Program Mission

The Environmental Sciences (EVS) Ph.D. Program was initiated in 1997. The mission of the EVS Ph.D. program is to provide a program of study that prepares graduates to successfully pursue scientific careers in industry or academics. Students are provided with opportunities to reinforce their background and expand their knowledge in areas not covered by their undergraduate degrees by fostering a stimulating intellectual atmosphere conducive to the learning process of both students and faculty through low student-to-faculty ratios, as well as, providing the facilities and professional mentorship enabling students to conduct, evaluate, and report on original research and thereby add to the knowledge of humanity.

Program Goals and Learning Outcomes

Program Goal 1
Achieve a critical mass of qualified Ph.D. students in the EVS program capable of supporting a graduation rate of four per year.

Assessment Method
Monitor applications, admissions, and graduation rates

Results
The graduation rate has increased and is projected to meet or exceed four per year in the coming year. The increase in the teaching assistantship stipend from $14,000/year to $18,500/year which occurred in the 2008-09 budget year has allowed the program to be more competitive in recruiting more qualified student into the program. The addition of Challenge Fellowships offered by the Research Office has allowed the Program to add additional students and one of these students; will be graduating this spring. A graduate of Florida International University entered the program on a Challenge Fellowship offered by the Research Office and is the first EVS student in the Chemistry Concentration to work in Chemical Engineering. The number of teaching assistantships is still below the level necessary to support a critical mass of students. Projection of student enrollment and graduation rate for the next several years is positive. Two additional teaching assistantships will be added to the program for 2012-2013 which will further improve the overall health of the program. Additional funds have been provided to the EVS program for recruitment of students at regional and national scientific conferences.
The figure below summarizes the current enrollment trends and graduate rates.

![Enrollment Data Chart]

Program Goal 2:
EVS student research projects will be recognized at regional and national levels

Assessment Method
Evaluation of students by external reviewers and awards

Results
Indications of the program’s increased reputation can be illustrated by the recent student awards:

Southeastern Fisheries Council 2008 annual meeting
An EVS student won first in oral presentations;
An EVS student won third in the poster presentations.

Kentucky-Tennessee Water Professionals Conference 2008
An EVS student was awarded First Place for his Poster Presentation “Influence of Dissolved Organic Matter on Potable Water Production”
W. Don Baker Memorial Award for Best scientific presentation
An EVS student won this award for work entitled: “Habitat Use of Female Crayfish in Small Upland Streams and Vulnerability of Young-of-Year Crayfish to Roundup®”

Best Poster Award
An EVS student won this award at the Southeastern Fisheries Council 2011 for the poster, "Development of Species-Habitat Models to Inform Conservation Planning for Freshwater Species covered by the Cumberland Habitat Conservation Plan."

In addition, students and faculty of the Environmental Sciences Ph.D. Program were recently featured in an article in the Center for the Management, Utilization, and Protection of Water Resources Newsletter. “Chemists Join Forces to Study Environmental Impacts of Methamphetamine and Learn to Detect Its Warning Signs” The article describes efforts to detect and evaluate the presence of methamphetamine and its precursor in the environment. Additional evidence of our successfully recruiting quality students came from the comments of the outside reviewers for the Academic Program Review in 2010, who wrote “We were impressed with the graduate students in the EVS program. Overall they are matriculating through the program in a timely manner.”

Student Learning Outcome 1
EVS Ph.D. students will demonstrate a knowledge of the interdisciplinary nature of environmental science such that they are aware of a wide range of environmental concerns beyond the boundaries of a specific discipline.

Assessment Method
The EVS faculty will monitor a student understanding of the interdisciplinary nature of environmental science by the administration of oral and written comprehensive exams. The comprehensive exam is interdisciplinary and is comprised of questions written by each member of the graduate advisory committee. The results of these exams are kept on file by the EVS Director.

Results
The EVS faculty continues to maintain a high standard for passage of the comprehensive exams. Oral and written examinations are performed by the student’s committee members and include topics in
all areas of environmental science. To date all students in the program have successfully passed these exams. The Director of the program monitors the exam to maintain the integrity and consistency.

Summary of Key Continuous Improvements

The EVS program has increased its graduation rate and will meet or exceed the four students per year goal over the next several years. This graduation rate is a result of the increased TA stipends, Challenge Fellowships, and the efforts of the faculty to support additional students. The University is adding two additional teaching assistantship to the program for the 2012-13 academic year. Additional funds have also been provided to enhance the recruitment efforts. The program will continue to encourage and support the presentation of research results at regional and national meetings. The increased visibility can be monitored by the number of student inquiries and the quality of applicants to the program.

These changes plus the efforts of the faculty and administration have enhanced this program over the last several years and provide a base to continue building the program in the future.