

General Education Student Learning Report (rev. 7/15)

Fall 2015 – Spring 2016

Department of Biology

Effectively assessing a degree program should address a number of factors:

- 1) Valid student learning outcomes should be clearly articulated;
- 2) Valid assessment measures should be used, consistent with the standards of professional practice;
- 3) There should be evidence that assessment data are being used by faculty to make necessary instructional or assessment changes; and there should be evidence that instructional or assessment changes are being implemented to improve student learning.

Relationship of Degree Program Learning Outcomes to Departmental and University Missions

| RSU Mission | General Education Mission |
|--|--|
| Our mission is to ensure students develop the skills and knowledge required to achieve professional and personal goals in dynamic local and global communities | General Education at Rogers State University provides a broad foundation of intellectual skills, knowledge, and perspectives to enable students across the University to achieve professional and personal goals in a dynamic local or global society. |
| RSU Commitments | General Education Outcomes |
| To provide quality associate, baccalaureate, and graduate degree opportunities and educational experiences which foster student excellence in oral and written communications, scientific reasoning, and critical and creative thinking. | <ol style="list-style-type: none">1) Think critically and creatively.2) Acquire, analyze, and evaluate knowledge of human cultures and the physical and natural world.3) Use written, oral, and visual communication effectively.4) Develop an individual perspective on the human experience, and demonstrate an understanding of diverse perspectives and values.5) Demonstrate civic knowledge and engagement, ethical reasoning, and skills for lifelong learning. |

| RSU Mission | General Education Mission |
|--|--|
| <p>To promote an atmosphere of academic and intellectual freedom and respect for diverse expression in an environment of physical safety that is supportive of teaching and learning.</p> | |
| <p>To provide a general liberal arts education that supports specialized academic programs and prepares students for lifelong learning and service in a diverse society.</p> | <ol style="list-style-type: none"> 1) Think critically and creatively. 2) Acquire, analyze, and evaluate knowledge of human cultures and the physical and natural world. 3) Use written, oral, and visual communication effectively. 4) Develop an individual perspective on the human experience, and demonstrate an understanding of diverse perspectives and values. 5) Demonstrate civic knowledge and engagement, ethical reasoning, and skills for lifelong learning. |
| <p>To provide students with a diverse, innovative faculty dedicated to excellence in teaching, scholarly pursuits, and continuous improvement of programs.</p> | |
| <p>To provide university-wide student services, activities, and resources that complement academic programs.</p> | |
| <p>To support and strengthen student, faculty, and administrative structures that promote shared governance of the institution.</p> | |
| <p>To promote and encourage student, faculty, staff, and community interaction in a positive academic climate that creates opportunities for cultural, intellectual, and personal enrichment for the university and the communities it serves.</p> | |

PART 1

Discussion of Instructional Changes Resulting from 2014-2015 General Education Student Learning Report

List and discuss all instructional or assessment changes proposed in Part 4 of last year's General Education Student Learning Report, whether implemented or not. Any other changes or assessment activities from last year, but not mentioned in last year's report, should be discussed here as well. Emphasis should be placed on student learning and considerations such as course improvements, the assessment process, and the budget. If no changes were planned or implemented, simply state "No changes were planned or implemented."

| Instructional or Assessment Changes | Changes Implemented (Y/N) | Impact of Changes on Degree Program Curriculum or Budget |
|---|---------------------------|--|
| A new textbook was adopted for Biol 1114. | Y | None |
| Online courses and course supplements were migrated to the new Jenzabar system. | Y | None |
| | | |
| | | |
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PART 2

Discussion of the University Assessment Committee's 2014-2015 Peer Review Report

[Complete this part only if the general education course(s) was among those that were peer reviewed last year.] The University Assessment Committee in its Degree Program Peer Review Report provided feedback and recommendations for improvement in assessment. List or accurately summarize all feedback and recommendations from the committee, and state whether they were implemented or will be implemented at a future date. If they were not or will not be implemented, please explain why. If no changes were recommended last year, simply state "No changes were recommended."

