

**Course Options for Biology Majors**  
**Participating in Messiah-Approved Off-Campus Study**  
*Messiah College EpiCenter*

*August 1, 2008*

The following is a listing of courses that we have identified as possible options for students in your department. **This list is fluid and constantly changing.** Please use this as a guide to help identify programs that might work with your curriculum. However, please refer to current course listings for actual courses that will be offered the semester that you are studying off campus.

**Code    Course**

**Au Sable Institute**

BIOL 351 Bioethics: Bridge to the Future  
BIOL 489 Wetland Ecology  
BIOL 443 Capstone Seminar and Practicum  
ENVST 352 Ecological Issues in Science and Religion  
BIOL 403 Ecology of African Agriculture  
ENVST 368 Environmental History of the Pacific Northwest  
BIOL 266 Natural History of the Pacific Northwest  
BIOL 361 Field Natural History  
BIOL 452 Intro to Environmental Medicine and Public Health  
ENVST 357 Introduction to Geographic Information Systems  
BIOL 450 Introduction to Tropical Medicine  
BIOL 486 Land Stewardship Ecology  
BIOL 318 Marine Biology  
BIOL 306 Ornithology: Western Birds  
BIOL/GEOG 306 Pacific Rim Development and Ecological Sustainability  
ENVST 380 Principles of Environmental Education and Interpretation  
BIOL 499 Research  
BIOL 490 Research Methods I  
BIOL 491 Research Methods II  
BIOL 483 Restoration Ecology Applications  
BIOL 400 Special Topics in Environmental Studies  
BIOL 346 Stream Ecology and Watersheds  
BIOL 333 Summer Flora  
BIOL 348 The Ecology of Commerce  
BIOL 326 Town and Country Stewardship Planning  
BIOL 343 Tropical Agriculture and Missions  
BIOL 355 Watershed Stewardship  
BIOL 489 Wetland Ecology

**Great Lakes –**

BIOL 310 Winter Biology  
ENVST 350 Environmental Ethics  
BIOL 305 Ornithology: Eastern Birds  
BIOL 315 Woody Plants  
BIOL/GEOG/GEOG 301 Land Resources  
BIOL 311 Field Botany  
BIOL 321 Animal Ecology  
BIOL 322 Aquatic Biology

BIOL 411 Advanced Field Botany  
BIOL/GEOG 471 Conservation Biology  
BIOL 487 Forest Ecology  
GEOL/GEOG 216 Field Geology  
BIOL 302 Limnology (Water Resources)  
BIOL 312 Insect Biology and Ecology  
CHEM 332 Environmental Chemistry  
BIOL 342 Fish Biology and Ecology  
BIOL/GEOG 457 Bioregional Models for Environmental Stewardship  
BIOL 482 Restoration Ecology

**Pacific Rim –**

ENVST/BIOL/INT 353 Appropriate Technology & Stewardship Praxis  
BIOL 344 Pacific Salmon and Fisheries Stewardship  
ENVST/INT 370 Stewardship Art  
BIOL 377 Marine Invertebrates  
BIOL 417 Marine Stewardship  
BIOL 477 Plant Ecology  
GEOL/GEOG 217 Field Geology of the Pacific Northwest  
BIOL/AGR/GEOG 303 Ecological Agriculture  
BIOL/GEOG 304 Global Development and Ecological Sustainability  
BIOL 311 Field Botany  
BIOL 359 Marine Mammals

**India –**

BIOL 427 Ecology of the Indian Tropics  
BIOL/GEOL/GEOG 309 Land Resources of South India  
BIOL 330 Birds and Mammals of South India  
BIOL 479 Tropical Mountain Ecology

**East Coast –**

BIOL/GEOG 267 Natural History of the Chesapeake

**Africa –**

BIOL 307 Birds on the African Tropics  
BIOL/GEOG 308 Development and Ecological Sustainability in Africa  
BIOL 319 Tropical Botany  
BIOL 329 Mammals of East Africa

**City University – Athens**

SCI 302 Astronomy  
SCI 303 Oceanography  
SCI 304 Meteorology  
NAS 215 Environmental Science

**Creation Care Study Program**

**Belize -**

Tropical Ecosystems  
God and Nature  
Introduction to Sustainable Community Development

**New Zealand –**

Ecosystems of the South Pacific  
God and Nature  
Introduction to Sustainable Community Development

**Houghton in Tanzania**

BIOL 207 Wildlife Behavior in East Africa  
BIOL 212 Advanced Wildlife Behavior in East Africa

**Latin American Studies Program**

Tropical Science and Sustainable Development Concentration  
Science Seminar  
Field Research

