California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) **ENVIRONMENTAL BIOLOGY**
Subplan/Option _____

Catalog Year **2017-2018**
Minimum Units Required **180**

Name _____
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)
BOT 201/201L - Form and Function in Plants (3/1)
ZOO 201/201L - Animal Biology (3/1)
BIO 211/211L - Biometrics (3/1)
BIO 303 - Genetics (4)
BIO 325/325L - Principles of Ecology (3/1)
BIO 413 - Principles of Evolution (4)

BIO 441 - Internship in Biology (1-2) or
BIO 461 - Undergraduate Research (2)

Total Units 36

Elective Core Courses

At least 18 units from the primary cluster and the remaining 13 units from the other cluster (totaling to the required 31 units for Elective Core Courses). At least 15 units must be taken at the 400 or 500 level. See "Upper-Division Course Clusters" listed on the back of the curriculum sheet.

Total Units 31

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.

Support Courses for Cluster 1:
BIO 121/121L - Foundations of Biology: Energy and Matter - Cycles and Flows (3/2) (B2, B3)
BIO 304 - Environment and Society (4) (B5)
BIO 340 - Biodiversity Conservation (4)

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)

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

GEO 240/240A - Introduction to Geographic Information Systems (3/1)

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Required Support Courses Con't.

GSC 111 - Principles of Geology (4)
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)

PLT 231/231L - Basic Soil Science (3/1)
RS 302 - Global Regenerative Systems (4) (D4)

Support Courses for Cluster 2:
BIO 121/121L - Foundations of Biology: Energy and Matter - Cycles and Flows (3/2) (B2, B3)
BIO 304 - Environment and Society (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 314 - Organic Chemistry (3) and
CHM 317L - Organic Chemistry Laboratory (1)

CHM 315 - Organic Chemistry (3) and
CHM 318L - Organic Chemistry Laboratory (1)

CHM 316 - Organic Chemistry (3)

CHM 327 - Biochemistry (3) and
CHM 327L - Biochemistry Laboratory (1)

CHM 328 - Biochemistry (3) and
CHM 328L - Biochemistry Laboratory (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)
MIC 201/201L - Basic Microbiology (3/1)

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

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

PLT 231/231L - Basic Soil Science (3/1)
RS 302 - Global Regenerative Systems (4) (D4)

Total Units 69-72

Unrestricted Electives

Select a sufficient number of courses so that the total from "Required Support", "GE", and "Unrestricted Electives" is at least 113 units.

Total Units 0-4

General Education Requirements

Area A Communication & Critical Thinking
1. Oral Communication
2. Written Communication
3. Critical Thinking

Area B Mathematics & Natural Sciences
Select at least one lab course from subarea 1 or 2.
1. Physical Science
2. Biological Science
3. Laboratory Activity
4. Math/Quantitative Reasoning
5. Science & Technology Synthesis

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

Area D Social Sciences
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

Total Units 68

American Institutions Courses that satisfy this requirement may also satisfy GE Area D1	8

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.	4

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.

Cluster 1 - Ecology, Conservation, and Biodiversity

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)
BIO 528 - Community Ecology (3)
BIO 540 - Biogeography (3)
BOT 343/343L - California Flora (1/2)
BOT 433/433L - Marine Botany (2/2)
BOT 434/434L - Evolution of Plants (3/2)
BOT 428/428L - Plant Physiology (4/1)
MIC 435/435L - Microbial Ecology (2/2)
MIC 436/436L - Plant-Microbe Interactions (2/2)
ZOO 426/426L - Entomology (3/1)
ZOO 429/429L - Herpetology (3/2)
ZOO 430/430L - Mammalogy (2/2)
ZOO 435/435L - Ornithology (3/1)
ZOO 441/441L - Ichthyology (2/2)
GEO 410 - Photographic Remote Sensing (4)
GEO 420 - Digital Image Processing (4)
GEO 445/445A - Environmental Modeling With Geographic Information Systems (3/1)
GSC 323/323L - Geomorphology (3/1)
PLS 315 - Politics of Public Policy (4)
PLT 334/334L - Soil Resource Management and Conservation (3/1)
PLT 437/437L - Environmental Sustainable Agriculture (3/1)
RS 301 - Life Support Processes (4)
RS 303 - Organization for Regenerative Practices (4)

Cluster 2 - Environmental Microbiology and Biotechnology

BIO 310 - Cell and Molecular Biology (4)
BIO 420 - Water Pollution Biology (3)
BIO 431/431L - Radiation Biology (3/1)
BIO 465 - Stem Cell Biology (3)
BIO 465L - Stem Cell Biology Lab (1)
CE 351/351L - Environmental Engineering/Laboratory (3/1)

CHM 329 - Biochemistry (3) and
CHM 329L - Biochemistry Laboratory (1)

CHM 460 - Air Pollution Problems (3)
GEO 413 - Environmental Law (4)
MIC 310/310L - Applied Microbiology (3/2)
MIC 330 - General Epidemiology (4)
MIC 410/410L - Medical Bacteriology (3/2)
MIC 428/428L - Microbial Physiology (4/1)
PLT 303 - Pesticide and Hazardous Material Laws (3)
PLT 411 - Environmental Toxicology (4)
PLT 431/431L - Soil Chemistry (3/1)

Up to 4 units of BIO 441 and/or BIO 461 and 2 units of BIO 462 may count towards core electives.
Note: *500-level courses: No more than 13 units may be counted toward an undergraduate degree. Students must have senior standing and at least a 2.75 GPA. A special petition must be filed to receive undergraduate credit for graduate courses taken as a senior.