**ECS Bachelor of Science Tracks**

**Conservation Biology**

BIL 150/151 General Biology + lab (4 + 1 cr.)

BIL 160/161 Evolution & Biodiversity + lab (4 + 1 cr.)

*12 credits of the following (must include 3 credits in the field/lab category).*

BIL 226 General Botany (3 cr)

BIL 220 Evolution and Disease (3 cr)

BIL 230 Marine Biology (3 cr)

BIL 250 Genetics (3 cr)

BIL 315 – Marine Biota and Biogeochemical Cycles (3 cr)

BIL 316 – Global Primary Production (3 cr)

BIL 330 Ecology (3 cr)

BIL 350 – Survey of Marine Mammals (3 cr)

BIL 360 – Comparative Physiology (3 cr)

BIL 385 Special topics in biology: Conservation and Protected Areas (3 cr)

BIL 415 – Coral Reef Science and Management (3 cr)

BIL 433 Conservation in Practice\* (3 cr)

BIL 435 Origins, Ecology and Conservation in Insular Diversity (3 cr)

BIL 441 Animal Behavior (3 cr)

BIL 539 Conservation and Protected Areas (3 cr)\*\*

Other approved conservation-related course

**Field/Lab category:**

BIL 221 Biology of Birds (4 cr)

BIL 227 General Botany Laboratory (1 cr)

BIL 231 Marine biology lab (1 cr)

BIL 321 Invertebrate Zoology

BIL 331 Ecology lab (1 cr)

BIL 332 Ecology and Land Use in the Galapagos (3 cr)\*

BIL 432 Ecology in the Galapagos (3 cr)

BIL 466 Environmental Physiology: Oxygen, Water, and Ionoregulatory Stress (1 cr)

BIL 525 Herpetology in the Galapagos (3 cr)\*

Other approved field or lab biology course

22 credits total. Completion of track also satisfies a minor in biology.

Courses marked with an \* are part of the current listings for the fall UGalapagos semester. If/when these courses are changed, the new offerings will take their place here.

\*\*BIL 539 (co-listed with ECS 403) taken to satisfy the Conservation Biology track cannot also satisfy the ECS 403 core course requirement; a separate ECS 403 section must be taken.

**Environmental Chemistry**

*Three of the following (must include 2 labs):*

CHM 201 + 205 (Organic Chemistry I + lab) (3 + 1 cr)

CHM 202 + 206 (Organic Chemistry II + lab) (3 + 1 cr)

CHM 360 + 364 (Physical Chemistry I + lab) (3 + 1 cr)

CHM 365 + 464 (Physical Chemistry II + lab) (3 + 1 cr)

CHM 401 (Environmental Chemistry)

*(Note: CHM 111/113, 112/114 must be taken before the Chemistry concentration. Fulfillment of the Chemistry concentration earns a Chemistry minor.)*

**Environmental Health**

*Three of the following:*

CAE 340 (Environmental Pollution)

CHM 201 + 205 (Organic Chemistry I + lab) (3 + 1 cr)

EPH 580 (Vector-Borne Diseases)

MIC 301 (Intro to microbiology and immunology)

MIC 322 (Medical parasitology)

*(Note: BIL 150/151, 160/161 and CHM 121, 221, 222 should be taken before the Environmental Health concentration.)*

**Geology**

GSC 260 (Earth Materials) (4 cr)

 *Plus two of the following:*

GSC 360 (Depositional and Diagenetic Systems) (4 cr)

GSC 380 (Paleontology and Stratigraphy) (4 cr)

GSC 410 (Environmental Geochemistry) (3 cr)

GSC 420 (Geophysics) (3 cr)

GSC 480 (Structural Geology) (4 cr)

GSC 550 (Hydrogeology) (3 cr)

*(Note: GSC110/114 and 111 should be taken before the Geology concentration. This plus the Geology concentration earns a minor in geological sciences.)*

**Geospatial Certificate**

GEG 199 (Intro to GIS)

GEG 391 (Intermediate GIS)

GEG 392 (Environmental Remote Sensing)

 *Plus two of the following:*

GEG 410 (Intro to Microwave Imaging and SAR)

GEG 491 (GIS and Environmental Modeling)

GEG 545 (Special Topics: Web-GIS)

GEG 545 (Special Topics: Advanced SAR Techniques and Applications)

GEG 545 (Special Topics: GIS in Public Health)

*(Note: Fulfillment of the Geospatial Certificate PLUS GEG 110 earns a geography minor. This minor does NOT qualify for an Arts and Sciences BS; students completing the geospatial certificate concentration must complete an additional minor in one of the following for an Arts and Sciences BS: biology, chemistry, computer science, geology, marine science, mathematics, physics.)*

**Mathematics**

MTH 359 (Mathematical Models in Biology and Medicine)

 *Plus 2 of the following:*

MTH 210 (Linear Algebra)

MTH 310 (Multivariable Calculus)

MTH 311 (Intro to Ordinary Differential Equations)

*(Note: Calculus II must be taken before the Mathematics concentration. Fulfillment of the Mathematics concentration earns a mathematics minor.)*