



**California State Polytechnic University, Pomona
Degree Curriculum Sheet**

Plan (Major) **Biology**

Catalog Year **2016 - 2017**

Name _____

Subplan/Option **Zoology**

Minimum Units Required **180**

Student ID _____

Required Core Courses

BIO 122/122L - Foundations of Biology: Reproduction and Development (3/2)
 BIO 123/123L - Foundations of Biology: Biodiversity (3/2)
 BIO 211/211L - Biometrics (3/1)
 BIO 303 - Genetics (4)
 BIO 490 - Scientific Communication (1)

Total Units 19

Required Subplan/Option Core Courses

BIO 310 - Cell and Molecular Biology (4)
 BIO 325/325L - Principles of Ecology (3/1)
 BIO 413 - Principles of Evolution (4)
 ZOO 237/237L - Introduction to Invertebrate Zoology (3/2)
 ZOO 238/238L - Introduction to Vertebrate Zoology (3/2)
 ZOO 428/428L - Animal Physiology (4/1)

Total Units 27

Elective Subplan/Option Core Courses

22 units of upper division courses must be completed from approved courses included in one of two clusters (Physiology and Neuroscience/Biodiversity and Systematics). Students do not need to declare a cluster. Courses may be chosen from either of the two clusters indicated below; however, a minimum of 3 units must be completed from each cluster. See below for approved courses.

Physiology and Neuroscience

BIO 320 - Developmental Biology (4)
 BIO 320L - Developmental Biology Laboratory (1)
 BIO 410 - Biophysics (4)
 BIO 424 - Neuroscience (4)
 BIO 426/426L - Neuroanatomy (4/1)
 BIO 428/428L - Cellular Physiology (4/1)
 BIO 431/431L - Radiation Biology (3/1)
 BIO 450 - Concepts of Molecular Biology (4)
 BIO 451 - Molecular Biology Techniques (3)
 BIO 451L - Molecular Biology Techniques Laboratory (2)
 BIO 455/455L - Molecular Biology of Recombinant DNA (2/2)
 BIO 465 - Stem Cell Biology (3)
 BIO 465L - Stem Cell Biology Lab (1)
 BIO 499/499A/499L - Special Topics for Upper Division Students (1-4/1-4/1-4) (Lecture Component Only)
 ZOO 422/422L - Histology (2/3)
 ZOO 439/439L - Evolutionary Ecomorphology (2/2)

Biodiversity and Systematics

BIO 330/330L - Marine Biology (3/1) (Lecture Component Only)
 BIO 418 - Population Ecology (3)
 BIO 442/442L - Marine Ecology (3/2)
 BIO 464 - Biology of Species Invasions (3)
 BOT 343/343L - California Flora (1/2)
 ZOO 426/426L - Entomology (3/1)
 ZOO 429/429L - Herpetology (3/2)
 ZOO 435/435L - Ornithology (3/1)

Total Units 22

Required Support Courses

The following major support courses should be used to satisfy the indicated GE requirements. If these courses are not used to satisfy GE, the total units to degree may be more than 180 units.

BIO 121/121L - Foundations of Biology: Energy and Matter - Cycles and Flows (3/2) (B2, B3)

BIO 304 - Environment and Society (4) (B5) or
 BIO 340 - Biodiversity Conservation (4) (B5)

CHM 121 - General Chemistry (3) (B1) and
 CHM 121L - General Chemistry Laboratory (1) (B3)

CHM 122 - General Chemistry (3) and
 CHM 122L - General Chemistry Laboratory (1)

CHM 123 - General Chemistry (3) and
 CHM 123L - General Chemistry Laboratory (1)

CHM 201 - Elements of Organic Chemistry (3) and
 CHM 250L - Elements of Organic Chemistry Laboratory (1)

CHM 321/321L - Elements of Biochemistry (3/1)

ENG 130 - Freshman English II (4) (A3) or
 PHL 202 - Critical Thinking (4) (A3)

ENG 107 - Stretch Composition III (4) (A2) or
 ENG 109 - Advanced Stretch Composition II (4) (A2) or
 ENG 110 - First-Year Composition (4) (A2)

MAT 120 - Calculus for the Life Sciences (4) (B4)

PHY 121 - College Physics (3) and
 PHY 121L - College Physics Laboratory (1)

PHY 122 - College Physics (3) and
 PHY 122L - College Physics Laboratory (1)

PHY 123 - College Physics (3) and
 PHY 123L - College Physics Laboratory (1)

STA 120 - Statistics with Applications (4) (B4)

FN 203 - Health, Nutrition and the Integrated Being (4) (E)
 or

PSY 201 - General Psychology (4) (E)

or
 PSY 210 - Mind, Brain, and Behavior: An Integrated View (4) (E)

or
 SCI 101/101A - Science and Mathematics: Freshman Experience I (1/1) (E) and
 SCI 102/102A - Science and Mathematics: Freshman Experience II (1/1) (E)

Total Units 61

Elective Support Courses

Approved electives include any 200, 300, or 400-level courses in the Biological Sciences Department not specifically designed for non-majors. Only 2 units of BIO 200 or BIO 400 allowed. Only 4 units of BIO 441 or BIO 461 allowed. Only 2 units of BIO 462 allowed.

Approved electives include any advanced chemistry or math course. See advisor for approval of courses offered by other departments.

Total Units 11

General Education Requirements

Area A Communication & Critical Thinking (12 units)

1. Oral Communication
2. Written Communication
3. Critical Thinking

Area B Mathematics & Natural Sciences (16 units)

1. Physical Science
2. Biological Science
3. Laboratory Activity
4. Math/Quantitative Reasoning
5. Science & Technology Synthesis

Area C Humanities (16 units)

1. Visual and Performing Arts
2. Philosophy and Civilization
3. Literature and Foreign Language
4. Humanities Synthesis

Area D Social Sciences (20 units)

1. U.S. History, Constitution, American Ideals
 - a. United States History
 - b. Introduction to American Government
2. History, Economics and Political Science
3. Sociology, Anthropology, Ethnic & Gender Studies
4. Social Science Synthesis

Area E Lifelong Understanding & Self Development (4 units)

Total Units 68

American Institutions

Courses that satisfy this requirement may also satisfy GE Area D1

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American Cultural Perspectives Requirement

Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.

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All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the quarter following completion of 120 units for undergraduates.