

Microbiology, B.S.

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, B.S.

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

Pre-Medicine Track

Course	Title	Hours
Academic Career		
Any Semester		
GE CLAS Core: Sustainability ^a		
Hours		0
First Year		
Fall		
CHEM:1110	Principles of Chemistry I ^{b, c}	4
MATH:1460	Calculus for the Biological Sciences ^{c, d, e}	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
CSI:1600	Success at Iowa	2
Elective course ^f		1
Hours		14-15
Spring		
BIOL:1411	Foundations of Biology ^{c, g}	4
CHEM:1120	Principles of Chemistry II	4

RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
GE CLAS Core: Diversity and Inclusion ^h		3
Hours		14-15

Second Year

Fall		
BIOL:1412	Diversity of Form and Function	4
CHEM:2210	Organic Chemistry I	3
GE CLAS Core: Historical Perspectives ^h		3
GE CLAS Core: World Languages First Level Proficiency or elective course ^{f, i}		4 - 5
Elective course ^f		2
Hours		16-17

Spring

MICR:2157	General Microbiology ^g	3
MICR:2158	General Microbiology Laboratory ^g	2
CHEM:2220	Organic Chemistry II	3
GE CLAS Core: International and Global Issues ^h		3
GE CLAS Core: World Languages Second Level Proficiency or elective course ^{f, i}		4 - 5
Hours		15-16

Third Year

Fall		
BMB:3120	Biochemistry and Molecular Biology I	3
CHEM:2410	Organic Chemistry Laboratory	3
PHYS:1511 or PHYS:1611	College Physics I or Introductory Physics I	4
GE CLAS Core: Values and Culture ^h		3
GE CLAS Core: World Languages Third Level Proficiency or elective course ^{f, i}		4 - 5
Hours		17-18

Spring

BMB:3130	Biochemistry and Molecular Biology II	3
PHYS:1512 or PHYS:1612	College Physics II or Introductory Physics II	4
Major: advanced elective course ^j		3
GE CLAS Core: Literary, Visual, and Performing Arts ^h		3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course ^{f, i}		4 - 5
Hours		17-18

Fourth Year

Fall		
Major: advanced microbiology course ^k		3
Major: advanced microbiology course ^k		3
Major: optional research		1 - 3
GE CLAS Core: Social Sciences ^h		3
Elective course ^f		3
Elective course ^f		1
Hours		14-16

Spring

Major: advanced microbiology course ^k		3
Major: advanced microbiology course ^k		4
Major: optional research		1 - 3
Elective course ^f		3

Elective course ^f	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^l	
Hours	14-16
Total Hours	121-131

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 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 See the General Catalog for list of approved courses.

k Complete at least 13 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.

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.

Scholar Track

Course	Title	Hours
Academic Career		
Any Semester		
GE CLAS Core: Sustainability ^a		
Hours		0
First Year		
Fall		
CHEM:1110	Principles of Chemistry I ^{b, c}	4
MATH:1460	Calculus for the Biological Sciences ^{b, d, e}	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4

Elective course ^f	1	
CSI:1600	Success at Iowa	2
Hours		14-15

Spring		
BIOL:1411	Foundations of Biology ^{b, g}	4
CHEM:1120	Principles of Chemistry II	4
ENGL:1200 or RHET:1030	The Interpretation of Literature or Rhetoric	3 - 4
GE CLAS Core: Diversity and Inclusion ^h		3
Elective course ^f		1
Hours		15-16

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 or elective course ⁱ		4 - 5
Hours		16-17

Spring		
PHYS:1400	Basic Physics	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		4 - 5
Elective course ^f		2
Hours		16-17

Third Year		
Fall		
GHS:2320 or GHS:2000	Origins of Human Infectious Disease or Introduction to Global Health Studies	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		4 - 5
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		4 - 5
Elective course ^f		3
Hours		16-17

Fourth Year		
Fall		
Major: advanced elective course ^k		3
Major: advanced microbiology course ^j		4
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 Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Fulfills a major requirement and may fulfill a GE requirement.

c Enrollment in chemistry courses requires completion of a placement exam.

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.