Biology, 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 fifth semester begins: BIOL:1412 Diversity of Form and Function, CHEM:2210 Organic Chemistry I, STAT:2010 Statistical Methods and Computing or STAT:3510 Biostatistics, and two other courses in the major.

Before the seventh semester begins: BIOL:2512 Fundamental Genetics; PHYS:1511 College Physics I and PHYS:1512 College Physics II, or equivalents; six or seven more courses in the major; and at least 90 s.h. earned toward the degree.

Before the eighth semester begins: two or three more courses in the major.

During the eighth semester: enrollment in all remaining coursework in the major, all remaining 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.

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• Cell and Developmental Biology Track [p. 1]
• Genetics and Biotechnology Track [p. 2]
• Integrative Biology Track [p. 2]
• Neurobiology Track [p. 2]

Cell and Developmental Biology Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM:1110</td>
<td>Principles of Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>RHET:1030</td>
<td>or ENGL:1200</td>
<td>3 - 4</td>
</tr>
<tr>
<td>or ENGL:1200</td>
<td>Rhetoric or The Interpretation of Literature</td>
<td></td>
</tr>
<tr>
<td>MATH:1460</td>
<td>Calculus for the Biological Sciences</td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core: Diversity and Inclusion d</td>
<td>3</td>
<td></td>
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Spring

BIOL:1411 Foundations of Biology 4
CHEM:1120 Principles of Chemistry II 4
RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature 3 - 4
GE CLAS Core: Social Sciences d 3

Hours 14-15

Second Year

Any Semester

Research: students interested in research should begin the placement search process in the second year.

Fall

BIOL:1412 Diversity of Form and Function 4
CHEM:2210 Organic Chemistry I 3
STAT:2010 or STAT:3510 Statistical Methods and Computing or Biostatistics 3
GE CLAS Core: World Languages First Level Proficiency or elective course e 4 - 5

Hours 14-15

Spring

BIOL:2512 Fundamental Genetics 4
BIOL:2723 Cell Biology 3
Major: foundation track course, choose from BMB:3110 Biochemistry or BMB:3120 Biochemistry and Molecular Biology I f 3
GE CLAS Core: World Languages Second Level Proficiency or elective course e 4 - 5

Hours 14-15

Third Year

Fall

BIOL:3363 or BIOL:3233 or BIOL:3172 Plant Developmental Biology or Introduction to Developmental Biology or Evolution 3 - 4
Major: foundation track course g 3 - 5
PHYS:1511 College Physics I 4
GE CLAS Core: World Languages Second Level Proficiency or elective course e 4 - 5

Hours 14-18

Spring

BIOL:3172 or BIOL:3363 or BIOL:3233 Evolution or Plant Developmental Biology or Introduction to Developmental Biology 3 - 4

PHYS:1512 College Physics II 4
Major: cell and development biology elective I h 3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course e 4 - 5

Hours 14-16

Fourth Year

Fall

BIOL:3736 or BIOL:3626 Developmental Biology Lab or Cell Biology Laboratory 4
Major: cell and development biology elective II h 3

Hours 14-16
### Integrative Biology Track

This sample plan is being reviewed and will be updated at a later date.

### Neurobiology Track

**Course** | **Title** | **Hours**
---|---|---
CHEM:1110 | Principles of Chemistry I | 4
ENGL:1200 | The Interpretation of Literature | 3 - 4
MATH:1640 | Calculus for the Biological Sciences | 4
GE CLAS Core: Social Sciences | 3
CSI:1600 | Success at Iowa | 2

**Any Semester**

**Fall**
- CHEM:1110 Principles of Chemistry I
- ENGL:1200 or RHET:1030 The Interpretation of Literature or Rhetoric
- MATH:1640 Calculus for the Biological Sciences
- GE CLAS Core: Social Sciences
- CSI:1600 Success at Iowa

**Spring**
- BIOL:1411 Fundations of Biology
- BIOL:2512 Fundamental Genetics
- BIOL:2753 Introduction to Neurobiology
- PHYS:1511 College Physics I
- GE CLAS Core: World Languages Second Level Proficiency or elective course

### Genetics and Biotechnology Track

This sample plan is being reviewed and will be updated at a later date.

### Integrative Biology Track

This sample plan is being reviewed and will be updated at a later date.

### Neurobiology Track

**Course** | **Title** | **Hours**
---|---|---
CHEM:1110 | Principles of Chemistry I | 4
ENGL:1200 | The Interpretation of Literature | 3 - 4
MATH:1640 | Calculus for the Biological Sciences | 4
GE CLAS Core: Social Sciences | 3
CSI:1600 | Success at Iowa | 2

**Any Semester**

**Fall**
- CHEM:1110 Principles of Chemistry I
- ENGL:1200 or RHET:1030 The Interpretation of Literature or Rhetoric
- MATH:1640 Calculus for the Biological Sciences
- GE CLAS Core: Social Sciences
- CSI:1600 Success at Iowa

**Spring**
- BIOL:1411 Fundations of Biology
- BIOL:2512 Fundamental Genetics
- BIOL:2753 Introduction to Neurobiology
- PHYS:1511 College Physics I
- GE CLAS Core: World Languages Second Level Proficiency or elective course

### Genetics and Biotechnology Track

This sample plan is being reviewed and will be updated at a later date.
Biology, B.S.

<table>
<thead>
<tr>
<th>GE CLAS Core: World Languages Second Level</th>
<th>4 - 5 Hours</th>
<th>15-16</th>
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</thead>
<tbody>
<tr>
<td>GE CLAS Core: World Languages Fourth Level</td>
<td>4 - 5 Hours</td>
<td>14-15</td>
</tr>
</tbody>
</table>

### Spring
- Biol:2723 Cell Biology 3
- BMB:3130 Biochemistry and Molecular Biology II 3
- Phys:1512 College Physics II 4
- GE CLAS Core: World Languages Second Level 4 - 5

### Fourth Year
#### Fall
- Biol:3253 Neurobiology I 4
- Biol:3656 Neurobiology Laboratory or Biol:3655 Neurogenetics Laboratory 4
- Major: neurobiology elective 3
- GE CLAS Core: International and Global Issues 3

### Spring
- Biol:3254 Neurobiology II 4
- Major: experiential elective 4
- GE CLAS Core: Literary, Visual, and Performing Arts 3
- GE CLAS Core: Values and Culture 3

### Total Hours
- 116-122

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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. Enrollment in math courses requires completion of a placement exam.

d. 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.

e. 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.

f. Students who take BMB:3120 also must take BMB:3130.

g. See General Catalog for list of approved courses. Students must choose BMB:3130 if BMB:3120 was taken.

h. Students may take an investigative lab for the track. Or, students who use Biol:4999 to fulfill the requirement must complete 6 s.h. in that course; students who use Biol:3994 must complete 5 s.h. in that course in combination with 1 s.h. in Biol:4898; and students who use Biol:4897 or Biol:4806 must complete 4 s.h. in those courses. Students may complete at least 4 s.h. from a combination of Biol:3994, Biol:4213, Biol:4897, Biol:4999, LATH:3001, or an approved biology-related internship.

i. 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.