REQUIREMENTS FOR THE BIOLOGY MAJOR

Please consult http://biology.uoregon.edu/advising/ or our staff in 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 courses used to meet the major requirements must be passed with a C-, P or better.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Semester(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Chemistry</td>
<td>12 cr</td>
<td>F, W, S, (U 221, 222, 223)</td>
</tr>
<tr>
<td>General Chemistry Lab</td>
<td>6 cr</td>
<td>F, W, S, (U 227, 228, 229)</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>8 cr</td>
<td>F, W, S, (U 331, 335, 336)</td>
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<tr>
<td>Calculus for Biological Sci or Calculus</td>
<td>8 cr</td>
<td>F, W, S, (U 251,252)</td>
</tr>
<tr>
<td>MAPS</td>
<td>4 cr</td>
<td>F, W, S, U TBA</td>
</tr>
<tr>
<td>General or Foundations of Physics</td>
<td>12 cr</td>
<td>F, W, S, (U 201, 202, 203)</td>
</tr>
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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.

- BI 281H Cells, Biochemistry & Physiology 5 cr
- BI 282H Genetics & Molecular Biology 5 cr
- BI 283H Evolution, Diversity & Ecology 5 cr

**Option B. General Biology Sequence.** Enrollment requires C- or better in college-level chemistry lecture course (CH 111, 113, 114, 221 or 224H).

- BI 211 Cells 4 cr
- BI 212 Organisms 4 cr
- BI 213 Populations 4 cr
- BI 214 Mechanisms 4 cr

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 326 Immunology & Infectious Disease 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 380 Evolution 4 cr
   - BI 390 Animal Behavior (Main & OIMB) 4 cr
   - BI 395 Tropical Ecology 4 cr

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

   **Approved lab/field courses:** BI 306, 307, 328, 330 & 331, 355, 356, 357, 370, 372, 401*, 410 Mar Micro: Phytoplankton, 410 Ecological Field Methods, 421, 425, 432, 442, 448, 451, 452, 454, 455, 457, 458, 459, 468, 474, ONEO 488: BI Ecuador Field Study. This requirement may be fulfilled while completing other Biology Major requirements. Course details in the UO catalog. *Two terms of BI 401 in the same laboratory equivalent to one lab/field course.

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 & General Science Advising Center.

4. **MAPS:** One course required from: BI 399 Sp St Experimental Design & Statistics (OIMB only), BI 399 Computational Genomics, BI 410 Introduction to Programming for Biologists, BI 410 Matlab for Biologists, BI 410 Analysis Neural Data, BI 410 Ecological Field Methods, BI 410 Advanced Modeling Biology, BI 485 Techniques in Computational Neuroscience, ANTH 470 Statistical Analysis of Biological Anthropology, GEOL 418 Earth & Environmental Data Analysis, Math 425 Statistical Methods I.
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 & General Science 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  | 468 | 445  | 360  | 467  | 375  | 323  | 418| 321 | 441   |
    | 459  | 470 | 471  | 461  | 427  | 421  | 433  | 322| 438 | 445   |
    | 462  | 472 | 463  | 462  | 466  | 423  | 434  | 323| 434 | 444   |
    | 463  | 487 | 467  | 463  | 477  | 324  | 321  | 441| 302 | ANTH 470+ |
    | 467  |  |     |      |      |      |      |    |     | 304 | GEOL 418+ |
    | 462  | 472 | 465  | 423  | 434  | 323  | 322  | 441| 302 | MATH 425+ |
    | 463  | 487 | 477  | 324  |      |      |      |    |     | 445 | PSY 302   |
    | 467  |     |      |      |      |      |      |    |     | 449 | + MAPS satisfying |

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.

Last updated 3/5/21