| Feedback and Recommended Changes from the University Assessment Committee | Suggestions Implemented (Y/N) | Changes that Were or Will Be Implemented, or Rationale for Changes that Were Not Implemented |
|---|-------------------------------|--|
| | | |

| | | |
|---|----------|--|
| <p>BIOL 1114 & 1134 only measured online students. There needs to be an equivalent mechanism to capture the data from traditional students.</p> | <p>N</p> | <p>The intent of this feedback is not understood. We assess online and on-ground sections of both of these courses. On-ground sections of Biol 1114 are assessed with 1) a pre-post comprehensive exam of concepts covered in the course, and 2) a quiz on scientific principles and the scientific method. On-ground sections of Biol 1134 are assessed using a comprehensive final exam or the average of unit exams. All of the above data is reported in our annual report. At present, however, the online sections of Biol 1114 are assessed only with a comprehensive final exam. Thus the online and on-ground sections are not assessed in the same fashion making comparisons of student learning difficult. Concern has been raised about the test security of offering our assessment instrument to online students. This would require a service like Proctor U to ensure the test does not leak to other students.</p> |
| <p>Consider a more effective approach to gather data from adjunct instructors to avoid incomplete information.</p> | <p>N</p> | <p>Agreed. The missing information is ALL from adjunct instructors teaching at branch campuses. Better communication about the assessment process needs to be communicated to faculty from the department.</p> |

PART 3

Analysis of Evidence of Student Learning Outcomes

The five General Education Outcomes are listed below. For each outcome, indicate the General Education courses being assessed, and provide a brief narrative of the assessment measures and performance standards used, as well as the sampling methods and sample sizes. For each measure, document the results of the activity measured and draw any relevant conclusions related to strengths and weaknesses of their performance. Finally, indicate whether the performance measure was met or not.

OUTCOME 1: Think critically and creatively

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) |
|--------------------------------------|--------------------------------------|---|--|---------------------------|---|--|---|
| BIOL 1114: General Biology | Science Literacy Quiz Comprises a | 70% of test takers will score 70% or above. | Given to all students in both Fall and Spring terms. | Fall + Spring 139 | This table summarizes for student scores for Fall & Spring terms. | The average test score for the full year was 78%. 73% (101 of 139) scored | Y |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | |
|---|---|--|--|---|--|----------------|------------------------------------|--------|---|--------|----|--------|----|--------|-----|---------|----|---|-------------|--|--|
| | 15-question multiple choice assessment on the principles of science and the scientific method. | | Administered in course lab sections. | 11 of 14 sections reported data. | <p>Score Distribution</p> <table border="1"> <tr><td>0-49%</td><td>5</td></tr> <tr><td>50-59%</td><td>1</td></tr> <tr><td>60-69%</td><td>32</td></tr> <tr><td>70-79%</td><td>28</td></tr> <tr><td>80-89%</td><td>47</td></tr> <tr><td>90-100%</td><td>26</td></tr> <tr><td>Average:</td><td>77.6</td></tr> </table> | 0-49% | 5 | 50-59% | 1 | 60-69% | 32 | 70-79% | 28 | 80-89% | 47 | 90-100% | 26 | Average: | 77.6 | <p>≥70%.</p> <p>This is the third consecutive year that students have met the standard for this measure. This shows that students are improving their proficiency in critical thinking skills.</p> <p>Below are assessment data for the last five cycles. Shown are the average score for the quiz and percentage of students that met the standard for the full year.</p> <p>2015-16 77.6 73% 2014-15 77.7 75% 2013-14 78.2 75% 2012-13 70.8 55% 2011-12 69.5 56%</p> | |
| 0-49% | 5 | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 1 | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 32 | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 28 | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 47 | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 26 | | | | | | | | | | | | | | | | | | | | |
| Average: | 77.6 | | | | | | | | | | | | | | | | | | | | |
| BIOL 1144: General Cell Biology | Science Literacy Quiz Comprises a 15-question multiple choice assessment on the principles of science and the scientific | 70% of students will score 70% or above. | Given to all students in both Fall and Spring terms. Administered as part of the lab final. | Fall + Spring 267 17 of 24 sections reported data. | <p>This table summarizes student scores for Fall & Spring terms.</p> <p>Score Distribution</p> <table border="1"> <tr><td>0-49%</td><td>4</td></tr> <tr><td>50-59%</td><td>5</td></tr> <tr><td>60-69%</td><td>40</td></tr> <tr><td>70-79%</td><td>49</td></tr> <tr><td>80-89%</td><td>113</td></tr> <tr><td>90-100%</td><td>56</td></tr> </table> | 0-49% | 4 | 50-59% | 5 | 60-69% | 40 | 70-79% | 49 | 80-89% | 113 | 90-100% | 56 | <p>The average test score for the full year was 80%.</p> <p>82% (218 of 267) scored ≥70%.</p> <p>The 82% success rate for this measure is the highest we have seen in this course since implementing the quiz. We have also seen steady</p> | Y | | |
| 0-49% | 4 | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 5 | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 40 | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 49 | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 113 | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 56 | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) |
|-----------|------------------------|--------------------------|---------------------|--------------------|---------------|--|------------------------------------|
| | method. | | | | Average: 79.8 | improvement in student achievement on this quiz over the last five cycles. This shows that students are demonstrating a proficiency in critical thinking skills. Below are assessment data for the last five cycles. Shown are the average score for the quiz and percentage of students that met the standard for the full year. 2015-16 79.8 82% 2014-15 77.1 70% 2013-14 82.0 73% 2012-13 76.0 70% 2011-12 74.0 65% | |

