Animal Systems Option

All Biotechnology Options have the same Freshman and Sophomore year requirements.

### Freshman Year

<table>
<thead>
<tr>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>WRIT 101W - College Writing I</td>
<td></td>
<td></td>
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<tr>
<td>BIOB 105CS - Introduction to Biotechnology</td>
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<tr>
<td>BIOB 170IN - Principles of Biological Diversity</td>
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<tr>
<td>CHMY 141 - College Chemistry I</td>
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</tbody>
</table>

Select one of the following:

- BIOB 318 - Biometry
- STAT 216Q - Introduction to Statistics
- M 165Q - Calculus for Technology I

- BIOB 160 - Principles of Living Systems
- or BIOB 260 - Cellular and Molecular Biology

- CHMY 143 - College Chemistry II

Select one of the following:

- M 161Q - Survey of Calculus
- M 166Q - Calculus for Technology II

University Core and Electives

**Year Total:**

### Sophomore Year

<table>
<thead>
<tr>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>BIOB 375 - General Genetics</td>
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<td></td>
</tr>
<tr>
<td>CHMY 321 - Organic Chemistry I</td>
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<td></td>
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<tr>
<td>or CHMY 211 - Elements of Organic Chemistry</td>
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<tr>
<td>BIOM 360 - General Microbiology</td>
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<tr>
<td>CHMY 323 - Organic Chemistry II</td>
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<tr>
<td>ECNS 101IS - Economic Way of Thinking</td>
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</table>

University Core and Electives

**Year Total:**

### Junior Year

<table>
<thead>
<tr>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>BCH 380 - Biochemistry</td>
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</tr>
<tr>
<td>BIOM 457 - Research Methods in Immunology</td>
<td>5</td>
<td></td>
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<tr>
<td>University Core and Electives</td>
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<td></td>
</tr>
<tr>
<td>BIOM 400 - Medical Microbiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BIOM 455R - Research Methods in Microbiology</td>
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</tr>
</tbody>
</table>

Chose one of the following:

- ANSC 265 - Anatomy and Physiology of Domestic Animals - Lecture
- ANSC 266 - Anatomy and Physiology of Domestic Animals - Lab
- BIOH 201 - Human Anatomy and Physiology I
- or BIOH 211 - Human Anatomy and Physiology II

University Core and Elective

**Year Total:**

### Senior Year

<table>
<thead>
<tr>
<th>Credits</th>
<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>PHSX 205 - College Physics I</td>
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<td></td>
</tr>
<tr>
<td>University Core and Electives</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>BIOH 445 - Introduction to Pharmacology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BIOM 494 - Seminar/Workshop</td>
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- BIOM 498R - Biotech Internship 1-4
- PHSX 207 - College Physics II 4
- BIOB 424 - Ethical Practice of Science 3
- BIOM 494 - Seminar/Workshop 1

University Core and Electives

**Year Total:**

**Total Program Credits:** 54-57

* If a student takes BIOB 318 Biometry or STAT 216Q Introduction to Statistics, then the student must take M 161Q Survey of Calculus. If a student takes M 165Q Calculus for Technology I, then the student must take M 166Q Calculus for Technology II.

* If a student takes CHMY 321 Organic Chemistry I, the student must take CHMY 323 Organic Chemistry II.

* BIOH 201 Human Anatomy and Physiology I may also be taken in the spring.

### Recommended Electives

- ANSC 320 Animal Nutrition 3
- ANSC 321 Physiology of Animal Reproduction 4
- ANSC 322 Principles of Animal Breeding and Genetics 3
- ANSC 337 Disease of Domestic Livestock 3
- ANSC 421 Assisted Reproduction Technologies w/ Lab 4
- BCH 441 Biochemistry of Macromolecules 3
- BCH 442 Metabolic Regulation 3
- BCH 444R Biochemistry & Molecular Biology Methods 3
- BIOB 425 Adv Cell & Molecular Biology 3
- BIOB 410 Immunology 3
- BIOH 201 Human Anatomy and Physiology I 5
- BIOH 211 Human Anatomy and Physiology II 4
- BIOH 405 Hematology 3
- BIOH 445 Introduction to Pharmacology 3
- BIOM 431 Medical Bacteriology 3
- BIOM 435 Virology 3
- BIOM 450 Microbial Physiology 3
- BIOO 310 Comparative Vertebrate Anatomy 4
- BIOO 412 Animal Physiology 3
- EQUUS 327 Equine Lameness 3
- EQUUS 346 Equine Reproductive Management 4
- BIOM 492 Independent Study 1-3
- BIOM 490R Undergraduate Research 1-6

* CHMY 211 Elements of Organic Chemistry serves as the prerequisite for additional Chemistry courses, which are required in the Biotechnology Degree, Animal Systems Option. Graduate departments at some universities require that students have one year of organic Chemistry. Therefore, students potentially interested in graduate school can take the CHMY 321/CHMY 323 series of organic Chemistry during their sophomore year.

** If one of these is used as a departmental requirement, then it cannot count as elective credits.

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 or above.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.