

Major Field Assessment Plan Report B.S. Science Education (Biology)

November 2006

The mission of Southeastern Louisiana University is to lead the educational, economic and cultural development of southeastern Louisiana.

We had 5 graduates in this program in 2003-2004, three graduates in 2004-2005, and no graduates in 2005-2006. Thus, data on this program are limited.

The purpose of the Bachelor of Science program in Biology Education is:

Goal I

Biology education majors at Southeastern Louisiana University will acquire fundamental and advanced concepts, principles and applications of historical and contemporary biological content knowledge.

A.. Expected Outcome

Graduating seniors will compare favorably with similar students nationwide in their knowledge of biological principles.

Assessment

- a. All biology majors, upon taking biology seminar (GBio 441), will be given a locally developed multiple choice exam, and at least 50% will score a passing grade.
- b. On the Department Exit Survey, at least 80% of the graduating students will indicate that they received at least an adequate preparation in each area of biology assessed by the questionnaire.
- c. Biology Education students will compare favorably with students from other universities in their performance on the PRAXIS examination.

Results

- a. In nine sections of GBio 441 between 2003-2005 with a total of 136 students, the class averages were 46.1—100 (3 times) with an overall average of 76.7%. Only one section had an average below 50.
- b. In the most recent Exit Survey (2004-2005), 96.5% of the students surveyed rated the quality of instruction in advanced courses from 3—5 on a scale of 1—5, with 1 being very dissatisfied and 5 being very satisfied; 93% of the scores were between 4—5.
- c. All Biology Education majors since 2003 have passed the PRAXIS exam.

Use

With few exceptions, students do well on the GBio 441 comprehensive exam. The Exit surveys indicate that students are extremely satisfied with the quality of their upper level courses. The success of the graduates on the PRAXIS exam indicates that their training has prepared them to succeed.

Goal II

Students who wish to continue their education will be adequately prepared to pursue a graduate degree in a pedagogy or biological field.

A. Expected Outcome

Biology Education majors will apply to and be accepted by high quality graduate programs granting advanced degrees in education or biological sciences.

Assessment

- a. At least 70% of the graduating seniors will indicate on the SLU Exit Survey that they feel adequately or well-prepared to seek further education.
- b. Students who indicate on the Undergraduate Alumni Survey that they are seeking a graduate degree in a biological science, will indicate that they are "satisfied" or "well-satisfied" with their instruction in the major and when they compare themselves with alumni from other institutions, they believe their preparation at SLU was "better" or "about equal".
- c. We will track the careers of Biology Education graduates to see if they pursue graduate degrees.

Results

- a. On the most recent exit survey (2004-2005), 78.4% of the undergraduates, which included three Biology Education majors, rated their "outlook for a job or further study in your field" from 3—5 on a scale of 1—5, where 1 is very dissatisfied and 5 is very satisfied.
- b.-c. The most recent Alumni survey, from 2001, responses were received from four Biology Education majors. One of the respondents was currently enrolled in a graduate program, one planned to enroll in a graduate program within 12 months, and the remaining two were likely to enroll in a degree program in the future. Two of the respondents were planning to obtain MS degrees and two were planning on obtaining doctorates. All four rated the quality of their program from 3—5 on a scale of 1—5, where 1 is very dissatisfied and 5 is very satisfied. 100% would recommend SELU to someone interested in their major, and 100% would do the same major if they had to do it over again.

Use

The Biology Education majors appear satisfied with their preparation for graduate school, and the fact that all four graduates from 2001 were in graduate school or planning to go to graduate school indicates that our programs prepared them well for further education.

Goal III

Biology education majors at Southeastern Louisiana University will acquire process skills that are necessary to design, supervise, and conduct biological research in a meaningful and safe manner.

A. Expected Outcome

Senior students will have good written and oral communicative skills. These include being able to conduct a literature search, read and interpret scientific literature, include charts graphs, and tables; and write a grammatically correct, scientific report. In addition, these students will be able to develop and conduct an oral presentation on a biological topic.

