

Ecological Sciences PhD

Expanded Statement of Institutional Purpose

Institutional Mission Reference

The Ecological Sciences program offers graduate students a high quality degree program in ecological sciences that meets national standards of excellence. Program faculty are committed to quality teaching and the discovery of new knowledge. The Ecological Sciences PhD program supports the University's mission of providing advanced professional education for the Hampton Roads area and the Commonwealth.

Institutional Goal(s) Supported

The Ecological Sciences PhD program supports the University goals of quality graduate academic programs, quality teaching, discovery of new knowledge, and community service. (See pages 8-9 of the Strategic Plan) The Ecological Sciences PhD program also supports Strategic Initiative 2 (excellent graduate programs). (See the Old Dominion University Strategic Plan)

Intended Educational (Student) Outcomes, Methods for Assessment, Criteria for Success, Assessment Results, and Use of Results

Intended Outcome 1

Students will effectively communicate scientific information through writing.

Method for Assessing Outcome 1 and Criterion for Success: 100% of students will achieve scores of "Acceptable" or higher in the "Quality of Writing" sub-score on the "Dissertation Assessment Form", as determined by three or more graduate faculty reviewers of the students' dissertation; 80% will earn scores of "Good" or "Excellent".

Summary of Assessment Data Collected for Outcome 1: During the past year, 100% of those completing their dissertation (7 students) scored acceptable or above and 86% scored good or excellent. The assessment goals were met or exceeded.

Alternate Method for Assessing Outcome 1 and Criterion for Success: Half of the students will have at least one publication in the peer-reviewed literature prior to graduation, as evidenced from the student surveys conducted every three years.

Summary of Assessment Data Collected, Alternate Method for Outcome 1: Out of 15 survey respondents, 60% had at least one publication. Of those, most had more than one publication. The assessment goal has been exceeded.

Use of Assessment Results from Intended Outcome 1 to Improve Academic Program: The goals are currently being exceeded; no new actions are required.

Intended Outcome 2

Students will effectively synthesize and orally communicate scientific information.

Method for Assessing Outcome 2 and Criterion for Success: 100% of students will achieve scores of "Acceptable" or higher in the "Ability to Synthesize" and "Composure" sub-scores on the "Oral Candidacy Exam Assessment Form", as determined by five or more graduate faculty members of the student's guidance Committee; 80% will earn scores of "Good" or "Excellent".

Summary of Assessment Data Collected for Outcome 2: Six students took the oral exam during the past year. One failed the exam and as a result the outcome is skewed. On ability to synthesize, 83% scored acceptable or above and 50% scored good or excellent. For composure, 100% scored acceptable or above and 67% scored good or excellent. These skewed results fell below the assessment goals.

Alternate Method for Assessing Outcome 2 and Criterion for Success: Half of the students will have at least one presentation at a national or international meeting prior to graduation, as evidenced from the student surveys conducted every three years.

Summary of Assessment Data Collected, Alternate Method for Outcome 2: Out of the 15 students responding, 60% had at least one presentation at a scientific meeting. Most had more than one.

Use of Assessment Results from Intended Outcome 2 to Improve Academic Program: There is room for improvement here. We will try to increase the opportunities for student presentations and also advocate a greater emphasis on information synthesis and critical thinking in our formal courses.

Intended Outcome 3

Students will develop proficiency in the conduct of scientific research by effectively using research methods and designs to test hypotheses and draw conclusions.

Method for Assessing Outcome 3 and Criterion for Success: 100% of students will achieve scores of "Acceptable" or higher in the "Statistical Analysis", "Research Design" and "Hypotheses & Interpretation" sub-scores on the "Dissertation Assessment Form", as determined by three or more graduate faculty reviewers of the student's dissertation; 80% will earn scores of "Good" or "Excellent".

Summary of Assessment Data Collected for Outcome 3: The scores in all three areas were identical. Based on 7 students, 100% scored acceptable or above and 86% scored good or excellent. The assessment goals were met or exceeded.

Use of Assessment Results from Intended Outcome 3 to Improve Academic Program: We see no need for new initiatives here. The goals were met or exceeded.

Intended Outcome 4

Students will demonstrate knowledge of the theories and empirical findings relevant to modern ecological sciences.

Method for Assessing Outcome 4 and Criterion for Success: 100% of students will achieve scores of "Acceptable" or higher in the "Knowledge of Literature" and "Factual Knowledge" sub-scores on the "Oral Candidacy Exam Assessment Form", as determined by five or more graduate faculty members of the student's Guidance Committee; 80% will earn scores of "Good" or Excellent".

Summary of Assessment Data Collected for Outcome 4: Again, one of the six students failed the exam and skewed the results. For knowledge of the literature, 83% scored acceptable or above and 50% scored good or excellent. For factual knowledge, 83% scored acceptable or above and 33% scored good or excellent. These scores fell below our goals and only two students scoring good or excellent for factual knowledge is of particular concern.

Alternate Method for Assessing Outcome 4 and Criterion for Success: 100% of students will achieve scores of "Acceptable" or higher in the "Literature Review/Documentation" sub-score on the "Dissertation Assessment Form", as determined by three or more graduate faculty reviewers of the student's dissertation; 80% will earn scores of "Good" or Excellent".

Summary of Assessment Data Collected, Alternate Method for Outcome 4: 100% of the 7 students scored good or excellent. This far exceeds our goals and can't be improved upon.

Alternate Method for Assessing Outcome 4 and Criterion for Success: 80% of alumni will be placed in positions highly related to their field of study, as determined by alumni surveys administered every three years.

Summary of Assessment Data Collected, Alternate Method for Outcome 4: Out of the 11 alumni responding, 82% were employed in areas highly related to the field. The two alumni who were not employed in the field were a physician and computer consultant respectively. We exceed our goal for this assessment outcome.

Use of Assessment Results from Intended Outcome 4 to Improve Academic Program: Though the goals were not met for outcome 1, they were exceeded for outcomes 2 and 3. Overall we do not see a major source of concern here. The performances on the oral exam may be more a problem with preparation for the exam than a larger problem with appropriate gains in knowledge. We will certainly continue to closely monitor assessment results in this area.