Microbiology, BS

Academic Plans

Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the university's Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

Before the third semester begins: BIOL:1411 Foundations of Biology, CHEM:1110 Principles of Chemistry I, CHEM:1120 Principles of Chemistry II, and an approved calculus or biostatistics course.

Before the fifth semester begins: BIOL:1412 Diversity of Form and Function, CHEM:2210 Organic Chemistry I, MICR:2157 General Microbiology, and MICR:2158 General Microbiology Laboratory.

Before the seventh semester begins: seven more courses in the major and at least 90 s.h. earned toward the degree.

Before the eighth semester begins: another 10–12 s.h. of coursework.

During the eighth semester: enrollment in all remaining coursework in the major, all remaining required GE CLAS Core courses, and a sufficient number of semester hours to graduate.

Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Microbiology, BS

- Pre-Medicine Track [p. 1]
- Scholar Track [p. 2]

Pre-Medicine Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Academic Career</td>
<td>GE CLAS Core: Sustainability a</td>
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<tr>
<td>Any Semester</td>
<td>GE CLAS Core: Diversity and Inclusion b</td>
<td>3</td>
</tr>
<tr>
<td>First Year</td>
<td></td>
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<tr>
<td>Fall</td>
<td>CHEM:1110 Principles of Chemistry I b, c</td>
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<td></td>
<td>MATH:1460 Calculus for the Biological Sciences c, d, e</td>
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<td></td>
<td>RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature</td>
<td>3 - 4</td>
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<tr>
<td></td>
<td>CSL:1600 Success at Iowa</td>
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<tr>
<td></td>
<td>Elective course f</td>
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<tr>
<td></td>
<td>Hours</td>
<td>14-15</td>
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<tr>
<td>Spring</td>
<td>BIOL:1411 Foundations of Biology c, g</td>
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<tr>
<td></td>
<td>CHEM:1120 Principles of Chemistry II</td>
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<td></td>
<td>RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature</td>
<td>3 - 4</td>
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<td>Hours</td>
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<tr>
<td>Second Year</td>
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<tr>
<td>Fall</td>
<td>BIOL:1412 Diversity of Form and Function</td>
<td>4</td>
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<td></td>
<td>CHEM:2210 Organic Chemistry I</td>
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<td>GE CLAS Core: Historical Perspectives b</td>
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<td>GE CLAS Core: World Languages First Level Proficiency or elective course i, j</td>
<td>4 - 5</td>
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<td></td>
<td>Elective course f</td>
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<td></td>
<td>Hours</td>
<td>16-17</td>
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<tr>
<td>Spring</td>
<td>MICR:2157 General Microbiology g</td>
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<td></td>
<td>MICR:2158 General Microbiology Laboratory g</td>
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<td>GE CLAS Core: International and Global Issues h</td>
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<td>GE CLAS Core: World Languages Second Level Proficiency or elective course i, j</td>
<td>4 - 5</td>
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<td>Hours</td>
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<tr>
<td>Third Year</td>
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<td>Fall</td>
<td>BMB:3120 Biochemistry and Molecular Biology I</td>
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<td>CHEM:2410 Organic Chemistry Laboratory</td>
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<td>Hours</td>
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<td></td>
<td>Major: advanced microbiology course k</td>
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<tr>
<td></td>
<td>Major: optional research</td>
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<tr>
<td></td>
<td>GE CLAS Core: Social Sciences h</td>
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<tr>
<td></td>
<td>Elective course f</td>
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<td></td>
<td>Elective course f</td>
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<td>Hours</td>
<td>14-16</td>
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<tr>
<td>Spring</td>
<td>Major: advanced microbiology course k</td>
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<tr>
<td></td>
<td>Major: advanced microbiology course k</td>
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<tr>
<td></td>
<td>Major: optional research</td>
<td>1 - 3</td>
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<td>Elective course f</td>
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<td>Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) j</td>
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<td>Hours</td>
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<td>Total Hours</td>
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Students must earn a grade of C or higher in BIOL:1411, or in
Enrollment in math courses requires completion of a placement
Students who have completed four years of a single language in
Enrollment in chemistry courses requires completion of a placement
GE CLAS Core courses may be completed in any order unless used
Complete at least 13 s.h. of advanced microbiology and
Other course options include BIOS:4120, MATH:1550,
See the General Catalog for list of approved courses.
Please see Academic Calendar, Office of the Registrar website for
Fulfills a major requirement and may fulfill a GE requirement.
Other course options include BIOS:4120, MATH:1550,