OUTCOME 2: Acquire, analyze, and evaluate knowledge of human cultures and the physical and natural world.

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) |
|--------------------------------------|---|--|--|--------------------|--|---|------------------------------------|
| BIOL 1114: General Biology | Comprehensive Pre-Post Exam Comprises a 50 | 70% of students will score 70% or above. | Given to all students in both Fall & Spring terms. | Fall 102 Spring | These tables summarize student scores for the Fall and Spring terms. | Mean scores were 67% and 60% for Fall & Spring terms. The overall mean score for the both terms | N |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|--------------------------|---------------------|--|---|--------------------|------------------------------------|-------|----|--------|----|--------|----|--------|----|--------|----|---------|----|-----------------|-------------|--------------------|--|-------|----|--------|----|--------|----|--------|----|--------|---|---------|---|-----------------|-------------|--|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|--|
| | <p>multiple-choice question exam on basic concepts covered in the course.</p> <p>This exam was administered with the pre-test given on first class and the post-test given at time of final exam. as a pre-post test</p> <p>We consider two results: 1) post test scores, and 2) the difference in pre-post test scores.</p> <p>Here, we discuss the post-test score results. Change in pre-post scores is discussed in next section.</p> | | | <p>68</p> <p>6 of 9 sections reported data</p> | <p>Fall</p> <table border="1" data-bbox="397 724 641 976"> <thead> <tr> <th>Score Distribution</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>11</td> </tr> <tr> <td>50-59%</td> <td>22</td> </tr> <tr> <td>60-69%</td> <td>25</td> </tr> <tr> <td>70-79%</td> <td>20</td> </tr> <tr> <td>80-89%</td> <td>14</td> </tr> <tr> <td>90-100%</td> <td>10</td> </tr> <tr> <td>Average:</td> <td>67.2</td> </tr> </tbody> </table> <p>Spring</p> <table border="1" data-bbox="673 724 917 976"> <thead> <tr> <th>Score Distribution</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>18</td> </tr> <tr> <td>50-59%</td> <td>13</td> </tr> <tr> <td>60-69%</td> <td>21</td> </tr> <tr> <td>70-79%</td> <td>10</td> </tr> <tr> <td>80-89%</td> <td>3</td> </tr> <tr> <td>90-100%</td> <td>3</td> </tr> <tr> <td>Average:</td> <td>60.2</td> </tr> </tbody> </table> | Score Distribution | | 0-49% | 11 | 50-59% | 22 | 60-69% | 25 | 70-79% | 20 | 80-89% | 14 | 90-100% | 10 | Average: | 67.2 | Score Distribution | | 0-49% | 18 | 50-59% | 13 | 60-69% | 21 | 70-79% | 10 | 80-89% | 3 | 90-100% | 3 | Average: | 60.2 | <p>was 64%. Only 35% of students met that standard of 70%.</p> <p>The average of 64% is a drop from our average from last year. That number was the highest we have observed for the last four years of data. This cycle's scores are more consistent with preceding years. This shows that students are not adequately demonstrating the ability to acquire and analyze knowledge of the natural world.</p> <p>Below are data from the last five assessment cycles. These data show the average post-test score and the percentage of students that met the standard for the full year.</p> <table border="1" data-bbox="1193 430 1356 682"> <tbody> <tr> <td>2015-16</td> <td>64.4</td> <td>35%</td> </tr> <tr> <td>2014-15</td> <td>67.6</td> <td>48%</td> </tr> <tr> <td>2013-14</td> <td>63.3</td> <td>37%</td> </tr> <tr> <td>2012-13</td> <td>66.0</td> <td>44%</td> </tr> <tr> <td>2011-12</td> <td>60.0</td> <td>29%</td> </tr> </tbody> </table> | 2015-16 | 64.4 | 35% | 2014-15 | 67.6 | 48% | 2013-14 | 63.3 | 37% | 2012-13 | 66.0 | 44% | 2011-12 | 60.0 | 29% | |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 67.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 60.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015-16 | 64.4 | 35% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014-15 | 67.6 | 48% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013-14 | 63.3 | 37% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 66.0 | 44% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011-12 | 60.0 | 29% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|--|---|----------------|------------------------------------|--------------------|-------------------------|-------|----|--------|----|--------|----|--------|----|--------|---|--------|---|--------|---|--------|---|--------|---|---------|---|----------------------|------|--|----------|
