For Students entering the Oklahoma State System for Higher Education: Summer 2011 through Spring 2012

For the Bachelor of Science in Chemistry

Minimum Credit Hours and Grade Point Averages Required

Total Hours — 120
Major Hours — 40
Grade Point Averages:
Overall & Major: Combined OU/Transfer - 2.00 OU - 2.00
48 Upper-Division Hours REQUIRED

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

Requirements for the Bachelor of Science in Chemistry

College of Arts and Sciences
The University of Oklahoma

General Education and College Requirements

Courses graded P/NP will not apply.

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. 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, BOT, HES, MIBO, or ZOO.
   2. Physical Science
      Chosen from the following approved General Education designators: ACSC, ASTR, CHEM, GEOG, 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.

Computer Literacy Requirement — Students must demonstrate computer proficiency which includes the competent use of a variety of software and networking applications. This requirement may be satisfied by:
   1. A high school computer science course that meets curricular requirement; or
   2. Completion of a college-level course that requires competent use of computing; or
   3. Completion of a university computer proficiency assessment test.

Major Requirements

CHEMISTRY
1315 General Chemistry
1415 General Chemistry cont., or
1425 General Chemistry for Majors
3064 Organic Chemistry I
3164 Organic Chemistry II
3005 Quantitative Analysis
3421 Physical Chemistry Lab
3423 Physical Chemistry I
3521 Physical Chemistry Lab
3523 Physical Chemistry II
4021 Instrumental Methods of Chemical Analysis
4033 Instrumental Methods of Chemical Analysis Laboratory
4333 Advanced Inorganic Chem.-Periodic System
4444 Advanced Synthesis and Spectral Characterization
4913 Senior Thesis (Capstone), or
4923 Senior Project (Capstone), or
4933 Current Topics in Biochemistry (Capstone)
3653 Introduction to Biochemistry

MATH — one of the following pairs:
1823 Calculus & Analytic Geom. I, and
2423 Calculus & Analytic Geom. II
or
1914 Differential & Integral Calculus I, and
2924 Differential & Integral Calculus II

PHYSICS — one of the following groups:
1214 Gen. Physics for Life Science
1311 General Physics Lab I
2424 Gen. Physics for Life Science
1321 General Physics Lab II
or
2514 Gen. Physics for Engr. & Science
1311 General Physics Lab I
2524 Gen. Physics for Engr. & Science
1321 General Physics Lab II

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

Core Area A: International and Cultural Studies (3 hours)
Core Area B: Cultural and Personal Characterization (3 hours)
Core Area C: Physical and Biological Sciences (14-16 hours)
Core Area D: Historical and Political Studies (3-4 hours)
Core Area E: Social Science (9 hours)
Core Area F: Humanities and Fine Arts (33-34 hours)
Core Area G: Advanced Courses (9 hours)

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

MAJOR REQUIREMENTS

CHEMISTRY
1315 General Chemistry
1415 General Chemistry cont., or
1425 General Chemistry for Majors
3064 Organic Chemistry I
3164 Organic Chemistry II
3005 Quantitative Analysis
3421 Physical Chemistry Lab
3423 Physical Chemistry I
3521 Physical Chemistry Lab
3523 Physical Chemistry II
4021 Instrumental Methods of Chemical Analysis
4033 Instrumental Methods of Chemical Analysis Laboratory
4333 Advanced Inorganic Chem.-Periodic System
4444 Advanced Synthesis and Spectral Characterization
4913 Senior Thesis (Capstone), or
4923 Senior Project (Capstone), or
4933 Current Topics in Biochemistry (Capstone)
3653 Introduction to Biochemistry

MATH — one of the following pairs:
1823 Calculus & Analytic Geom. I, and
2423 Calculus & Analytic Geom. II
or
1914 Differential & Integral Calculus I, and
2924 Differential & Integral Calculus II

PHYSICS — one of the following groups:
1214 Gen. Physics for Life Science
1311 General Physics Lab I
2424 Gen. Physics for Life Science
1321 General Physics Lab II
or
2514 Gen. Physics for Engr. & Science
1311 General Physics Lab I
2524 Gen. Physics for Engr. & Science
1321 General Physics Lab II

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

Departmental Requirements

For students in the College of Arts and Sciences, the major requirements must be from the approved General Education course list published in the Class Schedule or on http://www.ou.edu/enrollment/home/.

