# Bachelor of Science in Biology

**2021-2022 Catalog**

**Overall Requirements to Graduate**
- 120+ semester hours
- Completion of core curriculum
- Completion of a major
- 36 upper division credit hours
- GPA above 2.0
- Major GPA above 2.0
- Minor/Program complete (optional)

## Core Curriculum (46 hours)

### Theology (9 credit hours)
- Must take in order. (Pre-req: Phil 1311 or 1315/3315)
  - THEO 1301/3301 Intro to Sacred Scriptures
  - THEO 2301/3311 Teachings of the Catholic Church
  - THEO 3349 Christ and the Moral Life (Phil 2314 or 2316/3316)

### Philosophy (9 credit hours)
- Choose one sequence:
  - Systematic Sequence (must take in order)
    - PHIL 1311 Philosophy of the Human Person
    - PHIL 2314 Ethics
    - PHIL 3313 Metaphysics
  - Historical Sequence (must take in order)
    - PHIL 1315/3315 Ancient Philosophy
    - PHIL 2316/3316 Medieval Philosophy
    - PHIL 3317 – Modern Philosophy

### Synthesis Course (3 credit Hours)
- Choose one synthesis course from the Synthesis Course List.

### English (9 credit hours)*
- Must take in order.
  - ENGL 1341 The Classical Tradition: Literature & Composition I
  - ENGL 1342 The Middle Ages: Literature & Composition II
  - ENGL 2312 The Modern World: Literature & Composition III
  - *Students with transfer credit:
    - 3 transfer credits: Take 1341/1342 (left)
    - 6 transfer credits: Take ENGL 3312 (below)
    - ENGL 3312 Perspectives in World Lit.

### History (6 credit hours)
- Choose one pair of courses:
  - World History
    - HIST 1335 World Community I
    - HIST 1336 World Community II
  - U.S. History
    - HIST 2333 U.S. History to 1877
    - HIST 2334 U.S. History since 1877

### Social and Behavioral Sciences (6 credit hours)
- Choose one option:
  - Social and Behavioral Sciences Option
    - Choose two courses from the Social and Behavioral Sciences Core course list.
  - Social and Behavioral Sciences + Oral Communication Option
    - Choose one course from the Social & Behavioral Sciences Core course list.
    - Choose one course from the Communication Core Course list.

### Natural Sciences (8-10 credit hours)
- Choose one option:
  - Natural Sciences Option (8 credit hours)
    - Choose two lecture/laboratory courses from the Natural Sciences Core course list.
  - Natural Sciences + Modern and Classical Language Option (10 credit hours)
    - Choose one lecture/laboratory course from the Natural Sciences Core course list.
    - Choose two sequential courses in a language. Courses must be completed in order

### Mathematics (3 credit hours)
- Choose one course from the Mathematics Core Course list.

### Fine Arts (3 credit hours)
- Choose one course from the Fine Arts Core Course list.

### Freshman Symposium (1 credit hour)
- Required for all incoming freshmen.
  - UNIV 1111 Freshman Symposium

## Credit Hour Breakdown

<table>
<thead>
<tr>
<th>Hours completed</th>
<th>Hours in progress</th>
<th>Core hours needed</th>
<th>Major hours needed</th>
<th>(Minor hours needed)</th>
<th>(Other hours needed)</th>
<th>Elective hours needed</th>
<th>TOTAL HOURS (120+)</th>
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**Last updated on November 3, 2021**

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## 2021-2022 Catalog

### Major Requirements (66 credit hours)

<table>
<thead>
<tr>
<th>Biology (21 credit hours)</th>
<th>Complete</th>
<th>Needed</th>
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<tbody>
<tr>
<td>- BIOL 1351/1151 – Introduction to Population Biology and Evolution w/ lab</td>
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<tr>
<td>- BIOL 1352/1152 – Introduction to Cell and Molecular Biology w/ lab</td>
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<tr>
<td>- BIOL 3321/3121 – Genetics &amp; Genetics &amp; Molecular Biology Lab (BIOL 1351/1151/1352/1152, CHEM 1341/1141/1342/1142)</td>
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<tr>
<td>- BIOL 3331 – Ecology* or BIOL 3341 Marine Biology* (the course used for this requirement cannot also count in the section below, but the other choice may be taken and used below)</td>
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<tr>
<td>- BIOL/CHEM 3334 – Biochemistry (CHEM 2343/2143)</td>
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<td>- BIOL 4332 – Evolution (Capstone) (BIOL 3321, senior standing)</td>
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<tr>
<th>Biology Research Methods (3 credit hours)</th>
<th>Complete</th>
<th>Needed</th>
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</thead>
<tbody>
<tr>
<td>- BIOL 3194 Introduction to Biological Research (BIOL 1351/1151/1352/1152, CHEM 1341/1141/1342/1142)</td>
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<tr>
<td>- BIOL 4194 Guided Biological Research (BIOL 3194 and 50 independent lab research hours)</td>
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<tr>
<td>- BIOL 4195 Biology Senior Thesis (BIOL 4194 and 100 independent lab research hours)</td>
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### Additional Upper Division Biology Courses (22 credit hours)

Choose six lecture courses and 4 lab courses. For 3 HR courses with 1 HR lab it is recommended to take them together. 4 HR courses include the lecture and the lab. *Courses marked with an asterisk require completion of BIOL 3321 Genetics.

#### 3 HR Lecture Courses:
- BIOL 3331 Ecology
- BIOL 3345 Physiology (BIOL 1352/1152, CHEM 1342/1142)
- BIOL 3333 Microbiology*
- BIOL 3339 Neuroscience*
- BIOL 3341 Marine Biology*
- BIOL 3351 Molecular Biology*
- BIOL 3362 Cancer Biology*
- BIOL 4321 Nucleic Acids*
- BIOL 4336 Cells, Genes & Molecules (BIOL 3334, 3351)
- BIOL 4334 Pathogenic Microbiology*

#### 1 HR Lab Courses:
- BIOL 3121 Genetics & Molecular Lab (BIOL 3321)
- BIOL 3133 Microbiology Lab*
- BIOL/CHEM 3134 Biochemistry Lab (CHEM 2343/2143)
- BIOL 3151 Advanced Molecular Biology Lab* (BIOL 3334)
- BIOL 4154 Pathogenic Microbiology Lab*

#### 4 HR Lecture Courses:
- BIOL 3448 Comparative Anatomy & Lab*
- BIOL 3461/3061 Cell Biology & Lab*
- BIOL 4449 Immunology & Lab*

### Chemistry (12 credit hours)

Must take in order:
- CHEM 1341/1141 General Chemistry I and laboratory
- CHEM 1342/1142 General Chemistry II and laboratory
- CHEM 2343/2143 Organic Chemistry I and laboratory (CHEM 1342/1142)

### Physics (4 credit hours)
Choose one of the following:
- PHYS 1331/1111 General Physics I w/ lab
- PHYS 2333/2111 University Physics I w/ lab (MATH 1431)

### Mathematics (4 credit hours)
Choose one from the following:
- MATH 1431 Calculus I (MATH 1331 with a C or better)
- MATH 3450/1050 Biostatistics I (6 credit hours math or science)

### Electives

**Note:** All biology students must complete a Major Field Test prior to graduation**

Last updated on November 3, 2021