| <p>BIOL 1114: General Biology</p> | <p>Comprehensive Pre-Post Exam Comprises a 50 multiple-choice question exam on basic concepts covered in the course. This exam was administered with the pre-test given on first class and the post-test given at time of final exam as a pre-post test We consider two results: 1) post test scores, and 2) the difference in pre-post test scores Here, we discuss the change between pre and pre-post test scores.</p> | <p>70% of students will improve on the post-test by 20% or greater over the pre-test.</p> | <p>Given to all students in Fall & Spring terms.</p> | <p>Fall 99 Spring 68 6 of 9 sections reported data</p> | <p>These tables summarize the difference in student scores for the pre & post</p> <table border="1" data-bbox="454 724 868 997"> <thead> <tr> <th colspan="2">Fall</th> </tr> <tr> <th>Score Distribution</th> <th>(Post Test Improvement)</th> </tr> </thead> <tbody> <tr> <td>0-10%</td> <td>15</td> </tr> <tr> <td>10-20%</td> <td>24</td> </tr> <tr> <td>20-30%</td> <td>29</td> </tr> <tr> <td>30-40%</td> <td>23</td> </tr> <tr> <td>40-50%</td> <td>5</td> </tr> <tr> <td>50-60%</td> <td>3</td> </tr> <tr> <td>60-70%</td> <td>0</td> </tr> <tr> <td>70-80%</td> <td>0</td> </tr> <tr> <td>80-90%</td> <td>0</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td>Average gain:</td> <td>22.2</td> </tr> </tbody> </table> <p>test scores for each term.</p> | Fall | | Score Distribution | (Post Test Improvement) | 0-10% | 15 | 10-20% | 24 | 20-30% | 29 | 30-40% | 23 | 40-50% | 5 | 50-60% | 3 | 60-70% | 0 | 70-80% | 0 | 80-90% | 0 | 90-100% | 0 | Average gain: | 22.2 | <p>Student improved by an average of 23 & 20 percentage points for Fall & Spring terms. Mean improvement was 22 percentage points when both terms are combined. 60% (60 of 99) improved their score by $\geq 20\%$ for the Fall term. 54% (37 of 68) improved their score by $\geq 20\%$ for the Spring term. 58% (97 of 167) of students scored $\geq 70\%$ for both terms combined. Student performance in 2014-15 cycle were the first time in the previous four years that students met the desired standard. Unfortunately, the results from the current cycle are more consistent with those seen in the three years prior. Thus, like the previous measure, this shows that students are not adequately demonstrating the ability to acquire and analyze knowledge of the natural world.</p> | <p>N</p> |
| Fall | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Score Distribution | (Post Test Improvement) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-10% | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-20% | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20-30% | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-40% | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40-50% | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-60% | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-70% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-80% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-90% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average gain: | 22.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|--------------------------|---------------------|--------------------|--|---|------------------------------------|-------|----|--------|----|--------|----|--------|----|--------|---|--------|---|--------|---|--------|---|--------|---|---------|---|----------------------|------|--|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|--|
| | | | | | <p>Spring</p> <table border="1" data-bbox="1015 1312 1128 1470"> <thead> <tr> <th>Score Distribution (Post Test Improvement)</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-10%</td> <td>14</td> </tr> <tr> <td>10-20%</td> <td>17</td> </tr> <tr> <td>20-30%</td> <td>19</td> </tr> <tr> <td>30-40%</td> <td>13</td> </tr> <tr> <td>40-50%</td> <td>5</td> </tr> <tr> <td>50-60%</td> <td>0</td> </tr> <tr> <td>60-70%</td> <td>0</td> </tr> <tr> <td>70-80%</td> <td>0</td> </tr> <tr> <td>80-90%</td> <td>0</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td>Average gain:</td> <td>20.4</td> </tr> </tbody> </table> | Score Distribution (Post Test Improvement) | | 0-10% | 14 | 10-20% | 17 | 20-30% | 19 | 30-40% | 13 | 40-50% | 5 | 50-60% | 0 | 60-70% | 0 | 70-80% | 0 | 80-90% | 0 | 90-100% | 0 | Average gain: | 20.4 | <p>Many students do not meet the desired standard on the post-test score, but do perform reasonably well on improving on their pre-test score. This is indicative a student population that have a poor aptitude for science coming into college and require more than a single course to get them to college level material.