

- Minimum 30 of the last 60 credits earned at PennWest.
- Minimum of 30 major credits must be completed at PennWest or a State System (PASSHE) university.
- Minimum Total of 42 Credits in Advanced Coursework.

General Education

Foundations: (13 Credits)

Oral Communication (3 Credits)

☐ _____

Quantitative Reasoning (4 Credits)

☐ MATH 1410 Pre-Calculus

Technological Literacy (3 Credits)

☐ GIS 1210 Mapping our Environment

Written Communication (3 Credits)

☐ ENGL 1200 College Composition

Discoveries: (29 Credits)

At least two (2) disciplines must be represented within each of the three (3) categories.

Art/Humanities (9 Credits)

☐ ENGL 2230 Writing and the Natural Sciences

☐ _____

☐ _____

Natural Sciences & Technology 11 Credits)

☐ CHEM 1108 General Chemistry I

☐ GEOL 1500 Dynamic Earth

☐ _____

Social Sciences (9 Credits)

☐ _____

☐ _____

☐ _____

Elective/Wellness & Personal Health: (3 Credits)

☐ _____

Competencies:

Applied Methodologies

☐ _____

Ethical Reasoning

☐ _____

Information Literacy

☐ _____

Intercultural Fluency

☐ _____

Keystone Experience

☐ BIOL 4480 or BIOL 4951 or BIOL 4999

Quantitative Applications

☐ ATMS 1500 Environmental Atmospheric Sciences

Writing Intensive - Two (2) courses are required

☐ ENGL 2230 Writing & Natural Science

☐ Any BIOL, FWSC, ATMS, or GEOL Writing Intensive course.

Program Requirements

Required Major Courses: (17 Credits)

☐ BIOL 1400 Introduction to Ecology and Evolution

☐ BIOL 1700 Introduction to Organismal Biology

☐ ATMS 1500 Environmental Atmospheric Sciences

☐ GIS 2100 Geographic Informational Systems

☐ STAT 2020 Elements of Statistics

Required Concentration Courses: (18 Credits)

☐ BIOL 1900 Introduction to Cellular & Molecular Biology

☐ ~Or~ BIOL 2202 Genetics

☐ BIOL 2248 Principles of General Ecology

☐ BIOL 2411 Environmental Science & Sustainability

☐ ~Or~ NSET/BIOL 1278 Discovering Environmental Science

☐ BIOL 4550 Evolution

☐ CHEM 1128 General Chemistry II

☐ ~Or~ CHEM 2450 Environmental Chemistry

Major Electives: (25 Credits)

☐ **Choose From:** BIOL 2020 Introduction to Sustainability, GEOG 2410 Plan the Hum Env, GEOG 3410 Sustainable Development, or GEOG 4410 Env Plan

☐ _____

☐ **Choose From:** BIOL 3335 Sustainable Agriculture, BIOL 3399 Conservation Biology, or FWSC 4435 Natural Resource Law and Policy

☐ _____

☐ **Choose From:** GEOL 3030 Hydrology, BIOL 4473 Freshwater Ecology, BIOL 4475 Wetlands Ecology, BIOL 4484 Quan Meth in Aq Bio, PLE 4475 Wetland Ecology, GEOG 4110 Geography of Water Resources, or GEOL 4600 Watershed Evaluation and Management

☐ _____

☐ **Choose From:** BIOL 4402 Biometry, BIOL 4484 Quan Meth in Aq Bio, BIOL 4570 Bio St Des & Data An, BIOL 4800 Veg Sampling and Analysis, FWSC 4950 Applied Bio Methods and Sci Com, BIOL 4999 Research, or PLE 4410 Field Methods in Environmental Biology

☐ _____

☐ **Choose From:** BIO 4480 Topics in Field, BIOL 4951 Internship, or BIOL 4999 Research in Biology

☐ _____

☐ **Choose From:** Any courses 3000 or above from ATMS, BIOL, FWSC, GEOL, GEOG, GIS, or PLE.

☐ _____

Free Electives: (15 Credits)

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

Suggested Four Year Course Sequence

Year 1

Fall Semester

BIOL 1400 Introduction to Ecology and Evolution
ENGL 1200 College Composition
ATMS 1500 Environmental Atmospheric Sciences
Any Discoveries Course
Any Discoveries Course

Spring Semester

BIOL 1700 Organismal Biology
MATH 1410 Pre-Calculus
BIOL 2411 Intro to Environmental Science & Sustainability
~Or~ BIOL 1278 Discovering Environmental Science
Any Oral Communication Course
Any Elective/Wellness or Discoveries Course

Year 3

Fall Semester

GGIS 2100 Geographic Informational Systems
Policy & Conservation Elective
Environmental Science Elective
Any Competencies/Discoveries
Any Competencies/Discoveries

Spring Semester

Sustainability Elective
Research Design and Analysis Elective
Environmental Science Elective
Any Competencies/Discoveries Course
Free Elective

Year 2

Fall Semester

BIOL 1900 Introduction to Cellular & Molecular Biology
~Or~ BIOL 2202 Genetics
GEOL 1500 Dynamic Earth
GGIS 1210 Mapping our Environment
CHEM 1108 General Chemistry I

Spring Semester

BIOL 2248 Principles of General Ecology
CHEM 2450 Environmental Chemistry
~Or~ CHEM 1128 General Chemistry II
ENGL 2230 Writing and the Natural Sciences
STAT 2020 Elements of Statistics
Any Competencies/Discoveries

Year 4

Fall Semester

BIOL 4550 Evolution
~Or~ Water Resources Elective
Research Design and Analysis Elective
Environmental Science Elective
Free Elective
Free Elective

Spring Semester

BIOL 4480/4951, 4999
BIOL 4550 Evolution
~Or~ Water Resources elective
Environmental Science Elective
Free Elective

