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.

Biology, BS

- Cell and Developmental Biology Track [p. 1]
- Genetics and Biotechnology Track [p. 2]
- Integrative Biology Track [p. 3]
- Neurobiology Track [p. 4]

Cell and Developmental Biology Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Career</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Sustainability</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Any Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE CLAS Core: Social Sciences</td>
<td></td>
<td>3</td>
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</tbody>
</table>

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: World Languages First Level Proficiency or elective course | 4 - 5 |

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 Second Level Proficiency or elective course | 4 - 5 |

Third Year

Fall

| BIOL:3363 or BIOL:3172 or BIOL:3233 | Plant Developmental Biology or Evolution or Introduction to Developmental Biology | 3 - 4 |
| BIOL:3626 or BIOL:3233 or BIOL:3363 | Developmental Biology or Plant Developmental Biology | 3 - 4 |
| PHY:1512                        | College Physics I                               | 4     |
| BIOL:2723                       | Cell Biology                                    | 3     |
| GE CLAS Core: World Languages Fourth Level Proficiency or elective course | 4 - 5 |

Spring

| BIOL:3172 or BIOL:3233 or BIOL:3363 | Evolution or Introduction to Developmental Biology or Plant Developmental Biology | 3 - 4 |
| PHYS:1512                       | College Physics II                              | 4     |
| BIOL:2723                       | Cell Biology                                    | 3     |
| GE CLAS Core: World Languages Third Level Proficiency or elective course | 4 - 5 |

Fourth Year

Fall

| BIOL:3736 or BIOL:3626         | Developmental Biology Lab or Cell Biology Laboratory | 4     |
| BIOL:1411 or BIOL:3233 or BIOL:3363 | Cell and developmental biology elective | 3     |
| GE CLAS Core: International and Global Issues | 3     |
Elective course $^i$ 3

Spring
Major: cell and developmental biology elective II $^h$ 3
Major: experiential requirement $^j$ 4
GE CLAS Core: Literary, Visual, and Performing Arts $^d$ 3
GE CLAS Core: Values and Culture $^d$ 3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

Hours 13

Total Hours 112-122

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First Year

Fall
CHEM:1110 Principles of Chemistry I $^b$ 4
RHET:1030 or ENGL:1200 Rhetoric or The Interpretation of Literature 3 - 4
MATH:1460 Calculus for the Biological Sciences 4
GE CLAS Core: Diversity and Inclusion $^d$ 3
CSI:1600 Success at Iowa 2

Hours 16-17

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: Values and Culture $^d$ 3

Hours 14-15

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Second Year

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

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Third Year

Fall
BIOL:3110 or BMB:3172 Molecular Genetics $^g$ or Evolution 4
Major: foundation track course $^h$ 3 - 5
GE CLAS Core: World Languages Third Level Proficiency or elective course $^e$ 4 - 5

Hours 14-17

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Spring
BIOL:3134 or BMB:3172 Genomics $^g$ or Evolution 3 - 4
PHYS:1511 College Physics I 4
GE CLAS Core: Social Sciences $^d$ 3

Hours 14-17

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Genetics and Biotechnology Track

Course Title Hours
Academic Career
Any Semester
GE CLAS Core: Sustainability $^a$ 0

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GE CLAS Core: World Languages Fourth Level 4 - 5
Proficiency or elective course 6

Hours  14-16

Fourth Year

Fall

PHYS:1512  College Physics II  4
Major: genetics elective 1 3
Major: experiential elective  4
GE CLAS Core: International and Global Issues 3

Hours  14

Spring

BIOL:3716  Genetics and Biotechnology Lab  4
Major: genetics elective II  3
GE CLAS Core: Historical Perspectives  3
Elective course  k  3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)  l

Hours  13

Total Hours  113-124

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 levels of a single language or two levels of two different languages in high school or college have satisfied the GE CLAS Core World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.
f See General Catalog for list of approved courses. Students who took BMB:3120 must take BMB:3130.
g Two of the three courses need to be taken for this track: BIOL:3172, BIOL:3314, or BIOL:3713. BIOL:3314 is typically only offered during spring semesters.
h Students who take BMB:3120 also must take BMB:3130 as one of their track courses.
i At least one elective must be numbered 3000 or above.
j See General Catalog for list of approved options; some may require more than one semester.
k 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.
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 Degree Services.

Integrative Biology Track

Course  Title  Hours

Academic Career

Any Semester

GE CLAS Core: Sustainability  a
Research: Iowa Lakeside Laboratory summer field courses  b

Hours  0

First Year

Fall

CHEM:1110  Principles of Chemistry I  c  4
ENGL:1200 or RHET:1030  The Interpretation of Literature or Rhetoric  3 - 4
MATH:1460  Calculus for the Biological Sciences  4

GE CLAS Core: Social Sciences  e  3
CSI:1600  Success at Iowa  2

Hours  16-17

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: Diversity and Inclusion  e  3

Hours  14-15

Second Year

Any Semester

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

Hours  0

Fall

BIOL:1412  Diversity of Form and Function  4
CHEM:2210  Organic Chemistry I  3
STAT:3510 or STAT:2010  Biostatistics or Statistical Methods and Computing  3

