

## Degree Program Student Learning Outcomes

(Complete this form for every active degree or certificate granting program within your division.)

**Directions: Complete Sections A-C at the beginning of each evaluation cycle.**  
**Complete Sections D-E at the end of each evaluation cycle.**

<b>Department: Natural Science &amp; Mathematics</b>		<b>Department Chair: Karl Pruitt</b>			
<b>Degree Program: Biology</b>		<b>Degree Type: AS</b>		<b>Academic Year: 2007-2008</b>	
<b>A. Student Learning Outcomes (3-5)—no more</b>		<b>B. Direct Assessment Methods</b>	<b>C. Expected Results</b>	<b>D. Actual Results Obtained</b>	<b>E. Use of Results</b>
Students completing the program must demonstrate:		List what specific direct assessment methods you plan on using to measure the outcome. Provide specifics (i.e., course, embedded exam questions, etc...)	List what intended result you expect to obtain from the direct assessments.	When you assessed and measured your outcome, what results did you actually find?  <i>*Reported in late Spring</i>	Now that you have your results, how do you intend to use these results to improve this program?  <i>*Reported in late Spring.</i>
1. Be able to explain & apply through experiment design the concept of the scientific method ( Biology 103)		1. Lab Report(use common rubric) 1a. Written exam (embedded questions)	1. 70% of students enrolled in Biology 103 will demonstrate mastery of concept through the lab exercise on scientific method (assessment tool common lab report). 1a. 70% of students enrolled Biology 103 will demonstrate mastery of the concept by correctly answering 7 of 10 embedded questions on written exam	1.53% of the students in BIO103 mastered the scientific method.	1. To improve student results with the scientific method, the instructors will discuss this topic during the first laboratory and then test the students during the 3 <sup>rd</sup> or 4 <sup>th</sup> laboratory covering the identification of the cell.
2. Demonstrate proficient use of microscope and identification of the parts of the microscope. (Biology 103)		2. Lab final (use common rubric)	2. 70% of students enrolled in Biology 103 will demonstrate proficiency in the use of a microscope by achieving mastery on the performance based assessment rubric.	2. 87% of the students in BIO103 mastered the use of the laboratory microscope.	2. This Learning Outcome indicates those both full and part time faculties are teaching the correct use of the microscope. Evaluate the rubric to increase to 100%.
3. Be able to label and identify organs and organ systems as well as understand the physiology functions of each system. (Biology 201)		3. Lab Exam  3a. Written exam (embedded questions)	3. 70% of students enrolled in Biology 201 will demonstrate mastery of the concept by correctly answering questions on the lab exam (identification). 3a. 70% of students enrolled in Biology 201 will demonstrate mastery of the concept by correctly answering 7 of 10 embedded questions on written exam.	3. 84% of students in BIO201 mastered labeling and identification of structures in the laboratory.  3a. 55% of students in BIO201 mastered the written concepts on the embedded exam questions.	3. This proves that adequate laboratory models and equipment can be a successful aid in student learning of cellular structure identifications. Such methods will continue.  3a. This outcome indicates that faculty must spend more lecture time with some basic concepts in laboratory and lecture.

<p>4. Identify structures and function of the cell. (Biology 103)</p>	<p>4. Lab Exam 4a. Written exam (embedded questions)</p>	<p>4. 70% of students enrolled in Biology 103 will demonstrate mastery of cell structure and function by correctly answering questions on the lab exam (identification). 4a. 70% of students in Biology 103 will demonstrate mastery of the concept by correctly answering 7 of 10 embedded questions on written exam.</p>	<p>4. 75% mastered cell identification in BIO103. 4a. 75% of the written exam embedded exam questions.</p>	<p>4. To purchase more diverse cellular models to aid in learning. 4a. Have faculty to spend more time in lecture and laboratory with some basic biological concepts.</p>
<p>5. Communicate oral, written and technological skills of infectious diseases affect the systems of the human body. (Biology 220)</p>	<p>5. Research paper (use common rubric) 5a. Oral presentation with PowerPoint (use common rubric)</p>	<p>5. 70% of students enrolled in Biology 220 will demonstrate mastery of oral, written and technological skills on the performance based assessment rubric.</p>	<p>5. Based on the data collected 84% of students who completed the assignment mastered it.</p>	<p>5. Data shows that microbiology students are proficient in oral, written, and technological skills. Incorporate more teaching styles to increase to 100%.</p>