**University of Gloucestershire- Cheltenham, ENGLAND (BCA)**

BIO106 Practical Environmental Investigations  
BIO107 Introducing Fieldwork  
BIO109 Data Handling and Presentation  
BIO112 Scientific Thinking  
BIO121 Life on Earth: Diversity and Adaption  
BIO122 Life on Earth: Ecology  
BIO123 Cells to Organisms  
BIO124 Environmental Physiology of Plants and Animals  
BIO221 Evolution, Adaptation and Extinction  
BIO222 Microbial Systems  
BIO223 Population Biology  
BIO224 Animal Behaviour  
BIO225 Invertebrate Biology  
BIO226 Aquatic Systems  
BIO321 Parasites and Disease  
BIO322 Microbiology and Biotechnology  
BIO323 Biology and Ecology of Social Insects  
BIO324 Evolutionary and Behavioural Ecology  
BIO325 Marine Biology  
BIO326 Wilderness and Wildlife  
BIO327 Palaeoecology  
BIO328 Environmental Pollution  
EL100 Environment and Society  
EL101 Environment and Society  
EL102 Management at Work  
EL103 The Decision Makers  
EL104 Town and Country Planning  
EL105 Community and Locality  
EL106 Action with Communities  
EL108 Project Management with Communities  
EL109 Finance and Resources for Community Organisations  
EL110 Procedures for Local Council Administration  
EL111 Law for Local Councils  
EL121 Global Development Issues  
EL122 People, Place and Change  
EL123 Earth Surface Processes and Landforms  
EL124 Earth and Atmosphere Systems  
EL125 Environmental Data Handling  
EL127 Understanding and Producing Maps  
EL128 Earth's Story: Inheriting Landscape from Deep Time Processes

EL129 The Making of the English Landscape  
EL141 Places by Design  
EL142 Design Method  
EL143 Plant Knowledge  
EL144 Graphic Expression  
EL145 Site Planning  
EL146 Small Scale Landscapes  
EL163 Bioscience/Geoscience Fieldweek  
EL164 The Living Landscape  
EL165 Resources  
EL166 Practical Environmental Investigation  
EL184 Genetics and Evolution  
EL188 Life on Earth: Diversity & Adaptation  
EL189 Life on Earth: Ecology  
EL190 Cells to Organisms  
EL191 Laboratory Skills  
EL199 Skills for Sustainability  
EL201 Fieldweek  
EL202 Investigative Methods  
EL204 Environmental Management in Organisations  
EL205 Concepts of Heritage  
EL208 Managing the Rural Environment  
EL210 Community Development Theory and Practice  
EL219 Development of Skills in the Workplace  
EL221 Social Change and Space  
EL222 Economic Change and Location  
EL224 Environmental Hazards  
EL225 Geomorphology: Landscape Form and Process  
EL226 Ice Age Earth  
EL227 Ecosystems  
EL228 Environmental Impact Assessment  
EL229 Local Environmental Action  
EL231 Geographic Information Systems and Remote Sensing  
EL232 Images of the Developing World  
EL234 Population Collapse? Environmental Change and Sustainability  
EL238 Symbolic Landscapes  
EL242 Design in the Community  
EL243 Soil and Plant Relationships  
EL244 Formal and Informal Gardens  
EL245 Built Landscapes  
EL246 Hard Technology Project  
EL247 Soft Technology Project  
EL248 Integrated Design Project  
EL264 Evolution, Adaptation and Extinction  
EL269 Hydrological Processes  
EL270 Water and Water Quality  
EL282 Comparative Environmental Physiology  
EL286 Microbial Systems  
EL288 Population Biology  
EL289 Animal Behaviour  
EL291 Invertebrate Biology

EL338 Biogeography  
EL372 Fieldwork Projects  
EL398 Independent Study  
EZ102 Language and Ecology  
GEO103 Earth Systems and Processes  
PY107 Biological Basis of Behaviour

**University of San Francisco in Quito - Quito, ECUADOR (BCA)**

AGR 100 Introducción a la Agricultura  
AGR 203 Fisiología Vegetal  
AGR 211 Suelos y Conservación de Suelos  
AGR 213 Horticultura  
AGR 221 Fertilidad y Manejo de Suelos  
AGR 222 Nutrición y Reproducción Animal  
AGR 223 Fruticultura  
AGR 225 Mecanización Agrícola  
AGR 227 Microbiología Agrícola  
AGR 234 Manejo de Recursos Hídricos  
AGR 311 Cultivos I (Sierra)  
AGR 312 Producción Animal I  
AGR 314 Tecnología de Semillas  
AGR 322 Producción Animal II  
AGR 324 Entomología Agrícola  
AGR 330 Cultivos II (Trópico)  
AGR 401 Cultivos Controlados  
AGR 422 Floricultura  
AGR 424 Proyectos Agropecuarios  
AGR 485 Manejo Poscosecha  
BIO 100 Biología Básica  
BIO 101 Introducción a la Biología  
BIO 105 Sensory Neuroscience  
BIO 140 Biología General  
BIO 151 Introducción a la Neurociencia  
BIO 155 Mind and the Brain  
BIO 160 Brain and Behaviour  
BIO 201 Flora y Fauna del Ecuador  
BIO 202 Botánica General y Sistemática  
BIO 222 Zoología  
BIO 233 Evolución  
BIO 235 Genética General  
BIO 250 Microbiología Aplicada  
BIO 265 Neurociencia Avanzada  
BIO 303 Fisiología Animal  
BIO 305 Entomofauna del Ecuador  
BIO 306 Ictiofauna del Ecuador  
BIO 311 Ornitofauna del Ecuador  
BIO 314 Mastozoología Neotropical  
BIO 321 Mamíferos Marinos  
BIO 322 Entomología Aplicada  
BIO 323 Herpetología Ecuatoriana  
BIO 327 Biología de Peces