</p> <p>On the plus side, a much larger percentage of the student population are meeting this standard vs the post-test score measure on the same test (60% vs 35%).</p> <p>Below are data from the last five assessment cycles. These show the average improvement on the score and the percentage of students met the standard.</p> <table border="1" data-bbox="1015 1491 1128 1827"> <tbody> <tr> <td>2015-16</td> <td>21.7</td> <td>58%</td> </tr> <tr> <td>2014-15</td> <td>26.0</td> <td>72%</td> </tr> <tr> <td>2013-14</td> <td>23.0</td> <td>53%</td> </tr> <tr> <td>2012-13</td> <td>23.0</td> <td>65%</td> </tr> <tr> <td>2011-12</td> <td>21.0</td> <td>56%</td> </tr> </tbody> </table> | 2015-16 | 21.7 | 58% | 2014-15 | 26.0 | 72% | 2013-14 | 23.0 | 53% | 2012-13 | 23.0 | 65% | 2011-12 | 21.0 | 56% | |
| Score Distribution (Post Test Improvement) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-10% | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-20% | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20-30% | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-40% | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40-50% | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-60% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-70% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-80% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-90% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average gain: | 20.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015-16 | 21.7 | 58% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014-15 | 26.0 | 72% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013-14 | 23.0 | 53% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 23.0 | 65% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011-12 | 21.0 | 56% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | |
|---|---|--|---|--|---|--------------------|------------------------------------|-------|---|--------|---|--------|---|--------|----|--------|----|---------|---|-----------------|-------------|--|---|
| BIOL 1114: General Biology (Online) | Comprehensive Final Exam The exam is a comprehensive review of topics covered over the entire term. It includes short answer, essay, and multiple-choice questions. The exam is taken online. | 70% of students will score 70% or above. | Given to all students in all online sections. | Fall 32 Spring 31 4 of 4 sections reported data. | This table summarizes student scores for both semesters. <table border="1" data-bbox="527 716 771 995"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>2</td> </tr> <tr> <td>50-59%</td> <td>2</td> </tr> <tr> <td>60-69%</td> <td>6</td> </tr> <tr> <td>70-79%</td> <td>15</td> </tr> <tr> <td>80-89%</td> <td>30</td> </tr> <tr> <td>90-100%</td> <td>8</td> </tr> <tr> <td>Average:</td> <td>79.1</td> </tr> </tbody> </table> | Score Distribution | | 0-49% | 2 | 50-59% | 2 | 60-69% | 6 | 70-79% | 15 | 80-89% | 30 | 90-100% | 8 | Average: | 79.1 | The average score was 79%. 84% (53 of 63) scored $\geq 70\%$. Strong improvement in student performance has been evident in the online sections over the last four years. This shows that students are adequately demonstrating the ability to acquire and analyze knowledge of the physical and natural world. Below are data from the last five assessment cycles. Shown are the average test score and the percentage of students that met the standard. 2015-16 79.1 84% 2014-15 79.2 86% 2013-14 83.8 95% 2012-13 75.0 79% 2011-12 71.0 50% As has been noted in the past, student progress in the online General | Y |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 6 | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 15 | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 30 | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 8 | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 79.1 | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | | | |
|---|--|--|--|---|---|----------------|------------------------------------|--------------------|--|-------|----|--------|----|--------|----|--------|----|--------|----|---------|---|-----------------|------|---|---|
