

**STUDENT LEARNING ASSESSMENT PROGRAM
SUMMARY FORM AY 2004-2005**

**Degree and
Program Name:**

M.S. in Biological Sciences

Submitted By:

Andrew S. Methven

Please complete a separate worksheet for each academic program (major, minor) at each level (undergraduate, graduate) in your department. Worksheets are due to CASA this year by **June 1**. Worksheets should be sent electronically to cskjs@eiu.edu and should also be submitted to your college dean. For information about assessment or help with your assessment plans, visit the Assessment webpage at <http://www.eiu.edu/~assess/> or contact Karla Sanders in CASA at 581-6056.

PART ONE

What are the learning objectives?	How, where, and when are they assessed?	What are the expectations?	What are the results?	Committee/ person responsible? How are results shared?
1. Students will demonstrate the ability to use appropriate laboratory skills to successfully fill employment opportunities or enter doctoral and professional programs.	During laboratory exercises and examinations in graduate courses, graduate research projects, and graduate student exit survey.	85% of graduate students will demonstrate appropriate use of laboratory equipment in graduate courses that have a laboratory component; 85% of graduate students will demonstrate evidence of proper laboratory skills in research projects; 85% of graduate students will agree or strongly agree that they have appropriate laboratory skills on exit surveys.	Based on grades in graduate courses with a laboratory component in AY 2004-2005, 85% of graduate students demonstrated acceptable laboratory skills; 90% of graduate students demonstrated proper laboratory skills in research projects; an exit survey will be developed and administered in AY 2005-2006.	Instructors in graduate courses, faculty research mentors, Biological Sciences Graduate Coordinator (BSGC). BSGC tabulates results and shares data with faculty.
2. Students will demonstrate appropriate principles, methods, and strategies for conducting original scientific research to successfully fill employment opportunities or enter doctoral and professional programs.	Number of graduate students completing Master's theses, making presentations at scientific meetings, and being co-authors on scientific publications	85% of graduate students will demonstrate the ability to present and discuss evidence of original scientific research in written and oral formats.	During AY 2004-2005, 12/12 (100%) of graduate students completed Master's theses, 35/40 (87.5%) graduate students made presentations at scientific meetings, and 9/12 (75%) graduate students co-authored scientific publications.	BSGC BSGC tabulates results and shares data with faculty.
3. Students will demonstrate appropriate quantitative skills	Students are strongly advised to take BIO 4750 (Biometrics) or	80% of graduate students will demonstrate proficiency by	During AY 2004-2005, 80% of graduate students earned a	BSGC

to successfully fill employment opportunities or enter doctoral and professional programs.	BIO 381 (Advanced Biostatistics) prior to graduation.	attaining grades of C in either BIO 4750 or BIO 5381.	grade of C or better in either BIO 4750 or BIO 5381.	BSGC tabulates results and shares data with faculty.
4. Students will demonstrate critical thinking skills by successfully filling employment opportunities or by entering doctoral and professional programs.	M.S. capstone experience which includes an oral thesis/research defense and oral comprehensive examination.	More than 90% of graduate students are expected to pass the oral thesis/research defense and oral comprehensive examination on the first attempt.	During AY 2004-2005, 12/13 (92%) graduate students passed their oral thesis/research defense on the first attempt; 13/13 (100%) graduate students passed the oral comprehensive examination on the first attempt.	Faculty research mentors, graduate student committees, BSGC. BSGC tabulates results and shares data with faculty
5. Graduate students will demonstrate necessary academic knowledge and required competencies to gain full-time employment or admission to doctoral and professional programs.	Graduate student employment or admission to doctoral and professional programs.	More than 90% of graduate students will be offered full-time employment or admitted to doctoral and professional programs following graduation	Data will begin to be accumulated during AY 2005-2006.	BSGC BSGC tabulates results and shares data with faculty

(Continue objectives as needed. Cells will expand to accommodate your text.)

PART TWO

Describe what your program's assessment accomplishments since your last report was submitted. Discuss ways in which you have responded to the CASA Director's comments on last year's report or simply describe what assessment work was initiated, continued, or completed.

Results have been used to revise laboratory courses, update equipment, and improve laboratory skills used in graduate courses that have a laboratory component, including BIO 4751 (Advanced Molecular Cell Biology), BIO 5200 (Stream Ecology), BIO 5206 (Advanced Limnology), BIO 5208 (Population Ecology), BIO 5240 (Population Genetics), BIO 5380 (Landscape Ecology), and BIO 5381 (Advanced Biostatistics). Results in BIO 4750 and BIO 5381 are now being used to ensure that all graduate students demonstrate required competencies as well as a comprehensive knowledge of quantitative skills used in the biological sciences at the time of graduation. The oral thesis/research defense and oral comprehensive examination ensures all graduate students demonstrate required competencies as well as a comprehensive knowledge of biological sciences at the time of graduation.

PART THREE

Summarize changes and improvements in **curriculum, instruction, and learning** that have resulted from the implementation of your assessment program. How have you used the data? What have you learned? In light of what you have learned through your assessment efforts this year and in past years, what are your plans for the future?

The department has continued efforts to strengthen the graduate program by: 1) supporting more graduate students on research assistantships that are externally funded; 2) continuing to recruit students from outside Eastern to apply for and enroll in the graduate program; 3) developing a two-year rotation for all graduate course offerings; 4) continuing implementation of investigative laboratories into the graduate curriculum; 5) by initiating web-enhanced activities in graduate classes; 6) encouraging significant research experience as part of the graduate curriculum even for students who are not pursuing a Master's thesis option; and 7) continued placement in full-time positions or doctoral and professional programs after graduation. In addition, all graduate students are expected to be proficient in Word, Excel, PowerPoint and other software programs essential to manuscript preparation, data logging/analysis, and oral/poster presentations as well as demonstrate appropriate academic preparation and comprehensive knowledge at the time of graduation.

Recent graduates of our program have been accepted into outstanding Ph.D. programs (e.g., University of Illinois, Indiana University, University of Chicago, Purdue University, University of Missouri, Miami University, Michigan State University, University of Toronto, University of Southern Carolina) while others gained full-time employment in the field (e.g., Illinois Department of Natural Resources, Illinois Natural History Survey, Illinois Water Survey, Missouri Department of Natural Resources, Savannah River Ecology Laboratory, Community College Instructors, Scientific Sales).