Scholar Track
Course Title Hours
Academic Career
Any Semester
GE CLAS Core: Sustainability a

First Year
Fall
CHEM:1110 Principles of Chemistry I b, c 4
MATH:1460 Calculus for the Biological Sciences d, e 4
ENGL:1200 or RHET:1030 The Interpretation of Literature 3 - 4
Elective course f 1
CSI:1600 Success at Iowa 2

Spring
BIOL:1411 Foundations of Biology c, g 4
CHEM:1210 Principles of Chemistry II 4
RHET:1030 or ENGL:1200 Rhetoric 3 - 4
GE CLAS Core: Diversity and Inclusion h 3
Elective course f 1

Second Year
Fall
BIOL:1412 Diversity of Form and Function 4
CHEM:2210 Organic Chemistry I 3
MICR:2157 General Microbiology g 3
MICR:2158 General Microbiology Laboratory g 2
GE CLAS Core: World Languages First Level Proficiency 4 - 5
or elective course i

Hours 16-17

Spring
PHYS:1400 Basic Physics h 4
GE CLAS Core: Values and Culture h 3
GE CLAS Core: International and Global Issues h 3
GE CLAS Core: World Languages Second Level Proficiency or elective course i
Elective course f 2

Hours 16-17

Third Year
Fall
GHS:2000 or GHS:2320 Introduction to Global Health Studies or Origins of Human Infectious Disease 3
BMB:3120 Biochemistry and Molecular Biology I 3
Major: advanced microbiology course j 3
Major: advanced microbiology course j 3
GE CLAS Core: World Languages Third Level Proficiency or elective course i

Hours 16-17

Spring
BMB:3130 Biochemistry and Molecular Biology II 3
Major: advanced elective course k 3
GE CLAS Core: Literary, Visual, and Performing Arts h 3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course i

Hours 16-17

Fourth Year
Fall
Major: advanced elective course k 3
Major: advanced microbiology course j 3
Major: optional research 1 - 3
GE CLAS Core: Historical Perspectives h 3
Elective course f 2

Hours 13-15

Spring
Major: advanced microbiology course j 4
Major: optional research 1 - 3
GE CLAS Core: Social Sciences h 3
Elective course f 3
Elective course f 3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) i

Hours 14-16

Total Hours 120-130

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social

- a
- b
- c
- d
- e
- f
- g
- h
- i
- j
- k
- l
- m
- n
- o
- p
- q
- r
- s
- t
- u
- v
- w
- x
- y
- z
Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.
b Enrollment in chemistry courses requires completion of a placement exam.
c Fulfills a major requirement and may fulfill a GE requirement.
d Other course options include BIOS:4120, MATH:1550, MATH:1850, STAT:3510; selecting a course that satisfies the Quantitative or Formal Reasoning GE requirement is recommended.
e Enrollment in math courses requires completion of a placement exam.
f Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
g Students must earn a grade of C or higher in BIOL:1411, or in MICR:2157 and MICR:2158, in order to take more advanced Department of Microbiology and Immunology courses.
h GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
i Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
j Complete at least 14 s.h. of advanced microbiology and immunology courses (prefix MICR) numbered MICR:3147 or above, excluding MICR:3164; see the General Catalog for list of approved courses.
k See the General Catalog for list of approved courses.
l Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.