



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

Plan (Major) Biology
Subplan/Option Zoology

Catalog Year 2012-2013
Minimum Units Required 180

Name _____
Student ID _____

TGA _____
GWT Satisfied Yes No

| Required Core Courses | | |
|--------------------------|--------------|-----------|
| Course | | Units |
| Foundations of Biology | BIO 122/122L | 3/2 |
| Foundations of Biology | BIO 123/123L | 3/2 |
| Biometrics | BIO 211/211L | 3/1 |
| Genetics | BIO 303 | 4 |
| Scientific Communication | BIO 490 | 1 |
| Total Units | | 19 |

| Required Subplan/Option Core Courses | | |
|--------------------------------------|--------------|-----------|
| Course | | Units |
| Cell and Molecular Biology | BIO 310 | 4 |
| Principles of Ecology | BIO 325/325L | 3/1 |
| Principles of Evolution | BIO 413 | 4 |
| Intro to Invertebrate Zoology | ZOO 237/237L | 3/2 |
| Intro to Vertebrate Zoology | ZOO 238/238L | 3/2 |
| Animal Physiology | ZOO 428/428L | 4/1 |
| Total Units | | 27 |

| Elective Subplan/Option Core Courses | | |
|---|--|-----------|
| Course | | Units |
| Upper division courses are selected from approved courses in two clusters (see back). | | 22 |
| Total Units | | 22 |

| Required Support Courses | | |
|---|--------------------|-----------|
| Course | | Units |
| Foundations of Biology (B2, B3) | BIO 121/121L | 3/2 |
| Environment and Society (B5) or Biodiversity Conservation (B5) | BIO 304 BIO 340 | 4 (4) |
| General Chemistry (B1, B3) | CHM 121/121L | 3/1 |
| General Chemistry | CHM 122/122L | 3/1 |
| General Chemistry | CHM 123/123L | 3/1 |
| Organic Chemistry | CHM 201/250L | 3/1 |
| Elements of Biochemistry | CHM 321/321L | 3/1 |
| Freshman English I (A2) | ENG 104 | 4 |
| Freshman English II (A3) | ENG 105 | 4 |
| Calculus for Life Sciences (B4) | MAT 120 | 4 |
| College Physics | PHY 121/121L | 3/1 |
| College Physics | PHY 122/122L | 3/1 |
| College Physics | PHY 123/123L | 3/1 |
| Statistics with Applications (B4) | STA 120 | 4 |
| Health, Nutrition & Integrated Being (E) | FN 203 | 4 |
| or General Psychology (E) | PSY 201 | (4) |
| or Mind, Brain & Behavior: Integrated View (E) | PSY 210 | (4) |
| or Sci. and Mathematics: Freshmen Exp. I (E) | SCI 101/101A | (1/1) |
| -and- | | |
| Sci. and Mathematics: Freshmen Exp. II (E) | SCI 102/102A | (1/1) |
| Total Units | | 61 |

| Elective Support Courses | | |
|--|--|-----------|
| Course | | Units |
| 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. | | 11 |
| Total Units | | 11 |

| General Education Requirements | | |
|---|--|-----------|
| Area | | Units |
| Area A Communication & Critical Thinking | | 12 |
| 1 Oral Communication | | |
| 2 Written Communication | | |
| 3 Critical Thinking | | |
| Area B Mathematics & Natural Sciences | | 16 |
| <i>Select at least one lab course from sub-area 1 or 2.</i> | | |
| 1 Physical Science | | |
| 2 Biological Science | | |
| 3 Laboratory Activity | | |
| 4 Math/Quantitative Reasoning | | |
| 5 Science & Technology Synthesis | | |
| Area C Humanities | | 16 |
| 1 Visual and Performing Arts | | |
| 2 Philosophy and Civilization | | |
| 3 Literature and Foreign Language | | |
| 4 Humanities Synthesis | | |
| Area D Social Sciences | | 20 |
| 1 U.S. History, Constitution, American Ideals | | |
| 2 History, Economics and Political Science | | |
| 3 Sociology, Anthropology, Ethnic & Gender Studies | | |
| 4 Social Science Synthesis | | |
| Area E Lifelong Understanding & Self Development | | 4 |
| Total Units | | 68 |

| American Institutions | Units |
|---|-------|
| Courses that satisfy this requirement may also satisfy G.E. Area D1 | 8 |

| American Cultural Perspectives Requirement | Units |
|---|-------|
| Refer to catalog for list of courses that satisfy this requirements. Course may also satisfy major, minor, GE, or unrestricted elective requirements. | 4 |

The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet.

| Course | GE Area |
|--|---------------------------------|
| Freshman English I | ENG 104 A2 |
| Freshman English II | ENG 105 A3 |
| General Chemistry | CHM 121/121L B1, B3 |
| Foundations of Biology | BIO 121/121L B2, B3 |
| Calculus for Life Sciences | MAT 120 B4 |
| or Statistics with Applications | STA 120 (B4) |
| Environment and Society | BIO 304 B5 |
| or Biodiversity Conservation | BIO 340 (B5) |
| Health, Nutrition & Integrated Being | FN 203 E |
| or General Psychology | PSY 201 (E) |
| or Mind, Brain & Behavior: Integrated View | PSY 210 (E) |
| or Sci. and Mathematics: Freshmen Exp. I and Exp. II | SCI 101/101A & SCI 102/102A (E) |

The remaining GE requirements may be satisfied by any course approved for that area.

No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree.
A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

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 | | |
|--------------------------------------|--------------|--------------|
| Course | | Units |
| Developmental Biology | BIO 320/320L | (4/1) |
| Biophysics | BIO 410 | (4) |
| Neuroscience | BIO 424 | (4) |
| Neuroanatomy | BIO 426/426L | (4/1) |
| Cellular Physiology | BIO 428/428L | (4/1) |
| Radiation Biology | BIO 431/431L | (3/1) |
| Concepts of Molecular Biology | BIO 450 | (4) |
| Molecular Biology Techniques | BIO 451 | (3) |
| Molecular Biology Techniques Lab | BIO 451L | (2) |
| Molecular Biology of Recombinant DNA | BIO 455/455L | (2/2) |
| Neuromuscular Physiology | BIO 499 | (4) |
| Histology | ZOO 422/422L | (2/3) |
| Evolutionary Ecomorphology | ZOO 439/439L | (2/2) |

| Biodiversity and Systematics | | |
|-------------------------------------|--------------|--------------|
| Course | | Units |
| Marine Biology | BIO 330 | (3) |
| Population Ecology | BIO 418/418L | (2/1) |
| Marine Ecology | BIO 442/442L | (3/2) |
| Biology of Species Invasions | BIO 464 | (3) |
| California Flora | BOT 343/343L | (1/2) |
| Entomology | ZOO 426/426L | (3/1) |
| Herpetology | ZOO 429/429L | (3/2) |
| Ornithology | ZOO 435/435L | (3/1) |