

**Major field Assessment Plan  
Report on Results and Use  
M.S. Biological Sciences  
May 2010**

The mission of Southeastern Louisiana University is to meet the educational and cultural needs, primarily of southeast Louisiana, to disseminate knowledge and to facilitate life-long learning through quality instruction, research, and service in a safe, student-centered environment.

The purpose of the M.S. in Biological Sciences is to provide a broad academic program at the graduate level for students of diverse biological interests.

Students gain global perspectives through courses that emphasize biological issues that cross international boundaries. We also offer opportunities for research and study abroad.

**Goal**

To produce well-qualified graduate students who are ready to obtain positions in government or industry or continue their education toward a PhD or professional degree.

A. Expected Outcome

All incoming graduate students will have sufficient grasp of basic concepts in biology to begin graduate work and assist in instruction.

Assessment Procedure

All students will score at least 70% on the Preliminary Written Exam which consists of 9 general biology topics. This exam is given to all incoming students during their first three weeks of enrollment.

Results

Between 2005 and 2010, with the exception of one student, all graduate students passed the Preliminary Written Exam. Areas of weakness were considered as students chose classes and completed their degree plans.

Use

The exam appears to function as hoped. New students review basic biology when they arrive and perform acceptably on the exam. Weaknesses on individual areas within the exam can be addressed with coursework.

B. Expected Outcome

By the end of their second semester, students pursuing a thesis degree will have achieved sufficient mastery of their area of specialty to begin independent research.

Assessment Procedure

Thesis students must pass an oral exam of basic biology and their research area during their second semester. The oral exam is administered by the student's committee consisting of three faculty members, the graduate coordinator, and one graduate faculty member whose research is outside the student's area.

Results

Between 2005 and 2010, all students passed the oral exam, although we identified

deficiencies for three students. Those students began their research, but were also be required to take additional coursework to remediate their deficiencies.

Use

The exam allows each student to be evaluated by a committee, which efficiently identifies weaknesses that can be addressed before the student finishes.

C. Expected Outcome

By the end of their graduate studies, thesis students demonstrate an ability to conduct publishable independent research.

Assessment Procedure

Thesis students are required to prepare and defend a thesis based on original independent research.

Results

Between 2005 and 2010, thirty-eight students defended their theses and all thesis defenses were acceptable. We also track students following graduation where possible, so we know that results from some theses result in peer-reviewed publication.

Use

We require the thesis to be acceptable to both the major professor and the student's committee before we allow it to be defended. Often the thesis requires multiple rewrites, but the result has always been an acceptable public defense.

D. Expected Outcome

By the end of their graduate studies, non-thesis students will have a broad background in biology.

Assessment Procedure

Non-thesis students will complete 36 hours of coursework, will pass a comprehensive written exam based on their coursework after completing 30 hours of coursework.

Results

Between 2005 and 2010, 14 students completed the non-thesis program.

Use

So far, we think the exam and coursework requirements are working as planned.

E. Expected Outcome

By the end of their graduate studies, non-thesis students will conduct independent research.

Assessment Procedure

Non-thesis students are required to take three hours of research problems (GBIO 660) and give an oral presentation of their research to the department.

Results

Our non-thesis graduates fulfilled this requirement.

Use

The oral presentation gives students the incentive to work hard on this project and we feel that this a worthy endeavor.