

Lower Division Department Requirements for the Biology Major:

University of Oregon Courses	Qtr. Credits	PCC Course Equivalents	Qtr. Credits
CH 221, 222, 223 General Chemistry I, II, II+ labs CH 227, 228, 229	18	CH 221, 222, 223 General Chemistry I, II, III	15
CH 331 and 335 or 336 Organic Chemistry	8	No PCC equivalent	-
MATH 246, 247 Calculus for the Biological Sciences I & II or MTH 251, 252 Calculus I, II	8	MTH 251, 252 Calculus I, II	9
PHY 201, 202, 203 General Physics or PHY 251, 252, 253 General Physics with Calculus	12	PHY 201, 202, 203 General Physics or PHY 211, 212, 213 General Physics with Calculus	12 or 15
Option A: Biology Honors Sequence BI 281H Genetics & Molecular Biology BI 282H Evolution, Diversity & Ecology BI 283H Cells, Biochemistry & Physiology or Option B: General Biology Sequence: BI 211 Cells BI 212 Organisms BI 213 Populations BI 214 Mechanisms	15-16	Option A: Honors sequence needs to be taken at UO or Option B: BI 211, 212, 213 Principles of Biology BI 214 Mechanisms needs to be taken at UO	- 15

In addition to the departmental requirements listed above, students must also complete coursework for university admission, general education requirements, and BA/BS requirements. Meet with a PCC Academic Advisor to develop an effective transfer plan that will meet your individual needs.

PCC DEGREE/TRANSFER INFORMATION:

Associate of Arts/Oregon Transfer (AAOT) Degree – The courses listed above may be included in the AAOT degree. Students who complete this degree and are accepted at Oregon public universities will be admitted as having completed all lower division comprehensive and General Education requirements for a baccalaureate degree.

Associate of Science (AS) Degree – The courses listed above may be included in the AS degree. The degree does NOT guarantee that students will be accepted as having completed all lower division comprehensive and General Education requirements for a baccalaureate degree. Student should work with an Academic Advisor to plan for transfer to the school and major of their choice.

Transfer without a PCC Degree – Students may elect to earn credits and transfer to a four-year institution without earning a PCC degree. Please meet with an Academic Advisor for an individualized plan of study.

PCC endeavors to create accurate transfer guides for students; however, requirements may change without notice. Students are responsible for working with PCC advisors and their transfer institution to ensure that their academic plan will meet requirements and timelines.

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A brief review of some of the requirements for the Biology major:

MATH

Most students take mathematics their first year at U of O. Unless you have prior Advanced Placement/International Baccalaureate/College Now credit for college calculus you will need to take a math placement test (usually during IntroDUCkTion) to determine which class is the most appropriate. The test will more accurately reflect your level if you review the math you've done in the past. Placement information and sample questions can be viewed at <http://www.uoregon.edu/~testing/math.htm>. The math sequence for Biology majors is MATH 111 (College Algebra), MATH 112 (Elementary Functions), and MATH 246 & 247 (Calculus for the Biological Sciences I & II).

CHEMISTRY

General - The CH 221, 222, 223 sequence with labs (CH 227, 228, 229), is the one taken most commonly by Biology majors. To be eligible for this sequence you must have had chemistry in high school and have completed or be enrolled in MATH 111 College Algebra. If you haven't had previous chemistry, you should take CH 111 Introduction to Chemical Principles (offered in the Summer & Fall terms), prior to taking CH 221.

Organic - For the Biology Major, a minimum of two Organic Chemistry courses are required. After CH 331 Organic Chemistry I, Biology majors are required to successfully complete one additional Organic Chemistry course, either CH 335 Organic Chemistry II or CH 336 Organic Chemistry III. Those interested in graduate programs in medicine, dentistry, biomedicine or allied health should complete a full year of Organic Chemistry lectures (CH 331, 335, 336) with two laboratories (CH 337, 338). Many medical schools require upper-division Genetics and/or Biochemistry, thus we suggest BI 320 Molecular Genetics and/or CH 360 Physiological Biochemistry. Students are urged to contact specific institutions to confirm admission requirements.

PHYSICS

The Biology major requires a year sequence of General Physics, most commonly PH 201, 202, 203, which has MATH 112 as a prerequisite. Some students prefer to take physics with calculus, which requires MATH 246/251 as a pre- or corequisite. Physics laboratories are not required for the Biology major, but do remember that medical schools and many other graduate and health professional programs often require physics with laboratories.

BIOLOGY

Biology majors have two options (both with laboratories) for completing lower division Biology in order to prepare for upper division courses: (1) the General Biology sequence or (2) the Honors Biology sequence. The General Biology sequence spans 4 terms (4 credits/term), begins either in the fall or the winter, and includes BI 211 Cells, BI 212 Organisms, BI 213 Populations, and BI 214 Mechanisms. To begin this sequence, students must have completed a college-level, general chemistry course (CH 221 General Chemistry I or CH 111 Introduction to Chemical Principles at U of O or an equivalent course from another institution). The Honors Biology sequence spans 3 terms (5 credits/term), begins during the winter and includes BI 281H Genetics & Molecular Biology; BI 282H Evolution, Diversity and Ecology; and BI 283H Cells, Biochemistry & Physiology. To enter our Honors sequence, students must have strong backgrounds in Math & Chemistry. Freshmen may enter if their high school preparation is rigorous - for example, if it includes strong performance in AP or IB courses in Chemistry and Math. Alternatively, students who have earned a B- or better in the relevant UO courses (Math 111 and CH 224H or CH 221) may enter the sequence as sophomores. After completing the General or Honors Biology sequence, students must successfully complete (> C-/P) 44 credits of upper-division Biology. Please see Requirements for the Biology Major for specific details about upper division requirements.

INTERNATIONAL BACCALAUREATE (IB) OR ADVANCED PLACEMENT (AP) CREDIT

A score of 5 or more on the IB higher level Biology exam provides 12 credits for the General Biology courses BI 211 Cells, 212 Organisms, 213 Populations. An AP Biology Score of 4 or higher provides eight general education University credits of 100-level Biology (BI 1xxT, BI 1xxT) and 4 credits for the first course in our General Biology sequence (BI 211 Cells). AP credit for Chemistry is granted as CH 221, 222, 223 with scores of 3, 4 or 5. Credit is not awarded for the laboratory so students are required to take the laboratory sequence (CH 227, 228, 229). We encourage you to discuss your placement and options with us.