MEDICINAL AND BIOPHYSICAL CHEMISTRY, BS

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 [http://catalog.okstate.edu/university-academic-regulations/#matriculation].

Minimum Overall Grade Point Average: 2.00
Total Hours: 120

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td></td>
<td>General Education Requirements</td>
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<tr>
<td></td>
<td>English Composition</td>
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<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
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<td>ENGL 1213</td>
<td>Composition II</td>
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<td>or ENGL 1413</td>
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<td>or ENGL 3323</td>
<td>Technical Writing</td>
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<td></td>
<td>American History &amp; Government</td>
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<tr>
<td>HIST 1103</td>
<td>Survey of American History</td>
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<tr>
<td>or HIST 1483</td>
<td>American History to 1865 (H)</td>
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<td>or HIST 1493</td>
<td>American History Since 1865 (DH)</td>
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<td>Analytical &amp; Quantitative Thought (A)</td>
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<td>MATH 2144</td>
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<td>Humanities (H)</td>
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<td>Courses designated (H)</td>
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<td>Natural Sciences (N)</td>
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<td>Must include one Laboratory Science (L) course.</td>
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<td>BIOL 1114</td>
<td>Introductory Biology (LN) 1</td>
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<tr>
<td>CHEM 1314</td>
<td>Chemistry I (LN) 1</td>
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<td>Social &amp; Behavioral Sciences (S)</td>
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<td>Course designated (S)</td>
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<td>Additional General Education</td>
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<td>Diversity (D) &amp; International Dimension (I)</td>
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<td>May be completed in any part of the degree plan.</td>
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<td>At least one Diversity (D) course</td>
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<td>At least one International Dimension (I) course</td>
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<td>College/Departmental Requirements</td>
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<tr>
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<td>First Year Seminar</td>
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<td>(Transfer students with 15 hours exempt)</td>
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<td>Arts &amp; Humanities</td>
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<td>(See note 2.a.)</td>
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<td>Natural &amp; Mathematical Sciences</td>
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<td>CHEM 1515</td>
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<td>PHYS 2014</td>
<td>University Physics I (LN)</td>
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<td>(See note 3.)</td>
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0-6 hours

Upper-Division General Education
6 hours outside major department
(See note 2.c.)

Subtotal Hours 13

Major Requirements
Minimum major GPA 2.00.
CHEM 2113 Principles of Analytical Chemistry 3
CHEM 2122 Quantitative Analysis Laboratory 2
CHEM 3053 Organic Chemistry I 3
CHEM 3112 Organic Chemistry Laboratory 2
CHEM 3153 Organic Chemistry II 3
CHEM 3363 Bioinorganic Chemistry 3
or CHEM 3353 Descriptive Inorganic Chemistry
CHEM 3413 Physical Chemistry Applications (or) 3
CHEM 3433 Physical Chemistry I
& CHEM 3553 Physical Chemistry II (or)
BIOC 3223 Physical Chemistry for Biologists
CHEM 4023 Modern Methods of Chemical Analysis 3
CHEM 4022 Modern Methods of Chemical Analysis Laboratory 2
CHEM 4123 Chemical and Physical Basis of Macromolecular Function 3
CHEM 4313 Medicinal Organic Chemistry 3
or CHEM 4320 Chemical and Spectrometric Identification of Organic Compounds
CHEM 4990 Special Problems in Chemistry 2
BIOC 1604 Animal Biology 4
or PBIO 1404 Plant Biology (LN)
BIOC 3023 General Genetics 3
MATH 2153 Calculus II (A) 3
or STAT 2013 Elementary Statistics (A)
or STAT 4013 Statistical Methods I (A)
MICR 2123 Introduction to Microbiology 3
MICR 2132 Introduction to Microbiology Laboratory 2
MICR 3223 Advanced Microbiology 3
or BIOC 3653 Survey of Biochemistry
PHYS 2114 University Physics II (LN) 4

Subtotal Hours 54

Electives
May need to include 6 hours of a foreign language (see note 3.).
May need to include 6 hours upper-division general education major department (see note 2.c.) and 12 additional upper-division hours.

Suggested courses:
BIOC 3114 Human Anatomy
BIOC 3204 Physiology
MICR 3033 Cell and Molecular Biology
MICR 3253 Immunology
PSYC 1113 Introductory Psychology (S)
SOC 1113 Introductory Sociology (S)
Subtotal Hours 13
Total Hours 120

1 College and Departmental Requirements that may be used to meet
Gen Ed Requirements.

Other Requirements:

- See the College of Arts and Sciences Requirements.
- Minimum 2.00 GPA in all CHEM courses.
- **Upper-Division Credit**: Total hours must include at least 40 hours in
courses numbered 3000 or above.
- **Hours in One Department**: For B.A. and B.S. degrees, no more than 54
hours in one department may be applied to degree requirements.

