

**Major Field Assessment:
Evaluation, Outcome, and Indication for Programmatic Change
B.S. Science Education (Chemistry and/or Physics)
2005-2006, 2006, 2007, 2007-2008, 2008-2009**

The purpose of the B.S. in Science Education is to prepare students for a career in teaching high school physical science by means of preparing them with the appropriate content knowledge and pedagogical methods. To achieve this purpose the physics curriculum has three goals: to provide students with knowledge in the field of chemistry and/or physics, to develop a comprehensive understanding of the professional aspects of teaching physics and/or chemistry, and to prepare students for career-based employment and/or graduate study.

Evaluation

This evaluation is based on data gathered from the 2 students who completed the B.S. in Physics degree program during the academic years 2005-2006, 2006, 2007, 2007-2008, 2008-2009.

Goal 1 To provide students with knowledge in the field of chemistry and/or physics

It is expected that students completing the undergraduate program in science education will compare favorably on a national basis with other seniors graduating in science education in their ability to demonstrate problem-solving and laboratory skills in the areas of general, inorganic, organic, analytical, physical, and biological chemistry (chemistry) and/or classical mechanics, thermodynamics, electricity and magnetism, optics, special relativity, elementary quantum mechanics (physics). To assess the success of the curriculum in producing this outcome, the PRAXIS exam is administered to graduates. The standards for student achievement are as follows: 75% of the graduates in the physics program who graduate with a cumulative GPA > 3.0 in their major will pass the PRAXIS exam within 1 year, and 75% of the graduates in the physics program who graduate with a cumulative GPA < 3.0 in their major will pass the PRAXIS exam within 2 years. The result of this assessment is that 1 out of 1 (100%) of the students who graduated with a cumulative GPA > 3.0 passed the PRAXIS within 1 year and that 1 out of 1 (100%) of the students who graduated with a cumulative GPA < 3.0 passed the PRAXIS within 2 years. These results are consistent with expectations.

It is also expected that graduates will respond favorably to the science education curriculum and overall learning environment. To assess the success in producing this outcome, the Southeastern Exit Survey was administered to graduating senior science education majors. The expected outcome was that 90% of the graduates would indicate satisfaction. The results of this assessment are not available at this time.

Goal 2 To develop a comprehensive understanding of the professional aspects of teaching physics and/or chemistry

It is expected that students completing the undergraduate program in physics will demonstrate awareness of the diverse nature of teaching the physical sciences by means of exposure to innovative methods, as well as having the opportunity to implement their own pedagogical techniques. To assess the success in producing this outcome, the Southeastern Exit Survey was administered to graduating senior physics majors. The expected outcome was that 80% of the graduates would indicate that they were given opportunities and support for learning and developing their own pedagogical methods while at Southeastern. The results of this assessment are not available at this time.

Goal 3 To prepare students for career-based employment and/or graduate study

It is expected that one year after graduation, the majority of graduates will have career-based employment or will be in graduate school. To assess the success in producing this outcome, a survey was taken one year after the students' graduation. The expected outcome was that 60% of the graduates would be employed as teachers or enrolled in graduate school. The result for this reporting period is that 2 out of 2 (100%) of the graduates are employed as teachers. This result exceeds the expectation.

Outcome

The outcome of this assessment is that the stated goals were attained.

Indication for Programmatic Change

Since the B.S. in Science Education program is achieving its stated goals, no changes to the program are indicated at this time.

GOAL ATTAINMENT FRAMEWORK

B.S. Science Education (Chemistry and/or Physics)

Department of Chemistry and Physics

Academic Years 2005-06, 2006-07, 2007-2008, 2008-2009

Expected Outcome	Much Less than Expected	Less than Expected	Expected	More than Expected	Much More than Expected
% of graduates with cumulative GPA > 3.0 passing the PRAXIS exam within one year			100% (1/1) 75%		
% of graduates with cumulative GPA < 3.0 passing the PRAXIS exam within two years			100% (1/1) 75%		
% of graduates satisfied with their physics and chemistry instruction, as indicated on the Southeastern Exit Survey			N/A (0/0) 90%		
% of graduates who feel they were given opportunities and support for learning and developing their own pedagogical methods while a student at Southeastern as evidenced by the Southeastern Exit Survey			N/A (0/0) 80%		
% of graduates who have career employment or will be enrolled in graduate school as evidence by the Southeastern Chemistry and Physics Post Exit Survey			60%	100% (2/2)	