GE CLAS Core: World Languages First Level Proficiency or elective course  4 - 5

Hours  14-15

Spring

BIOL:2512  Fundamental Genetics  4
BIOL:2673  Ecology  3
PHYS:1511  College Physics I  4
GE CLAS Core: World Languages Second Level Proficiency or elective course  4 - 5

Hours  15-16

Third Year

Fall

BIOL:2723  Cell Biology  3
PHYS:1512  College Physics II  4
Major: foundation track course - BMB:3110 Biochemistry or BMB:3120 Biochemistry and Molecular Biology  3
GE CLAS Core: World Languages Third Level 4 - 5
Proficiency or elective course

| Hours | 14-15 |

**Spring**

BIO:3172  Evolution  4
Major: foundation track course  3 - 5
GE CLAS Core: Historical Perspectives  3
GE CLAS Core: World Languages Fourth Level  4 - 5
Proficiency or elective course

| Hours | 14-17 |

**Fourth Year**

**Fall**

Major: investigative lab  4
Major: biological systems course  3
GE CLAS Core: International and Global Issues  3
Elective course  3

| Hours | 13 |

| Hours | 13 |

**Spring**

Major: genes and genomes course  3
Major: experiential elective  4
GE CLAS Core: Literary, Visual, and Performing Arts  3
GE CLAS Core: Values and Culture  3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

| Hours | 13 |

**Total Hours**  113-121

**Neurobiology Track**

**Course**

**Title**

**Hours**

**Academic Career**

**Any Semester**

GE CLAS Core: Sustainability  

| Hours | 0 |

**First Year**

**Fall**

CHEM:1110  Principles of Chemistry I  4
ENGL:1200  The Interpretation of Literature  3 - 4
MATH:1460  Calculus for the Biological Sciences  4
GE CLAS Core: Social Sciences  3
CSI:1600  Success at Iowa  2

| Hours | 16-17 |

**Spring**

BIO:1411  Foundations of Biology  4
CHEM:1120  Principles of Chemistry II  4
ENGL:1200  The Interpretation of Literature  3 - 4
MATH:1460  Calculus for the Biological Sciences  4
GE CLAS Core: Diversity and Inclusion  3

| Hours | 14-15 |

**Second Year**

**Any Semester**

Research: Students interested in research should begin the placement search process in the second or third year.

| Hours | 0 |

**Fall**

BIO:1412  Diversity of Form and Function  4
CHEM:2210  Organic Chemistry I  3
STAT:3510  Biostatistics  3
BIOL:3510  Introduction to Neurobiology  3
GE CLAS Core: World Languages First Level  4 - 5
Proficiency or elective course

| Hours | 14-15 |

**Spring**

BIO:2753  Fundamental Genetics  4
PSY:2701  Introduction to Neurobiology  3
GE CLAS Core: Historical Perspectives  3
GE CLAS Core: World Languages Second Level  4 - 5
Proficiency or elective course

| Hours | 14-15 |
### Third Year

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>BIOL:2723</td>
<td>Cell Biology 3</td>
</tr>
<tr>
<td>BMB:3110</td>
<td>Biochemistry I 3</td>
</tr>
<tr>
<td>or BMB:3120</td>
<td>Biochemistry and Molecular Biology I 3</td>
</tr>
<tr>
<td>PHYS:1511</td>
<td>College Physics I 4</td>
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<tr>
<td>GE CLAS Core: World Languages Third Level Proficiency or elective course e</td>
<td>4 - 5</td>
</tr>
</tbody>
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| Hours        | 14-15 |

### Spring

<p>| |</p>
<table>
<thead>
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<th></th>
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<tbody>
<tr>
<td>BMB:3130</td>
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<tr>
<td>PHYS:1512</td>
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<tr>
<td>Major: neurobiology elective I g</td>
</tr>
<tr>
<td>GE CLAS Core: World Languages Fourth Level Proficiency or elective course e</td>
</tr>
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| Hours        | 14-16 |

### Fourth Year

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<thead>
<tr>
<th>Fall</th>
<th></th>
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<tbody>
<tr>
<td>BIOL:3253</td>
<td>Neurobiology I 4</td>
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<tr>
<td>BIOL:3245</td>
<td>Animal Behavior Laboratory 4</td>
</tr>
<tr>
<td>or BIOL:3656</td>
<td>Neurobiology Laboratory 4</td>
</tr>
<tr>
<td>or BIOL:3655</td>
<td>Neurogenetics Laboratory 4</td>
</tr>
<tr>
<td>Major: neurobiology elective II h</td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core: International and Global Issues d</td>
<td>3</td>
</tr>
</tbody>
</table>

| Hours        | 14 |

<table>
<thead>
<tr>
<th>Spring</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>BIOL:3254</td>
<td>Neurobiology II 4</td>
</tr>
<tr>
<td>Major: experiential elective i</td>
<td>4</td>
</tr>
<tr>
<td>GE CLAS Core: Literary, Visual, and Performing Arts d</td>
<td>3</td>
</tr>
<tr>
<td>GE CLAS Core: Values and Culture d</td>
<td>3</td>
</tr>
</tbody>
</table>

| Hours        | 14 |

| Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) j |  |

| Hours        | 14 |

| Total Hours  | 114-121 |

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