ENVIRONMENTAL SCIENCE MAJOR

Environmental Science (B.S.)

LOWER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
Biology:		
BIO 102	Environment and People	4
BIO 210	Cell Biology and Biochemistry	4
BIO 215	Animal Biology	4
Chemistry:		
CHE 151	General Chemistry Tutorial	1
CHE 152	General Chemistry I	4
CHE 153	General Chemistry II	4
CHE 211	Analytical Chemistry	2
CHE 295	Organic Chemistry I	5
Mathematics:		
MTH 144	Calculus with Applications	4
Choose one sequence:		8
Physics		
PHY 141-142	General Physics I-II	
PHY 241-242	University Physics I-II	
Choose one of three:		3
Sociology		
SOC 201	Cultural Anthropology	
Economics		
ECO 101	Principles of Economics I	
ECO 102	Principles of Economics II	
	TOTAL	43*

**Lower Division units = 47 if Political Science 230 is taken as one of "Other Related Electives" listed below.*

UPPER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
BIO 345	Genetics	4
BIO 360	Ecology	3
BIO 497	Biology Seminar	1
CHE 370	Instrumental Analysis	2
MTH 362	Calculus Based Statistics	2
	TOTAL	12

Upper-Division Electives

A minimum of 8 units of upper-division electives are required from approved environmental off-campus programs. Both departmental chairs (Biology and Chemistry) or their designees are responsible for approving all off-campus courses. At least one-half of upper-division units in the major must be taken at PLNU.

Advanced Science Electives (8 units minimum)

One of more approved off-campus environmental course(s) may fulfill part or all of this requirement.

COURSE	TITLE	UNITS

BIO 310	General Botany	3
BIO 315	Microbiology	3
BIO 320	Marine Zoology	3
BIO 325	Insect Biology	3
BIO 330	Marine Invertebrate Zoology	2
BIO 340	Field Biology	2
BIO 370	Marine Plant and Microbial Life	2
BIO 410	Vertebrate Biology	3
BIO 420	Vergebrate Physiology	3
BIO 430	Animal Behavior	3
CHE 450/ BIO 450	Advanced Biochemistry	4
CHE 300	Organic Chemistry II (quad)	2
CHE 325	Physical Chemistry I	5
CHE 351	Organic Qualitative Analysis	2
CHE 466	Advanced Inorganic Chemistry	2
CHE 475	Special Topics in Chemistry	2

Other Related Electives (9 units minimum)

Students can customize their degree by taking any combination of courses from the two categories below. One or more approved off-campus environmental course(s) may fulfill part or all of this requirement.

Methodology

COURSE	TITLE	UNITS
CHE 490	Internship in Chemistry	1-3
CHE 499	Research in Chemistry	1-3
BIO 490	Internship in Biology	1-3
BIO 499	Research in Biology	1-3

Public Policy and Stewardship

POL 230	Introduction to International Relations	4
POL 394	Governments and Politics of the Global South	4
POL 441	Issues in Public Policy	4
PHL 451	Religion and Science	3
	Upper-Division Elective Total	17
	Bachelor of Science Total	72*

**14 count for general education* requirements