

**Assessment Report for General Education-Science**

***Learning Outcome #3: The student will demonstrate an understanding of the fundamental concepts and applications of science as well as the impact of these applications on society.***

Academic Year	Assessment Method	Goal(s)	Actual Results	Analysis (What does it mean?)	Changes Required
2010-2011	<b>Biology</b> 1. Comprehensive Final Exam  2. Lab skills a. use of microscope b. following procedures in photosynthesis lab c. demonstrating pH d. labeling stages of mitosis using microscope slides	80% of classes will pass each assessment method with 76% or higher.	<b>Final Exam: Fall</b> <i>46% achieved a score of 76% or better, including 7 that did not attempt.</i> <b>Lab Skills Assessment:</b> 2. a. 67% with 5 that did not attempt. 2. b. 82% with 4 that did not attempt. 2. c. 56% with 10 that did not attempt. 2. d. 67% with 9 that did not attempt.  <b>Final Exam: Spring</b> <i>64% achieved a score of 76% or better, including 11 that did not attempt.</i> <b>Lab Skills Assessment:</b> 2a. 77% with 9 that did not attempt. 2b. 71% with 14 that did not attempt. 2c. 65% with 17 that did not attempt. 2d. 68% with 17 that did not attempt.	Students were not successful with some of the assignments. A lot of students did not attempt to do the assignments and the final which brought the averages of successful completion lower	Switch to pre and post testing to adequately assess student learning. Some students skip the final or the labs if they get behind in the class.
	<b>Botany</b> 1. Written Essay exam on	80% of class will pass	<b>Spring:</b> 85% of class passed with a grade of 76% or higher.	Students retained information on basic	None at this time

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	Biological concepts	written essay with 76% or higher.		biological/botanical concepts	
<b>2011-2012 Biology</b>	1.Comprehensive Final Exam 2. Lab skills a. demonstrating pH b. demonstrating enzymes c. labeling stages of mitosis using microscope slides	80% of classes will pass each assessment method with 76% or higher.	<b>Final Exam: Fall</b> 83% achieved a score of 76% or better. <b>Lab Skills Assessment:</b> 2a. 95% passed. 2b. 95% passed. 2c. 98% passed  <b>Final Exam: Spring</b> 68% achieved a score of 76% or better. <b>Lab Skills Assessment:</b> 2a. 92% passed. 2b. 87% passed. 2c. 77% passed.	Students were not successful with some of the assignments. Students overall were more proficient in the fall semester than in the spring semester. This could have been the layout of some of the classes – more online versus in class.	Switch to pre and post testing to adequately assess student learning. Some students skip the final or the labs if they get behind in the class.
<b>Botany</b>	1. Written Essay exam on Biological concepts	80% of class will pass written essay with 76% or higher.	<b>Written Essay: Fall</b> 82% achieved a score of 76% or better. <b>Written Essay: Spring</b> 60% achieved a score of 76% or better and 2 students did not attempt.	In the fall, statistics show students retained more information about basic biological concepts than in the spring.	None at this time

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<p><b>2012-2013</b></p> <p><b>Biology</b></p>	<p>1. Comprehensive Final Exam 2. Lab skills a. demonstrating pH b. demonstrating enzymes c. labeling stages of mitosis using microscope slides</p>	<p>80% of classes will pass each assessment method with 76% or higher.</p>	<p><b>Final Exam: Fall</b> 82.6% passed with a 76% or higher (Written Comprehensive +lab exam) <b>Lab Assessment Skills:</b> 2a. 96.3% showed understanding of the pH lab 2b. 93.5% pass rate with 76% or better 2c. 91.7% pass rate</p>	<p>Students do well with the labs but are also demonstrating learning overall</p>	<p>This year the Biology instructors have created a Pre and Post exam to better see the prior knowledge vs. gained learning in the course</p>
<p><b>2013-2014</b></p> <p><b>Biology</b></p>	<p>Pre and Post testing</p>	<p>85% of students will show a higher score on the post-test than the pre-test</p>	<p>83% of students showed an improvement from pre-test to post-test</p> <p>Of the students that showed improvement, the average score increase was 4.14 points. Of the students that showed no improvement, the average score decrease was 1.33 points</p>	<p>The goal was not met. The increase in points from pre-test to post-test was higher than the decrease, so the students that showed an improvement showed a fairly drastic improvement.</p> <p>This was the first year of the pre and post-test. Students may not have taken it seriously.</p> <p>The labs were not assessed this year. The lab assessment started in 2006-2007 when the online Biology course was first</p>	<p>None, only to increase the percentage of students who score higher on the post-test.</p> <p>This was the first year of the pre and posttest. Students may not have taken it seriously.</p>

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<b>Physical Science</b>	Pre and Post testing		<i>Not assessed this year due to not having a full-time faculty for this area.</i>	offered to compare in-class labs with the online labs. Since we have taught the online section for 7 years and the data shows that both are providing the rigor and structure the students need to learn, we feel that the comparison is no longer needed.	
<b>2014-2015</b>	Pre and Post testing	85% of students will show a higher score on the post-test than the pre-test	<ul style="list-style-type: none"> <li>• 88.9% of students showed an improvement from pre-test to post-test</li> <li>• 76.3% of the students taking the final exam scored a B or better.</li> </ul>	Goal was met this year. The final exam was also a consideration to see how well students are retaining the outcomes. The results are typical of what would be expected.	Continue with this data collection for another year.
<b>Physical Science</b>	Pre and Post testing		<i>Not assessed this year due to not having a full-time faculty for this area.</i>		

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<b>2015-2016 Biology</b>	Pre and Post testing	85% of students will show a higher score on the post-test than the pre-test	<ul style="list-style-type: none"> <li>85.5% of students showed an improvement from pre-test to post-test</li> <li>48.3% of the students taking the final exam scored a B or better.</li> </ul>	Goal was met this year. The final exam was also a consideration to see how well students are retaining the outcomes. This average decreased from last year.	Continue with this data collection for another year.
<b>Physical Science</b>	Pre and Post testing		<i>Not assessed this year due to not having a full-time faculty for this area.</i>		
<b>2016-2017 Biology</b>	Pre and Post testing	85% of students will show a higher score on the post-test than the pre-test	100% of students showed an improvement from pre-test to post-test	Goal was met this year. We did not use data from final exam this year as it did not show improvement like the pre/post-tests did.	Continue with this data collection for another year.
<b>Physical Science</b>	Pre and Post testing			<i>Not assessed this year due to not having a full-time faculty for this area.</i>	

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