| BIOL 1144: General Cell Biology | Comprehensive Pre-Post Exam Comprises a 50 multiple-choice question exam on basic concepts covered in the course. This exam was administered with the pre-test given on first class and the post-test given at time of | 70% of students will score 70% or above. | Given to all students in both Fall & Spring terms. | <u>Fall</u> 201 <u>Spring</u> 96 10 of 15 sections reported data. | These tables summarize student scores for the fall and spring terms. <table border="1" data-bbox="998 735 1291 976"> <thead> <tr> <th colspan="2">Fall</th> </tr> <tr> <th>Score Distribution</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>29</td> </tr> <tr> <td>50-59%</td> <td>39</td> </tr> <tr> <td>60-69%</td> <td>50</td> </tr> <tr> <td>70-79%</td> <td>39</td> </tr> <tr> <td>80-89%</td> <td>33</td> </tr> <tr> <td>90-100%</td> <td>7</td> </tr> <tr> <td>Average:</td> <td>65.2</td> </tr> </tbody> </table> | Fall | | Score Distribution | | 0-49% | 29 | 50-59% | 39 | 60-69% | 50 | 70-79% | 39 | 80-89% | 33 | 90-100% | 7 | Average: | 65.2 | Biology is substantially higher than the on-ground sections. The online sections have been taught by a regular adjunct instructor, so there may be differences in the course rigor. Also, a comprehensive final exam is used for assessment data in the online course rather than the standardized assessment exam. Thus differences in the respective student scores may also reflect a difference in test difficulty. | N |
| Fall | | | | | | | | | | | | | | | | | | | | | | | | | |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 29 | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 39 | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 50 | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 39 | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 33 | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 65.2 | | | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | |
|---|--|---|--|---|--|---|------------------------------------|--------|---|--------|----|--------|----|--------|----|---------|---|-----------------|-------------|--|--|
| | <p>final exam.as a pre-post test.</p> <p>We consider two results: 1) post test scores, and 2) the difference in pre-post test scores.</p> <p>Here, we discuss the post-test score results. Change in pre-post scores is discussed in next section.</p> | | | | <p style="text-align: center;">Spring Score Distribution</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>0-49%</td><td style="text-align: right;">14</td></tr> <tr><td>50-59%</td><td style="text-align: right;">9</td></tr> <tr><td>60-69%</td><td style="text-align: right;">21</td></tr> <tr><td>70-79%</td><td style="text-align: right;">23</td></tr> <tr><td>80-89%</td><td style="text-align: right;">15</td></tr> <tr><td>90-100%</td><td style="text-align: right;">9</td></tr> <tr><td>Average:</td><td style="text-align: right;">68.6</td></tr> </table> | 0-49% | 14 | 50-59% | 9 | 60-69% | 21 | 70-79% | 23 | 80-89% | 15 | 90-100% | 9 | Average: | 68.6 | <p>are the average score on the post test and the percentage of students that met the standard.</p> <p>2015-16 66.3 44% 2014-15 69.0 55% 2013-14 63.0 40% 2012-13 68.0 48%</p> | |
| 0-49% | 14 | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 9 | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 21 | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 23 | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 15 | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 9 | | | | | | | | | | | | | | | | | | | | |
| Average: | 68.6 | | | | | | | | | | | | | | | | | | | | |
| <p>BIOL 1144: General Cell Biology</p> | <p>Comprehensive Pre-Post Exam</p> <p>Comprises a 50 multiple-choice question exam on basic concepts covered in the course.</p> <p>This exam was administered with the pre-test given on first class and</p> | <p>70% of students will improve on the post-test by 20% or greater over the pre-test.</p> | <p>Given to all students in Fall & Spring terms.</p> | <p><u>Fall</u> 196</p> <p><u>Spring</u> 85</p> <p>10 of 15 sections reported data</p> | <p>These tables summarize the difference in student scores for the pre & post test scores for each term.</p> | <p>Student scores on the post-test improved by an average of 24% and 32% for the Fall and Spring terms. The average was 27% for both terms combined.</p> <p>67% (246 of 281) of students improved their score by ≥20% for the both terms combined. This falls just short of our desired standard of 70%. It is also a bit of a drop from last year where in</p> | <p>Y</p> | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------------|---------------------|--------------------|---|---|------------------------------------|-------|----|--------|----|--------|----|--------|----|--------|----|--------|---|--------|---|--------|---|--------|---|---------|---|----------------------|------|---|--|-------|---|--------|----|--------|----|--------|----|--------|----|--------|---|--------|---|--------|---|--------|---|---------|---|----------------------|------|---|--|