Assessment

- a. Seminar students will present a well organized scientific seminar as part of Biology 441.

Results

- a. All of the students who remained in GBio 441 since 2003 have presented a seminar using power-point, and all have received passing grades.

Use

We will continue to require that students in our capstone seminar class, GBio 441, give oral presentations on a biological topic.

Goal IV

Biology Education majors will have an opportunity to work with members of the faculty.

A. Expected Outcome

Graduating seniors in Biology Education will have an opportunity to participate in research, field trips, and educational projects with specific faculty members.

Assessment

- a. On the SLU Exit Survey, 90% of graduating seniors will indicate that they are satisfied with the friendliness and helpfulness of faculty.
- b. On the SLU Exit Survey, 90% of students will indicate that they are satisfied with the opportunities to interact with faculty outside the class.

Results

- a. On the most recent survey from 2004-2005 on a scale of 1—5 with 1 being very dissatisfied and 5 being very satisfied, 96.5% of the graduates rated faculty treatment of students both inside and outside of the classroom from 3—5.
- b. On the most recent survey from 2004-2005 on a scale of 1—5 with 1 being very dissatisfied and 5 being very satisfied, 98.2% of the graduates rated opportunities to interact with faculty outside of class from 3—5.

Use

Students seem very well satisfied with their opportunities to interact with faculty both inside and outside of the classroom. We will encourage these interactions to continue.

Goal V

Biology education majors at Southeastern Louisiana University will develop the skills to teach biology.

A. Expected Outcome

Biology Education majors will be provided with the skills and knowledge needed to teach.

Assessment

- a. At least 90% of graduates will score at least a 3.0 on the appropriate indicators of the Student Teacher Evaluation Form.

Results

We have Results of Student Teacher Evaluation from three Biology Education majors from 2004—2005. On a scale of 1—4 with 1 indicating

undeveloped or unused skills, and 4 indicating “uses skill consistently with a high degree of competence and confidence”, these students received for:

Planning: The student teacher/intern plans effectively for instruction – 3.72

Management: The student teacher/intern maintains an environment conducive to learning, maximizes the amount of time available for instruction and manages learner behavior to provide productive learning opportunities – 3.945

Instruction: The student teacher/intern delivers instruction effectively, presents appropriate content, and provides opportunities for student involvement in the learning process – 3.80

Use

The Student Teacher Evaluation is more a measure of the success of the Education Department and their training of students rather than the knowledge they learned in Biology. Still, this information is an affirmation of the quality of students that we have in Biology Education.

Goal VI

Biology Education majors will have an opportunity foster global and cultural perspectives.

A. Expected Outcome

Biology students will have the opportunity to develop an awareness of other cultures and languages.

Assessment

- a. Biology Education students will be provided the opportunity to travel abroad.
- b. Biology education majors will also develop essential global environmental perspectives through select courses.

Results

- a. Biology education students have had the opportunity to take courses overseas. In 2005 an electron microscopy course was taught with a cultural emphasis in Paris. For the past two years, students have had an opportunity to take a tropical ecology course in Costa Rica, and a summer course in Ecuador is being offered in 2006.. Along with students from other disciplines, biology students have participated in study abroad programs in Mexico.
- b. Students participating in the Bachelor of Sciences program in Biology Education at Southeastern Louisiana University are exposed to cultural and global perspectives through their participation in coursework and student teaching in multicultural public school environments, participating in science fairs, olympiads, district rallies and other community experiences, as well as volunteering in various local outreach programs.
- c. Biology education students through local activities and international travel will have an opportunity to gain knowledge of culture as well as ecology. These experiences will foster a positive global perspective.

Use

The biology department will continue to facilitate the development of

global and cultural perspectives by continuing to provide these opportunities. In addition, new and innovative means of attaining global perspectives will be entertained.