REQUIREMENTS FOR THE BACHELOR OF SCIENCE
COLLEGE OF ARTS AND SCIENCES
THE UNIVERSITY OF OKLAHOMA

For Students Entering the Oklahoma State System for Higher Education:

Summer 2018 through Spring 2019

Minimum Credit Hours and Grade Point Averages Required			
Total Hours —	**120**	Upper-Division Within Total	**48**
Major Hours —	**36-37**		

Grade Point Averages:

Overall & Major: Combined OU/Transfer - **2.00** OU - **2.00**

48 Upper-Division Hours REQUIRED

Chemistry and Biochemistry

(Standard Option)

B170

Bachelor of Science

OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in four years.

GENERAL EDUCATION AND COLLEGE REQUIREMENTS
Courses graded P/NP will not apply.

Courses for fulfillment of General Education and College of Arts & Sciences requirements must be from the approved General Education course list published in the Class Schedule or at **http://www.ou.edu/enrollment/home/**.

University-Wide General Education (minimum 40 hours) and College of Arts and Sciences Requirements

Core Area I: Symbolic and Oral Communication (9-22 hours, 3-6 courses)

a. **English Composition** (6 hours, 2 courses)
   1. English 1113, Principles of English Composition
   2. English 1213, Principles of English Composition, **or** EXPO 1213, Expository Writing

b. **Foreign Language** (0-13 hours in the same language)
   The College of Arts and Sciences requirement ***cannot be met by high school coursework.***
   1. Beginning Course (0-5 hours) _____
   2. Beginning Course, continued (0-5 hours) _____

◆ 3. Intermediate Course (2000 level, 0-3 hours). _____
   One course at the intermediate level or demonstrated competency at that level.

c. **Mathematics** (3 hours, 1 course). _____

Core Area II: Natural Science (7 hours, 2 courses) including one laboratory component.

◆ 1.**Biological Science** _____
   Chosen from the following approved General Education designators: BIOL, HES, MBIO, or PBIO.

◆ 2.**Physical Science** _____
   Chosen from the following approved General Education designators: AGSC, ASTR, CHEM, GEOG, GEOL, GPHY, METR, or PHYS.

Core Area III: Social Science (6 hours, 2 courses)

1. Political Science 1113, American Federal Government
2. _____

Core Area IV: Humanities (18 hours, 6 courses)

a: **Understanding Artistic Forms** (3 hours, 1 course) _____

b. **Western Civilization and Culture** (6 hours, 2 courses)
   1. History 1483, U.S., 1492-1865, **or** History 1493, U.S., 1865-Present,
   2. _____ (excluding HIST 1483 and 1493)

c. **Non-Western Culture** (3 hours, 1 course):_____

d. **Additional Core IV Humanities courses** (6 upper-division hours, 2 courses at the 3000- 4000-level). Must be outside the major and selected from Understanding Artistic Forms, Western Civilization and Culture, or Non-Western Culture.

◆ 1. _____

◆ 2. _____

Core Area V: Senior Capstone Experience (3 hours, 1 course): _____

◆ College of Arts and Sciences Requirements: College requirements are not automatically fulfilled by a previous degree.

Some courses required for the major may also fulfill University General Education and/or College of Arts & Sciences Requirements

MAJOR REQUIREMENTS

A grade of C or better must be earned in each Chemistry course presented for major credit. No grade below a C made in Chemistry courses at the upper-division level may be made up elsewhere without prior written approval by the OU Chemistry Department.

