

Environmental Science Co-Major (Effective May 2015, updated Feb 2018)

This co-major emphasizes earth science and life science approaches to understanding environmental patterns and processes. Students are prepared to pursue a wide variety of career paths and post-graduate degrees in environmental science, especially those with biological and physical science specializations. The term “co-major” indicates that students must complete another major at Miami University. The co-major complements this primary major, which provides significant depth and breadth in an academic discipline. There is no specific degree designation for the co-major; students receive the degree designation of their primary major.

Program Requirements (34-44 semester hours)

Complete a major in one of the divisions of the university

Biological Science (3-4 hours):

Choose ONE of the following:

BIO/MBI 115 Biological Concepts (4)

BIO 121 Environmental Biology (3)

BIO 131 Plants, Humanity, and Environment (3)

BIO 176 Ecology of North America (3)

BIO 191 General Botany (4)

Physical Science (7-9 hours)

Group A – Choose ONE of the following:

CHM 111, 111L Chemistry in Modern Society/Lab (3,1)

CHM 142, 145 College Chemistry/College Chemistry Lab (3,2)

GLG 211 Chemistry of Earth Systems (3)

CPB 244 Introduction to Environmental Engineering (3)

Group B – Choose ONE of the following:

GEO 121 Earth’s Physical Environments (4)

GEO 122 Geographic Perspectives on the Environment (3)

GLG 111, 115.L The Dynamic Earth/ Geology Lab (3,1)

GLG 121, 115.L Environmental Geology / Geology Lab (3,1)

GLG 141, 115.L Geology of US National Parks / Geology Lab (3,1)

Note: PHY 161/162 or 191/192 is strongly recommended.

Statistics (3-4 hours)

Choose ONE of the following:

STA 261 Statistics (4)

STA 301 Applied Statistics (3)

STA 368 Introduction to Statistics (4)

Social Science (6-7 hours):

This course:

ECO 201 Microeconomics (3)

Choose ONE of the following:

ATH 175 Peoples of the World (3)

GEO 101 Global Forces, Local Diversity (3)

IES 211 Energy and Policy (3)

POL 241 American Political System (4)

POL 261 Public Administration (4)

Environmental Science (9-11 hours):

This course:

IES 275 Principles of Environmental Science (3)

Choose two of the following (**both** must be outside department of primary major):

BIO 351, 408, 425, 431, 432, 438, 451, 453, 467

CHM 363/364, 454, 491

CPB 405, 441, 442

GEO 425, 426, 428, 431, 432, 436, 441, 444

GLG 307, 335, 354, 402, 408, 428, 432, 435, 474, 496

IES 429, 441, 494

MBI 402, 475

PHY 421, 437, 441

STA 333, 363, 401, 462, 475

Synthesis (3 hours)

This course:

IES 431 Principles and Applications of Environmental Science (3)

Practicum / Field Experience (3-6 hours)

Choose ONE of the following:

BIO 333 (3) Field Ecology

BIO 463 (4) Limnology

BIO/GEO 496 (6) Biodiversity of Kenya

GEO/GLG/IES/LAS 412 (5) Tropical Ecosystems of Costa Rica

GEO/GLG/LAS 413 / IES 423 (5) Tropical Marine Ecology

GLG 311 (3) Geoenvironmental Field Methods

GLG 411A (6) Field Geology

GLG/IES 415 (5) Coral Reef Ecology

IES 411 (4) Environmental Protocols

Honors Thesis (3)*

Independent Study 377 (3) or Internship 340 (3)*

*must be approved by the IES Director or the Co-Major Adviser