

Educational Program Institutional Effectiveness Report

Degree Program: Bachelor of Science Environmental Sciences

College/School: College of Arts and Sciences **Department:** Environmental Studies

Submission Date: November 2, 2009

Student Learning Outcomes

1. The student will demonstrate the ability to investigate, evaluate literature, and research an advanced topic in environmental studies.
2. The student will demonstrate the ability to critique ideas and opinions on advanced topics in environmental studies.
3. The student will have the ability to present information on an advanced topic in environmental studies using modern techniques and technology.
4. The student will demonstrate an overall knowledge and application of concepts related to Environmental Studies in a professional setting.
5. The student will demonstrate the ability to conduct research in a professional setting.

Assessment Methods

1. Report in EVS 495 scored using a rubric
SLO 1
2. Written critiques and oral discussions of speakers and topics in EVS 495
SLO 2
3. Oral Presentation with computer graphics in EVS 495 scored using a rubric
SLO 3
4. Evaluation and comments from site supervisors on the Confidential Performance Report and interviews with by the EVS Internship Coordinator
SLO 4, 5
5. Internship or Directed Individual Study Portfolio scored using a rubric
SLO 2, 4, 5

Summary of Assessment Results

Data on SLOs 1, 2, 3 and 4 have been collected since 2006 – 2007. Collection of data for SLO 5 was added in 2007 – 2008. SLO 1 results from the first round of evaluation of EVS 495 research reports showed many students performing at less than acceptable levels on a number of research skills. Faculty determined that the data indicated that students needed additional opportunities to develop research skills prior to the program capstone course. While results have improved since changes were made to EVS 470 (see below), there was still one area of concern in the 2008 – 2009 results. It was found that 50 to 55% of students in all sections had still difficulty initiating a search of primary literature. This prompted an additional curriculum change (see below).

Results over the three years for SLOs 2 and 3 remained consistently high, with 94% of students performing at or above acceptable on SLO 2 and 87% of students performing at or above acceptable on SLO 3 during 2008 – 2009.

Confidential Performance Reports from site supervisors have remained an important source of information about the field skills students need. The 2006 – 2007 results, along with a review of prior year reports, showed the need for students to have more prior exposure to governmental environmental assessment reporting. In 2006 – 2007 and 2007 – 2008 results, site supervisors from most internship agencies noted the lack of Global Information Systems (GIS) skills in program interns. Both of these recommendations from site supervisors were in the form of written comments added to the CPR evaluation form. Agencies that dealt with site assessment and/or GIS techniques commented at a rate of more than 75% for the addition of these skills to the curriculum.

Implemented Improvements Based on Assessment Results

Based on the 2006 – 2007 results (and prior year findings) for SLO 4 from the internship site supervisor Confidential Performance Report, it was determined that students would benefit from more formal instruction on environmental assessments reports prior to their internship experience. A new course EVS 477 Environmental Assessment was developed to teach students the research skills necessary to undertake an environmental assessment. This includes producing a Phase I environmental assessment for a given property in the format required by governmental agencies. This course was began being offered in the Fall 2007 as an experimental course before being adopted in Fall 2009. After this course was added, SLO 5 was added to the program assessment plan, and is now assessed through the Confidential Performance Report and the internship portfolio. Data for 2008 – 2009 showed that all but one internship student were performing at or above acceptable on this outcome.

Based on the SLO 1 results from the first round of evaluation of EVS 495 research reports, the course content of EVS 470 Advanced Natural Resource and Wildlife Management was changed to place more emphasis on student research skills and provide students with additional practice. This was accomplished by incorporating a class research project into the course. This change was added in spring 2009.

Based on the 2008-2009 results for SLO 1, the faculty determined that students needed more information about and hands on practice in literature searches. A unit was added to EVS 495 starting in Fall 2009 covering use and search techniques of the library using electronic data bases and latest technologies. This unit is taught by the science staff librarians from Randall Library.

Based on the SLO 4 results of the need for GIS skills, a new course EVS 281 Introduction to Global Information Systems was developed. This course was first offered in 2008 – 2009 as a special topics course, and was offered for the first time as an approved course in Fall 2009.

Documentation of Implemented Improvements (attached)

EVS 477: Proposal for Undergraduate Curriculum Change

EVS 470: Spring 2009 Syllabus

EVS 495: Fall 2009 Syllabus

EVS 281: Proposal for Undergraduate Curriculum Change