CHEMISTRY		
1315 General Chemistry, **or**		(5)
1335 General Chemistry I: Signature		
1415 General Chemistry cont., **or**		(5)
1425 Advanced General Chemistry, **or**		
1435 General Chemistry II: Signature		
3064 Organic Chemistry I		4
3164 Organic Chemistry II		4
3005 Quantitative Analysis		5
3421 Physical Chemistry Lab, **and**		1
3423 Physical Chemistry I		3
3521 Physical Chemistry Lab, **and**		1
3523 Physical Chemistry II		3
3653 Introduction to Biochemistry		3
4023 Instrumental Methods of Chemical Analysis		3
4033 Instrumental Methods of Chemical Analysis Laboratory, **or**		
4444 Advanced Synthesis & Spectral Characterization		
_____		3-4
Three hours from:		
3753 Intro. to Biochemical Methods		
4333 Advanced Inorganic Chemistry		
4753 Principles of Biochemistry I		
4970 Special Topics/Seminar in Chemistry & Biochemistry		
_____		3
4913 Senior Thesis (Capstone), **or**		
4923 Senior Project (Capstone), **or**		
4933 Current Topics in Biochemistry (Capstone)		
_____		3

MAJOR SUPPORT REQUIREMENTS

MATH	
1823 Calculus & Analytic Geom. I, **and**	
2423 Calculus & Analytic Geom. II	
or	
1914 Differential & Integral Calculus I, **and**	
2924 Differential & Integral Calculus II	
_____	3-4
_____	3-4
PHYSICS	
2414 Gen. Physics for Life Science, **and**	
2424 Gen. Physics for Life Science	
or	
2514 Gen. Physics for Engr. & Science, **and**	
2524 Gen. Physics for Engr. & Science	
_____	4
_____	4

Free Electives

Electives to bring total applicable hours to 120 including 48 upper-division hours.

INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

TOTAL HOURS: A minimum of 120 semester hours acceptable toward graduation must be completed.

UPPER-DIVISION HOURS: A minimum of 48 upper-division semester hours acceptable toward graduation must be completed. OU courses numbered 3000 or above are upper-division. Transfer work is counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where it was earned. Two-year college work is accepted only as lower-division credit.

ARTS AND SCIENCES HOURS: At least 80 semester hours of liberal arts and sciences courses are required for a BA degree. At least 55 semester hours of liberal arts and sciences courses are required for a BS degree.

MAJOR WORK: A minimum of 30 semester hours must be earned in the major, including a minimum of 15 credit hours at the upper-division level.

PASS/NO PASS ENROLLMENT: A maximum of 16 semester hours of free elective credit may be attempted under this option.

INDIVIDUAL STUDIES (e.g., courses titled "Independent Study"): A maximum of 12 total semester hours may be counted toward graduation, excluding Honors Reading and Honors Research.

P.E. COURSES: No physical education activity courses will be counted toward the 120 semester hours of acceptable credit for graduation.

SENIOR INSTITUTION HOURS: A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

RESIDENCY:

- At least 15 of the final 30 hours applied toward the degree or at least 50 percent of the hours required by the institution in the major field must be satisfactorily completed at the awarding institution.
- At least 15 semester hours of upper-division major work must be completed in residence at OU.
- OU correspondence courses are ***not*** considered resident credit.
- Credits earned via examination are neither resident nor nonresident credit.

GRADE POINT AVERAGES: Students must earn a minimum overall 2.00 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU. Some schools and departments of the College have higher minimum grade point averages required for their students.

SPECIAL DEGREES: Students may qualify for an Honors degree (cum Laude, Magna cum Laude, or Summa cum Laude) by completing specific requirements of the Honors College. A degree will be earned with Distinction if the student completes at least 60 semester hours at OU with at least a 3.60 combined retention GPA and OU retention GPA. A degree will be earned with Special Distinction if the student completes at least 60 semester hours at OU with at least a 3.90 combined retention GPA and OU retention GPA.

APPLICATION FOR GRADUATION: Students must apply for graduation during the term in which they complete their degree requirements in order to graduate in that term. The graduation application is available on line on your Ozone site. Deadlines for the OU Graduation Application are: **March 1** for Spring certification and the University of Oklahoma Commencement book; **July 1** for Summer graduation certification; and, **October 1** for Fall graduation certification.

Refer to the OU General Catalog for more complete information.

