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 2017 through Spring 2018

Minimum Credit Hours and Grade Point Averages Required			
Total Hours —	**120**	Upper-Division Within Total	**48**
Major Hours —	**40-42**		

Grade Point Averages:

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

48 Upper-Division Hours REQUIRED

Chemical Biosciences

B155

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: Signature	
1415	General Chemistry cont., **or**	(5)
1425	Advanced General Chemistry **or**	
1435	General Chemistry II: Signature	
3053	Organic Chemistry	3
3152	Organic Chemistry Lab	2
3153	Organic Chemistry	3
3451	Basic Physical Chemistry Lab	1
3453	Basic Physical Chemistry	3
3653	Introduction to Biochemistry	3
3753	Intro. to Biochemical Methods	3
4913	Senior Thesis (Capstone), **or**	
4923	Senior Project (Capstone), **or**	
4933	Current Topics in Biochemistry (Capstone)	
	_____	3
BIOLOGICAL SCIENCES		
BIOL	1124, Introductory Biology	4
MBIO	3812, Fund. of Microbiology Lab	2
MBIO	3813, Fund. of Microbiology	3
BIOL/MBIO/PBIO	4843, Intro. to Molecular Biology	3
A minimum of four hours chosen from the following BIOL lecture/lab combinations:		
3101	Princ. of Physiology Lab, **and**	
3103	Princ. of Physiology	
3201	Animal Development Lab, **and**	
3203	Animal Development	
3333	Genetics, **and**	
3342	Genetics Laboratory	
4244	Animal Histology	
	_____	4-5
A minimum of three hours from the following:		
BIOLOGY		
2124	Human Physiology	
2234	Intro. to Human Anatomy	
3113	Cell Biology (or MBIO/PBIO 3113)	
3214	Comp. Vertebrate Anatomy	
4223	Cellular & Molecular Neurobiology	
MICROBIOLOGY		
4823	Pathogenic Microbiology & Infectious Disease	
4833	Basic Immunology	
	_____	3-4

MAJOR SUPPORT REQUIREMENTS

MATH		
1823	Calculus & Analytic Geometry I	
or		
1914	Differential & Integral Calculus I	
	_____	3-4
PHYSICS		
1311	General Physics Lab I	1
1321	General Physics Lab II	1
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 up-per-divi sion. 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 — Chemical Biosciences - B155

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 Chemical Biosciences major requirements.

Year	FIRST SEMESTER	Hours	SECOND SEMESTER	Hours
FRESHMAN	CHEM 1315, General Chemistry	5	CHEM 1415, General Chemistry cont.	5
	ENGL 1113, Principles of English Composition (Core I)	3	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		PHYS 2514, Gen. Physics for Engineering & Science Majors, **or**	4
	Social Science (Core III)	3	2414, General Physics for Life Science Oriented Majors	
			PHYS 1311, Physics I Lab	1
			Understanding Artistic Forms (Core IV)	3
	TOTAL CREDIT HOURS	**14-15**	**TOTAL CREDIT HOURS**	**16**
SOPHOMORE	CHEM 3053, Organic Chemistry	3	CHEM 3152, Organic Chemistry Lab	2
	PHYS 2524, Gen. Physics for Engineering & Science Majors, **or**	4	CHEM 3153, Organic Chemistry	3
	2424, General Physics for Life Science Oriented Majors		MBIO 3813, Fundamentals of Microbiology	3
	PHYS 1321, Physics II Lab	1	Beginning Foreign Language (Core I)	5
	BIOL 1124, Introduction to Biology (Core II)	4	Non-Western Culture (Core IV)	3
	HIST 1483, United States 1492-1865, or	3		
	1493, United States 1865-Present (Core IV)			
	TOTAL CREDIT HOURS	**15**	**TOTAL CREDIT HOURS**	**16**
JUNIOR	CHEM 3653, Introduction to Biochemistry	3	CHEM 3453, Basic Physical Chemistry	3
	MBIO 3812, Fundamentals of Microbiology Lab	2	CHEM 3451, Basic Physical Chemistry Lab	1
	BIOL/MBIO/PBIO 4843, Introduction to Molecular Biology	3	Humanities, upper-division, outside major (Gen. Ed.)	3
	Western Civilization & Culture (Core IV)	3	P SC 1113, American Federal Government (Core III)	3
	Beginning Foreign Language continued (Core I)	5	Intermediate Foreign Language	3
			Free Elective	2
	TOTAL CREDIT HOURS	**16**	**TOTAL CREDIT HOURS**	**15**
SENIOR	CHEM 3753, Introduction to Biochemical Methods	3	§CHEM 4913, Senior Thesis (Capstone), **or**	3
	BIOL/MBIO, Major Group, Lecture	3	§CHEM 4923, Senior Project (Capstone), **or**	
	Humanities, upper-division, outside major (Gen. Ed.)	3	§CHEM 4933, Current Topics in Biochemistry (Capstone)	
	Free Elective, upper-division (3000-4000-level)	3	BIOL, Major Group, Lecture *with Lab*	4
	Free Elective	3	Free Elective, upper-division (3000-4000-level)	3
			Free Elective	3
	TOTAL CREDIT HOURS	**15**	**TOTAL CREDIT HOURS**	**13**

§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/**.