# REQUIREMENTS FOR THE BIOLOGY MAJOR

Please consult [http://biology.uoregon.edu/advising/](http://biology.uoregon.edu/advising/) or the Biology Advising Center in 65 Klamath (541-346-4525) for most current information. Course offerings noted Fall (F), Winter (W), Spring (S), Summer (U) are tentative.

## RESIDENCY & GRADE REQUIREMENTS:
24 credit hours of Biology applied to the Major must be taken at the University of Oregon. All Biology (BI prefix) courses used to meet the Major requirements must be passed with a C-, P or better.

## CHEMISTRY, MATH, MAPS & PHYSICS: (C-, P, or better grades required after fall 2015)

**CHEMISTRY, MATH, MAPS** (Modelling, Analysis, Programming & Statistics)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Terms</th>
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<tbody>
<tr>
<td>General Chemistry</td>
<td>12 cr</td>
<td>F, W, S</td>
</tr>
<tr>
<td>General Chemistry Lab</td>
<td>6 cr</td>
<td>F, W, S</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>8 cr</td>
<td>F, W, S</td>
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<tr>
<td>Calculus for Biological Sci or Calculus</td>
<td>8 cr</td>
<td>F, W, S</td>
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<tr>
<td>MAPS</td>
<td>4 cr</td>
<td>F, W, S</td>
</tr>
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**PHYSICS**

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Terms</th>
</tr>
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<tbody>
<tr>
<td>General or Foundations of Physics</td>
<td>4 cr</td>
<td>F, W, S</td>
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### LOWER DIVISION BIOLOGY:

#### Option A. Biology Honors Sequence
Enrollment requires B- or better in CH 223 (or CH 226H) and MATH 111 or higher.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BI 281H Cells, Biochemistry &amp; Physiology</td>
<td>5 cr</td>
</tr>
<tr>
<td>BI 282H Genetics &amp; Molecular Biology</td>
<td>5 cr</td>
</tr>
<tr>
<td>BI 283H Evolution, Diversity &amp; Ecology</td>
<td>5 cr</td>
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#### Option B. General Biology Sequence
Enrollment requires C- or better in college-level chemistry lecture course (CH 111, 113, 114, 221 or 224H).

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BI 211 Cells</td>
<td>4 cr</td>
</tr>
<tr>
<td>BI 212 Organisms</td>
<td>4 cr</td>
</tr>
<tr>
<td>BI 213 Populations</td>
<td>4 cr</td>
</tr>
<tr>
<td>BI 214 Mechanisms</td>
<td>4 cr</td>
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### UPPER DIVISION BIOLOGY:
Complete a minimum of 44 upper division Biology credits including 1, 2, and 3 below:

1. **At least one course completed from Areas I, II, and III.**

   **Area I: Cellular/Molecular**
   - BI 320 Molecular Genetics     4 cr
   - BI 322 Cell Biology (Main & OIMB) 4 cr
   - BI 328 Developmental Biology  4 cr
   - BI 360 Neurobiology           4 cr

   **Area II: Systems/Organisms**
   - BI 330 & 331 Microbiology & Lab 6 cr
   - BI 353 Sensory Physiology      4 cr
   - BI 356 Animal Physiology       5 cr
   - BI 358 Investigations in Medical Physiology 4 cr
   - BI 359 Plant Biology           4 cr
   - BI 399 Visual System           4 cr
   - BI 451 Invertebrate Biology/Zoology (OIMB only) 8 cr

   **Area III: Ecology/Evolution**
   - BI 357 Marine Biology          4 cr
   - BI 370 Ecology                 5 cr
   - BI 372 Field Biology           4 cr
   - BI 374 Conservation Biology    4 cr
   - BI 375 Biological Diversity    4 cr
   - BI 380 Evolution               4 cr
   - BI 390 Animal Behavior (Main & OIMB) 4 cr

2. **At least two courses at the 300 or 400 level with a major laboratory or field component**

   **Approved lab/field courses:**

3. **At least 12 credits with a BI prefix numbered 420 to 499.** This includes BI 410 experimental courses.

   For details about individual courses, please consult the Biology Advising Center, 65 Klamath Hall or call 541-346-4525.

4. **MAPS:** One course required from: BI 399 Sp St Experimental Design & Statistics (OIMB only), BI 410 Introduction to Programming for Biologists, BI 410 Matlab for Biologists, BI 473 Quantitative Ecology, BI 485 Techniques in Computational Neuroscience, ANTH 470 Statistical Analysis of Biological Anthropology, GEOL 418 Earth & Environmental Data Analysis, Math 425 Statistical Methods I. *(Applies to all BI students who entered fall 2017 or later.)*

*Last updated 10/11/17*
ADDITIONAL COURSES THAT MEET THE 44-CREDIT UPPER DIVISION REQUIREMENT:

1. **Research, Teaching & Workshops with credit limitations:**

   **BI 401 Research or BI 402 Supervised College Teaching:** A maximum of 4 credits of BI 401 Research and a maximum of 4 credits of BI 402 Supervised College Teaching may be applied to the 44-credit upper division Biology requirement. Faculty sponsorship is required.

   **BI 408 OIMB Summer Workshops:** A maximum of 4 credits of BI 408 OIMB Summer Workshops may be applied to the 44-credit upper division Biology requirement.

2. **Courses approved for use from other departments:** A maximum of 10 credits may be applied toward the 44-credit upper division Biology requirement. These courses cannot be substituted for Areas I, II, and III or 420–499 course requirements. R.D. Clark Honors College, HC 400-level science colloquia taught by Biology faculty may also be approved as outside department courses. For details about individual courses, please consult the Biology Advising Center, 65 Klamath Hall or call 541-346-4525. For all approved courses, the 10-credit maximum still applies.

   ANTH  CIS  CHEM  ENVS  GEOG  GEOL  HPHY  LA  PSY  STATS
   376  467  445  360  467  375  323  431  321  441  304  ANTH 470
   459  468  454  461  427  421  432  322  438  GEOL 418
   460  470  471  462  465  423  433  323  445  MATH 425
   462  472  463  477  434  324  449  PSY 302

ADDITIONAL LIMITATIONS & ALLOWANCES WITHIN THE 44-CREDIT UPPER DIVISION REQUIREMENT:

- BI 357 Marine Biology may not be taken for credit after credit is received for either BI 458 Biological Oceanography or BI 474 Marine Ecology.
- BI 403 Thesis, BI 405 Reading, BI 406 Field Studies, BI 407 Seminar, BI 408 Laboratory Projects, BI 409 Practicum may be applied toward the University of Oregon’s 62-credit upper division requirement, but cannot be applied toward the Biology major 44-credit upper division requirement.