Suggested Semester Plan of Study — Chemistry and Biochemistry - B170

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checksheet for official requirements. Students must consult with College of Arts and Sciences and/or Department of Chemistry and Biochemistry academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Arts and Sciences, and Chemistry and Biochemistry major requirements.

Year	FIRST SEMESTER	Hours	SECOND SEMESTER	Hours
FRESHMAN	CHEM 1315, General Chemistry, **or**	5	CHEM 1415, General Chemistry cont., **or** 1425, Advanced General Chemistry,	5
	1335, General Chemistry I: Signature	3	**or** 1435, General Chemistry II: Signature	
	ENGL 1113, Principles of English Composition (Core I)		ENGL 1213, Principles of English Composition (Core I), **or**	3
	MATH 1823, Calculus & Analytic Geometry I(Core I), **or**	3-4	EXPO 1213, Expository Writing (Core I)	
	MATH 1914, Differential & Integral Calculus I		MATH 2423, Calculus & Analytic Geometry II, **or**	3-4
	Social Science (Core III)	3	MATH 2924, Differential & Integral Calculus II	
			Understanding Artistic Forms (Core IV)	3
	TOTAL CREDIT HOURS	**14-15**	**TOTAL CREDIT HOURS**	**14-15**
SOPHOMORE	CHEM 3064, Organic Chemistry I	4	CHEM 3005, Quantitative Analysis	5
	PHYS 2514, Gen. Physics for Engineering & Science Majors, **or**	4	CHEM 3164, Organic Chemistry II	4
	2414, General Physics for Life Science Oriented Majors		PHYS 2524, Gen. Physics for Engineering & Science Majors, **or**	4
	Biological Science without lab (Core II)	3	2424, General Physics for Life Science Oriented Majors	
	HIST 1483, United States 1492-1865, or	3	Non-Western Culture (Core IV)	3
	1493, United States 1865-Present (Core IV)			
	TOTAL CREDIT HOURS	**14**	**TOTAL CREDIT HOURS**	**16**
JUNIOR	CHEM 3421, Physical Chemistry Lab	1	CHEM 3521, Physical Chemistry Lab	1
	CHEM 3423, Physical Chemistry I	3	CHEM 3523, Physical Chemistry II	3
	CHEM 4023, Instrumental Methods of Chemical Analysis	3	CHEM 4033, Instrumental Methods of Chemical Analysis Laboratory	3
	Beginning Foreign Language (Core I)	5	P SC 1113, American Federal Government (Core III)	3
	Western Civilization & Culture (Core IV)	3	Beginning Foreign Language continued (Core I)	5
	TOTAL CREDIT HOURS	**15**	**TOTAL CREDIT HOURS**	**15**
SENIOR	CHEM 3653, Introduction to Biochemistry	3	§CHEM 4913, Senior Thesis (Capstone), **or**	3
	CHEM 4333, Advanced Inorganic Chemistry	3	§CHEM 4923, Senior Project (Capstone), **or**	
	Intermediate Foreign Language	3	§CHEM 4933, Current Topics in Biochemistry (Capstone)	
	Humanities, upper-division, outside major (Gen. Ed.)	3	Humanities, upper-division, outside major (Gen. Ed.)	3
	Free Elective	3	Free Elective, upper-division (3000-4000-level)	3
	Free Elective	1	Free Elective, upper-division (3000-4000-level)	3
			Free Elective	3
			Free Elective	1
	TOTAL CREDIT HOURS	**16**	**TOTAL CREDIT HOURS**	**16**

§CHEM 4913, 4923, and 4933 are not all offered every semester. Students should plan their capstone experience accordingly.

Bachelor's degrees require a minimum of 48 hours of upper-division (3000-4000) coursework.
This plan of study should not be used in lieu of academic advisement.

Students who transfer from other institutions (particularly community colleges) must verify credit hour and course requirements with their college academic counselor, ELLH 124, 325-4411, **http://ou.edu/cas**.
Please make an appointment for a degree check with your college academic counselor once you have earned 90 hours. Appointments may be scheduled at **https://iadvise.ou.edu/**.