Assessment Date:  28 Aug 2013

Faculty Name(s):  James E. Baxter

1. Course Name and Number:

**Principles of Biology A—Biol 101B**

2. All Course SLOs from the Course Outline of Record:

**Student Learning Outcomes**

1. Demonstrate an understanding of the key points of biological evolution and identify the phylogenetic relationships among existing organisms and their evolutionary relationships to extinct life forms of past eras.
2. Identify protistan, fungal, animal and plant taxa on the basis of morphological and molecular criteria.
3. Demonstrate dissecting skills on a variety of fungal, animal and plant specimens by cleanly exposing and isolating internal anatomical structures.
4. Demonstrate a thorough understanding of scientific logic in the application of the scientific method to problem solving, experimental design, data collection and analysis.
5. Demonstrate an understanding of animal and plant physiology and how physiological function relates to structure.
6. Trace the flow of energy and matter through the Earth's biomes, ecosystems, and communities and demonstrate an understanding of nutrient cycles.
7. Develop critical thinking skills and good oral and written communication skills for communicating scientific information.
8. Demonstrate understanding of prokaryote, protistan, fungal, plant and animal life cycles, growth and reproductive processes and strategies.

3. Specific Course SLO(s) assessed as part of this project:
1. Demonstrate an understanding of the key points of biological evolution and identify the phylogenetic relationships among existing organisms and their evolutionary relationships to extinct life forms of past eras.
5. Demonstrate an understanding of animal and plant physiology and how physiological function relates to structure.
6. Trace the flow of energy and matter through the Earth’s biomes, ecosystems, and communities and demonstrate an understanding of nutrient cycles.

4. Assessment strategy or tool used in the assessment. (Describe below, and if applicable copy/paste any additional related documents at end of this form (i.e. Rubric, score sheet, test questions, essay assignment, etc.):

Final Exam

5. Specific aspects of the assessment tool which link up to specific Course SLOs being assessed (i.e. Which specific test questions measured which Course SLOs? Note: May describe with #4 above.):

The SLOs were assessed using student responses to SLO-relevant questions on Final Exams. Results are presented as graphs showing the number of students as a function of score range. Score range is given as percentage of points (100-90%, 89.9-80%; 79.9-70%, etc.) answered correctly for questions pertaining to a given SLO.

6. Results and analysis of the data. (Explain below and if applicable copy/paste any related documents, i.e. spreadsheets with data at the end of this document.):

See attached graphs and commentaries.

7. Describe any faculty dialogue that occurred as part of the assessment process (i.e. Were results shared at a department meeting? Was there discussion about changing any SLOs? Etc.):

N/A

8. Next steps (i.e. any planned revisions to curriculum or teaching strategies to promote student success, future assessment plans, etc.):
This is the first assessment of these SLOs. They will be assessed again before revisions will be considered.

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<th>9. Results of implemented changes, if available at this time:</th>
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Please save your finished document in the following format:

* yyyysemester-sloa-courseid.doc*
* example: 2012fall-sloa-engl101c.doc*
Approximately 40% of students in Biology 101B scored 80% or higher on questions relating to biological evolution. This indicates that these students achieved a critical understanding of the subject area and could apply their knowledge to solve problems in this area of biology. Around 47% (scoring between 60-79.9%) demonstrated a basic knowledge (factual recall) of the subject area. 13% had scores below 60% indicating unsatisfactory performance for this SLO.

Approximately 27% of students in Biology 101B scored 80% or higher on questions relating to plant and animal anatomy and physiology. This indicates that these students achieved a critical understanding of the subject area and could apply their knowledge to solve problems in this area of biology. Around 57% (scoring between 60-79.9%) demonstrated a basic knowledge (factual recall) of the subject area. 16% had scores below 60% indicating unsatisfactory performance for this SLO.
Approximately 33% of students in Biology 101B scored 80% or higher on questions relating to ecology. This indicates that these students achieved a critical understanding of the subject area and could apply their knowledge to solve problems in this area of biology. Around 30% (scoring between 60-79.9%) demonstrated a basic knowledge (factual recall) of the subject area. 37% had scores below 60% indicating unsatisfactory performance for this SLO. Ecology was covered in the last week of the semester just before finals. At this time students may have been overloaded with course projects that were due at the end of the semester and therefore did not have sufficient time to master the content of the ecology lectures. This may account for the poor performance by fully 1/3 of the students on this SLO.