

**Department of Biology**

**Bachelor of Science and Bachelor of Arts in Biology**

Program Review	Learning Outcomes	Where are learning outcomes published?	Assessment Measurement Tools	Criteria for Success	Data Collected Over Time Period	Findings from Data Collection	Resulting Program Changes
1995-1996 and 2003-2004	<b>1. TEACH: Students will demonstrate a broad based knowledge of the processes of science and the major disciplines of biology (cell, molecular, organismal, and population biology)</b>	Catalog, website, course syllabi	ETS Major Field Achievement Test in Biology	Group mean will be at or above the 75th percentile and at least 50% of students will score at or above the 60th percentile, on overall test and each of the four sub-disciplines (cell, genetic and molecular, organismal, and population, ecological and evolutionary)	2001-2006, yearly, senior capstone seminar (BIO 497)	Overall scores: 2001 86th percentile, 58% above 60th; 2002 97th percentile, 82% above 60th; 2003 94th percentile, 81% above 60th; 2004 95th percentile, 83% above 60th; Sub-scores in botony area started weak, but scores improved following curricular revisions	Mike Mooring, animal behaviorist specializing in large mammals was hired Fall 1997; Curriculum strengthened in content area of ecology in BIO 120; increased frequency of offerings of courses: Invertebrate Biology, Ornithology, and Marine Plant & Microbial Life
			ETS assessment indicator for quantitative skills	Overall group mean will be at or above the 75th percentile	2005-2006, yearly, senior capstone seminar (BIO 497)	Overall scores: 2001 91th percentile; 2002 99th percentile; 2003 97th percentile; 2004 95th percentile	
	<b>2. SHAPE: Students will demonstrate a positive attitude toward faculty mentoring, integration of science and faith, and preparation for their careers in science</b>	Catalog, website, course syllabi	ETS Program Assessment Questionnaire (environment for learning, quality of teaching, faculty concern for students, student satisfaction) plus additional questions on the integration of faith and science	No more than 25% of questions will receive a score rating lower than 3 (on a 4-point scale), and 75% of questions will receive a score rating of 3 or higher	2005-2006, yearly, senior capstone seminar (BIO 497)	A need to strengthen the quality of lab experiences was identified; Give attention to reducing attrition of freshmen from Biology and Biology-Chemistry majors	Ongoing effort: Faculty re-orient lab experiences to make better use of down time and increase emphasis on investigative exercises that are data intensive; Freshmen career seminar instituted to increase faculty-student interaction, improve mentoring and reduce attrition
			Alumni tracking of postgraduate education and professions	Success rates for alumni who apply to graduate or professional schools will be at least 75%	Yearly, survey sent to alumni 5-years out	Need for increased attention to addressing career needs of students interested in biotechnology, teaching, and other non-graduate or professional school options	Freshman career seminar was instituted in Fall 2001, associated with BIO 110
	<b>3. SEND: Students will successfully enter professional or graduate schools, or will obtain jobs in the science or health related professions</b>	Catalog, website, course syllabi	ETS Program Assessment Questionnaire for Alumni plus questions pertaining to the integration of science and faith	ETS scores on 75% of questions will be at least 3 (on a 4-point scale), and no more than 25% of questions will receive a rating of less than 3	Yearly, survey sent to alumni 5-years out		