Computer Literacy Requirement — Students must demonstrate computer proficiency which includes the competent use of a variety of software and networking applications. This requirement may be satisfied by:
   1. A high school computer science course that meets curricular requirement; or
   2. Completion of a college-level course that requires competent use of computing; or
   3. Completion of a university computer proficiency assessment test.

Grade Point Averages:
Overall & Major: Combined OU/Transfer - 2.00 OU - 2.00
**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. Application forms are available from the College of Arts and Sciences Academic Services office, Ellison Hall, Room 124. The deadline for completion of all coursework to graduate in a particular term is the last day of classes in that term.

Refer to the OU General Catalog for more complete information.

**Suggested Semester Plan of Study — Chemistry (Professional) - B175**

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 check sheet for official requirements. Students must consult with College of Arts and Sciences and/or Department of Chemistry and Biochemistry academic advisors 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.

<table>
<thead>
<tr>
<th>Year</th>
<th>FIRST SEMESTER</th>
<th>Hours</th>
<th>SECOND SEMESTER</th>
<th>Hours</th>
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<tr>
<td><strong>FRESHMAN</strong></td>
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<tr>
<td>CHEM 1315, General Chemistry</td>
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<td>CHEM 1415, General Chemistry cont.</td>
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<td>ENGL 1113, Principles of English Composition (Core I)</td>
<td>3</td>
<td>ENGL 1213, Principles of English Composition (Core I), or</td>
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<td>MATH 1823, Calculus &amp; Analytic Geometry II (Core I), or</td>
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<td>EXPO 1213, Expository Writing (Core I)</td>
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<td>MATH 1914, Differential &amp; Integral Calculus I</td>
<td>3</td>
<td>MATH 2423, Calculus &amp; Analytic Geometry II, or</td>
<td>3</td>
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<td>Social Science (Core III)</td>
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<td>Understanding Artistic Forms (Core IV)</td>
<td>3</td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
<td><strong>14-15</strong></td>
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<td><strong>SOPHOMORE</strong></td>
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<td>CHEM 3064, Organic Chemistry I</td>
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<td>CHEM 3005, Quantitative Analysis</td>
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<td>PHYS 2514, Gen. Physics for Engineering &amp; Science Majors, or</td>
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<td>CHEM 3164, Organic Chemistry II</td>
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<td>or 2414, General Physics for Life Science Oriented Majors</td>
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<td>PHYS 2524, Gen. Physics for Engineering &amp; Science Majors, or</td>
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<td>PHYS 1371, Physics I Lab</td>
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<td>PHYS 2424, General Physics for Life Science Oriented Majors</td>
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<td>Biological Science without lab (Core II)</td>
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<td>PHYS 1321, General Physics Lab II</td>
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<td>HIST 1483, United States 1492-1865, or</td>
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<td>Non-Western Culture (Core IV)</td>
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<td>1493, United States 1865-Present (Core IV)</td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>JUNIOR</strong></td>
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<td>CHEM 3423, Physical Chemistry I</td>
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<td>Western Civilization &amp; Culture (Core IV)</td>
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<td>CHEM 4033, Instrumental Methods of Chemical Analysis Lab</td>
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<td>Beginning Foreign Language (Core I)</td>
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<td>PSC 1113, American Federal Government (Core III)</td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>SENIOR</strong></td>
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<td>CHEM 3653, Intro. to Biochemistry</td>
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<td>CHEM 4913, Senior Thesis (Capstone), or</td>
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<td>CHEM 4333, Advanced Inorganic Chemistry—Periodic System</td>
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<td>CHEM 4923, Senior Project (Capstone), or</td>
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<td>CHEM 4444, Advanced Synthesis and Spectral Characterization</td>
<td>4</td>
<td>CHEM 4913, Current Topics in Biochemistry (Capstone)</td>
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<td>Humanities, upper-division, outside major (Gen. Ed.)</td>
<td>3</td>
<td>Free Elective, upper-division (3000-4000-level)</td>
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<td>Intermediate Foreign Language</td>
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<td>Free Elective, lower- or upper-division</td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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<td><strong>TOTAL CREDIT HOURS</strong></td>
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*If deficient in computer literacy, contact your college academic counselor in the Hobson Academic Services Center, ELLH 124, 325-4411, for approved courses.

§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/.