

## Program Assessment Plan for Environmental Science

### Program Mission

The Environmental Science major is an interdisciplinary program of the Biology and Chemistry Departments at The University of Scranton. The Environmental Science major has the following objectives: 1. To prepare students for positions (in the public or private sector) in the broad field of environmental analysis, compliance, and technology; 2. To prepare students for advanced study in environmental science; 3. To provide a sufficiently comprehensive science and liberal arts background to allow students to pursue advanced training or work in other fields that deal with environmental issues, e.g., environmental law, environmental health, and environmental regulation in business and industry. The Environmental Science program provides a rigorous and comprehensive grounding in the biological, chemical, and physical aspects of the natural environment, and in the analytical and instrumental techniques used to investigate environmental problems. Upper-class students may choose to focus more closely on either the chemical or biological aspects of environmental science, and must complete either an undergraduate research project or an internship in environmental science. The program also is designed to expose students to the social, political, regulatory, economic, and ethical concerns that are commensurate with defining and addressing environmental issues in today's world.

### Curriculum

The curriculum provides more than one opportunity for students to meet the Program Learning Objectives

### Key Courses And Assignments

Required major courses and acceptable major electives

### Program Learning Outcomes to be Assessed

PLO	1).Environmental Science majors will have a sound knowledge of both chemistry and biology, and the biological and chemical	ILOs to which the PLOs map	1,2,3
Year:	Year 2 AY 2015-16		
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	BIOL 141/142 CHEM 112/113 NSCI 201		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)	Grade records		
Benchmarks	C or better		
ListOfSources	Course grades		

### Program Learning Outcomes to be Assessed

PLO	2).Environmental Science majors will know how to apply critical thinking to the analysis and devising of possible solutions to	ILOs to which the PLOs map	1,2,4
Year:	Year 2 AY 2015-16		
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	BIOL 379 Biostatistics Major elective choices in ESCI		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)	Course Grades		
Benchmarks	C or better		
ListOfSources			

**Program Learning Outcomes to be Assessed**

PLO	3).Environmental Science majors will have an appreciation of the social and economic implications of environmental science.	ILOs to which the PLOs map	1,2,4
Year:	Year 3 AY 2016-17		
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	NSCI 201 GE Elective recommendations for ESCI majors		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)	Course grades		
Benchmarks	C or better		
ListOfSources			

**Program Learning Outcomes to be Assessed**

PLO	4).Environmental Science majors have a sounds knowledge of sustainability and how science can contribute to sustainable	ILOs to which the PLOs map	1,2,3,4
Year:			
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	Answers to relevant questions on course exams		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)			
Benchmarks	70% or better on answer grades		
ListOfSources	Sustainability related questions infused across all required and elective major courses		

### Program Learning Outcomes to be Assessed

PLO	5).Environmental Science majors will be proficient in the recording, analysis, and dissemination of data utilizing modern	ILOs to which the PLOs map	1,3
Year:	Year 1 Spring 2015		
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	Organic chemistry laboratory CHEM 233L		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)	Final Exam		
Benchmarks	Successful completion of organic chemistry laboratory CHEM 233L		
ListOfSources	Performance in organic chemistry laboratory CHEM 233L		

### Program Learning Outcomes to be Assessed

PLO	6).Environmental Science majors will be well prepared to succeed in employment in the public and private sector, to	ILOs to which the PLOs map	3,4
Year:	Year 1 Spring 2015		
Is the evidence Direct or Indirect	Direct		
Where in the program does the evidence reside?	University of Scranton Environmental Science Alumni Profiles: <a href="http://www.scranton.edu/faculty/cannm/misc/alumni-profiles.shtml">http://www.scranton.edu/faculty/cannm/misc/alumni-profiles.shtml</a>		
What tools are necessary to collect evidence? (Rubrics, Portfolio,Embedded Exam Questions etc.)	Evidenence collected through online survey		
Benchmarks	Success in the professional lives of environmental science graduates as evidenced by employme		
ListOfSources	University of Scranton Environmental Science Alumni Profiles <a href="http://www.scranton.edu/faculty/cannm/misc/alumni-profiles.shtml">http://www.scranton.edu/faculty/cannm/misc/alumni-profiles.shtml</a>		