College of Arts and Sciences
Requirements

1. General Education Requirements
   No more than two courses (or eight hours) from the major
department may be used to meet General Education and College and
Departmental Requirements. The General Education required English
Composition, required U.S. History, required American Government,
one required MATH or STAT course, and required foreign language for
B.A. degrees do not count against the two-course maximum.

2. A&S College/Departmental Requirements
   a. Arts and Humanities are defined as any course carrying an
   (H) designation or courses from AMST, ART, DANC, ENGL
   (except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except
   PHIL 1313 Logic and Critical Thinking (A), PHIL 3003 Symbolic
   Logic (A) and PHIL 4003 Mathematical Logic and Computability),
   REL, TH, and foreign languages.
   b. Natural and Mathematical Sciences are defined as any course
   from the following prefixes: ASTR, BIOC, BIOL, CHEM, CS (except
   CS 4883 Social Issues in Computing), GEOL, MATH, MICR, PBIO,
   PHYS, and STAT; or courses from other departments that carry an
   (A) or (N) general education designation.
   c. The required six hours of upper-division General Education may
   not include courses from the student’s major department. This
   requirement may be satisfied by courses also used to satisfy any
   part of a student’s degree program (i.e., in General Education,
   College Departmental Requirements, Major Requirements or
   Electives).
   d. Non-Western Studies Requirement for B.A. and B.F.A.; One 3-hour
course in Non-Western Studies (N.W.). This requirement may be
satisfied by courses also used to satisfy any part of a student’s degree
program (i.e., in General Education, College Departmental
Requirements, Major Requirements or Electives).
   e. The College of Arts & Sciences requires a minimum 2.0 GPA in all
major requirements and a minimum 2.0 GPA in all major-prefix
courses applied to the degree.

3. Foreign Language Proficiency
   a. The foreign language requirement for the B.A. may be satisfied by
9 hours college credit in the same language, which must include
3 hours at the 2000-level, or equivalent proficiency (e.g., passing
an advanced standing examination; TOEFL exam; presenting
a high school transcript which demonstrates the high school
was primarily conducted in a language other than English; etc.).
Computer Science courses may not be used to satisfy this
requirement. Currently Arabic and Mvskoke are not offered at the
2000-level at OSU.
   b. The foreign language requirement for the B.S., B.M. and B.F.A.
may be satisfied by presenting a high school transcript which
demonstrates two years of study of a single foreign language
(passing grades at second-year level of study). It may also
be satisfied by 6 hours college credit in the same language,
which must include language courses 1713 and 1813, or
equivalent proficiency (e.g., passing an advanced standing
examination; TOEFL exam; presenting a high school transcript
which demonstrates the high school was primarily conducted in
a language other than English; etc.). Computer Science courses
may not be used to satisfy this requirement.
   c. In addition to a. and b., students pursuing teacher certification
must meet novice-high foreign language proficiency by
presenting a high school transcript which demonstrates two
years of study of a single foreign language with no grade below
B. Or, students may complete 3 hours college credit in a single
language with no grade below C (or pass an advanced standing
examination, College Level Examination Program (CLEP) exam,
or Oral Proficiency Interview developed by the American Council
on the Teaching of Foreign Languages, equivalent to 3 hours of
college credit.) Or, students may meet the requirement by transfer
documentation of meeting the foreign language competency
from one of the teacher education programs in the State of
Oklahoma approved by the Oklahoma State Regents for Higher
Education.

4. Exclusions
   a. Courses used to satisfy the General Education English
Composition, U.S. History, American Government, and
Mathematics or Statistics requirements will not count toward the
54-hour maximum allowed from one department.
   b. Courses with ATHL or LEIS prefixes and leisure activity courses
may not be used for degree credit.

5. Teacher Certification
   Students can satisfy the requirements for secondary schools
teaching certification while earning a B.A. or B.S. in the College
of Arts & Sciences. Those interested should see their Arts and Sciences
advisor and the OSU Professional Education Unit in room 325 Willard.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at
OSU; 15 of the final 30 or 50% of the upper-division hours in the major
field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-
fourth of hours earned by correspondence; 8 transfer correspondence
hours.
- Students will be held responsible for degree requirements in effect at
the time of matriculation and any changes that are made, so long as
these changes do not result in semester credit hours being added or
do not delay graduation.
- Degrees that follow this plan must be completed by the end of
Summer 2025.