BIO 330 Invertebrados Marinos  
BIO 332 Biología de Invertebrados  
BIO 334 Aves Marinas  
BIO 352 Biofísica  
BIO 363 Plantas Útiles  
BIO 364 Plantas Medicinales  
BIO 365 Biología de Algas Marinas  
BIO 401 Seminario de Bioética  
BIO 405 Dendrología del Ecuador  
BIO 411 Filogenia y Biosistemática  
BIO 420 Anatomía Comparada  
BIO E01 Estudios Independientes de Biología  
BTC 111 Introducción a la Biotecnología  
BTC 300 Biotecnología de Alimentos II  
BTC 301 Microbiología de Alimentos  
BTC 307 Microbiología Patogénica  
BTC 310 Biotecnología de Animales  
BTC 340 Biología Molecular  
BTC 351 Biodiversidad y Biotecnología  
BTC 402 Inmunología  
BTC 405 Marcadores Moleculares  
BTC 441 Bioseguridad  
BTC 450 Bioremediación  
ECL 101 Ecología y Recursos del Ecuador  
ECL 112 Introducción a la Ecología  
ECL 114 Introducción a la Ecología Marina  
ECL 116 Certificación de Buceo  
ECL 200 Ecología Básica  
ECL 250 Ecología y Biogeografía  
ECL 300 Ecología de Poblaciones y Comunidades  
ECL 309 Plancton y Productividad  
ECL 310 Ecología Humana  
ECL 321 Introducción a la Oceanografía  
ECL 322 Introducción a los Ecosistemas Marinos  
ECL 332 Técnicas de Investigación en Ecología  
ECL 333 Prácticas de Ecología Campo  
ECL 335 Técnicas de Investigaciones en Ecología Marina  
ECL 340 Ecología de Agua Dulce  
ECL 342 Ecología Poblacional de Recursos Marinos y Pesca  
ECL 353 Ecología y Conservación de Galápagos  
ECL 373 Comunidades del Ecosistema Intermareal  
ECL 403 Áreas Marinas Protegidas  
ECL 405 Tropical Montane Ecology  
ECL 406 Tropical Coastal Ecology  
ECL 407e Tropical Rain Forest Ecology  
ECL 408 Studies in Tropical Ecology  
ECL 421 Ecología Forestal y Silvicultura  
ECL 460 Modelos Ecológicos  
ECL E04 Estudios Independientes de Ecología  
ECL S05 Comunicación Animal  
ECL S06 Ecología del Comportamiento

REC 230 Economía de Recursos Naturales  
REC 310 Aspectos de Comunicación Ambiental  
REC 312 Negociación Ambiental  
REC 313 Educación Ambiental  
REC 320 Agroecología General  
REC 321 Ecología y Recursos Marinos  
REC 331 Tortugas Marinas  
REC 335e Environmental Studies  
REC 340 Energías Renovables  
REC 351 Conservación y Manejo de Vida Silvestre  
REC 355 Manejo y Conservación de Ecosistemas y Recursos Marinos  
REC 373 Planificación de Proyectos Ambientales  
REC 405 Desarrollo Sustentable y Manejo de Recursos Renovables  
REC 410 Áreas Protegidas  
REC 412 Recursos Hídricos, Manejo, Protección, Tratamiento  
REC 417 Sensores Remotos e Interpretación de Imágenes  
REC 418 Introducción a Sistemas de Información Geográfica  
REC 424 Manejo de Turismo Sustentable  
REC 425 Manejo de Turismo Sustentable I  
REC 426 Manejo de Turismo Sustentable II  
REC 427 Biodiversidad y Distribución de Especies Marinas  
REC 428 Mercadeo de Servicios Turísticos para Turismo Sostenible  
REC 429 Circuitos de Turismo Receptivo  
REC 440 Interpretación de Atractivos Naturales y Culturales  
REC 452 Principios de Acuicultura Marina  
REC 460 Políticas Ambientales  
REC 463 Biocomercio  
REC 470 Plantificación Regional  
REC 476 Evaluación Ambiental  
REC 480 Elementos de Ingeniería Ambiental  
RECE01T Estudios Independientes de Recursos Naturales  
REC S04 Globalización y Ambiente  
REC S06 Arte y Reciclaje  
REC S08 Prácticas para Turismo de Aventura