SPAN / LATN / ITAL	(4) _____	_____
	101 / 102 / 210	(4) _____	_____
	101 / 102 / 210	(4) _____	_____

_ Humanities (at least 2 areas, at least 9 credits)⁵
 [Communications (last two digits must be in 50s or 60s), History, Literature, Art History, Music History, Theater History, Religion, Philosophy (not logic), selected Language courses, Humanities (HSSI), Honors (HONS)]

Course Num.	Course Title	√ non-Western ⁵	Semester	Grade
_____	() _____	_____	() _____	_____
_____	() _____	_____	() _____	_____
_____	() _____	_____	() _____	_____
Total _____				(at least 9 credit hours)

_ Critical Inquiry
 AFCI A101 (Critical Inquiry) (1) _____ Transfer exemption _____

_ English (must be C or higher)
 ENGL A101 (Composition)⁶ (3) _____
 ENGL A102 (Composition and Literature)⁶ (3) _____

_ Oral Communication
 COMM 201 or 241 circle (3) _____

_ Mathematics⁷ Test Out
 MATH A111 (Pre-Calc I)⁷ (3) _____
 MATH A112 (Pre-Calc II)⁷ (3) _____
 MATH A141 (Calculus I)⁷ (4) _____
 MATH A142 (Calculus II) (4) _____

_ Writing in the University Proficiency (should be completed as soon after CHEM 541L as possible)
 Writing Portfolio turned in _____ approved _____ OR ENGL 201 (Writing in the Univ.) (3) _____

_ American Political Institutions Semester Grade
 POLI A201 or HIST A201 or HIST A202 (circle one) (3) _____

Check-Offs (courses used to meet these requirements can & should be used to meet another degree requirement)

_ Non-Western Course (counts in another category) Course _____ () Semester _____ Grade _____

_ Writing Intensive Requirement (3 courses completed after completion of ENGL 102, at least one in Chem.)⁸
 CHEM A541L (Physical Chemistry I Lab) _____ Others _____
 CHEM A542L (Physical Chemistry II Lab) _____
 CHEM A511 or CHEM 550 (Adv. Inorg. Chem. or Adv. Biochem.) _____

_ ICE events
 Students are required to attend at least 2 ICE approved events for each semester enrolled at USCA.

First Year	Second Year	Third Year	Fourth Year	Extra Semesters
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Total Required 16 ICE events

3. COGNATE OR MINOR COGNATE / MINOR (circle one)

	Course Num.	(Title)	√ non-Western	(hr)	Semester	Grade
_ <u>Required Cognate</u>	BIOL 541	Princp. Biochem. ⁴		(4)	_____	_____

_ Cognate Electives (not CHEM, must be 300+ or any of the following MATH 241, 242; PHYS 212; BIOL 244, 250, ENCP 200, 210, 260, 290 ELCT 221)
 _____ () _____ () _____ ()
 _____ () _____ () _____ ()
 _____ () _____ () _____ ()

OR **Cognate: Total _____ (at least 12 credit hours w/ BIOL 541)**

_ Minor: Must take required Cognate in addition to the specific department listings for specific minor requirements.

Department	_____	()	_____	()	_____	_____
_____	_____	()	_____	()	_____	_____
_____	_____	()	_____	()	_____	_____
_____	_____	()	_____	()	_____	_____
_____	_____	()	_____	()	_____	_____

Minor: Dept. _____ Total _____ credit hours

4. ELECTIVES (A total of at least 120 credit hours is required for graduation)

Course Num.	Course Title	Semester	Grade
_____	()	()	_____
_____	()	()	_____
_____	()	()	_____
_____	()	()	_____

- 1 - A grade of C or higher is required in all chemistry courses counting toward the degree. Students placing in Mathematics 108 or below will successful complete these courses before enrolling in any chemistry course.
- 2 - Completion of a thesis and seminar on the research project are required for graduation.
- 3 - PHYS A212 can be counted toward a cognate.
- 4 - BIOL A121 and CHEM A332 are prerequisites for BIOL A541.
- 5 - At least three (3) credit hours of the degree must be in non-Western studies. A list of courses that meet this requirement can be found in the Academic Regulations/General Education Section of the appropriate Student Bulletin and in the Non-Western section of Degree Works.
- 6 - Students must complete English 101/102 with a grade of C or better in order to fulfill general education requirements. Freshmen should take English in their first semester unless they have already completed the 101/102 requirement. Students must complete AEGL 102 with a grade of C or better before taking other English courses and for any course to count as Writing Intensive including ACHM 541L, 542L, and 511L.
- 7 - Freshmen should take Math in their first semester unless they have already completed their math requirement. MATH 111 and MATH 112 may be taken in any order or at the same time. MATH 111 and 112 are pre-requisites for AMTH 141/142. MATH 141 is a pre-requisite for MATH 142.
- 8 - Transfer students need one WI course for each 30 hours at USCA including one in the major.
- 9 - A Cognate is an additional studies intended to support course work in the major. Cognate courses cannot be counted as major or general education requirements. Cognate courses must be approved by the major department. BIOL 541 is a required cognate for a Chemistry degree. Classes that can count as a Cognate Elective for a Chemistry degree include any 300+ course (not CHEM); PHYS 212; MATH 241, 242; BIOL 244, 250, ENCP 200, 210, 260, 290 ELCT 221. A minor in another discipline will replace the Cognate Elective requirement.