| | <p>the post-test given at time of final exam. as a pre-post test</p> <p>We consider two results: 1) post test scores, and 2) the difference in pre-post test scores</p> <p>Here, we discuss the change between pre and pre-post test scores.</p> | | | | <p>Fall</p> <table border="1" data-bbox="341 724 787 997"> <thead> <tr> <th>Score Distribution (Post Test Improvement)</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-10%</td> <td>27</td> </tr> <tr> <td>10-20%</td> <td>46</td> </tr> <tr> <td>20-30%</td> <td>51</td> </tr> <tr> <td>30-40%</td> <td>45</td> </tr> <tr> <td>40-50%</td> <td>20</td> </tr> <tr> <td>50-60%</td> <td>4</td> </tr> <tr> <td>60-70%</td> <td>1</td> </tr> <tr> <td>70-80%</td> <td>2</td> </tr> <tr> <td>80-90%</td> <td>0</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td>Average gain:</td> <td>24.2</td> </tr> </tbody> </table> <p>Spring</p> <table border="1" data-bbox="820 724 1266 997"> <thead> <tr> <th>Score Distribution (Post Test Improvement)</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-10%</td> <td>8</td> </tr> <tr> <td>10-20%</td> <td>11</td> </tr> <tr> <td>20-30%</td> <td>20</td> </tr> <tr> <td>30-40%</td> <td>16</td> </tr> <tr> <td>40-50%</td> <td>18</td> </tr> <tr> <td>50-60%</td> <td>7</td> </tr> <tr> <td>60-70%</td> <td>4</td> </tr> <tr> <td>70-80%</td> <td>1</td> </tr> <tr> <td>80-90%</td> <td>0</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td>Average gain:</td> <td>31.8</td> </tr> </tbody> </table> | Score Distribution (Post Test Improvement) | | 0-10% | 27 | 10-20% | 46 | 20-30% | 51 | 30-40% | 45 | 40-50% | 20 | 50-60% | 4 | 60-70% | 1 | 70-80% | 2 | 80-90% | 0 | 90-100% | 0 | Average gain: | 24.2 | Score Distribution (Post Test Improvement) | | 0-10% | 8 | 10-20% | 11 | 20-30% | 20 | 30-40% | 16 | 40-50% | 18 | 50-60% | 7 | 60-70% | 4 | 70-80% | 1 | 80-90% | 0 | 90-100% | 0 | Average gain: | 31.8 | <p>which 75% of students met this standard.</p> <p>As in the past, however, a much larger percentage of the student population are meeting this standard vs the post-test score measure with the same test (67% vs 44%). This finding is consistent with past results in that many students do not meet the desired standard on the post-test score, but do perform reasonably well on improving on their pre-test score. This is indicative a student population that have a poor aptitude for science coming into college and require more than a single course to get them to college level material.</p> <p>Below are assessment data for the last five years. They show the average improvement over the pretest score and the percentage of students that met the standard.</p> | |
| Score Distribution (Post Test Improvement) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-10% | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-20% | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20-30% | 51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-40% | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40-50% | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-60% | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-70% | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-80% | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-90% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average gain: | 24.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Score Distribution (Post Test Improvement) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0-10% | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-20% | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20-30% | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-40% | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40-50% | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-60% | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60-70% | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70-80% | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80-90% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average gain: | 31.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | |
|--|------------------------|--|--|---|---|------------------------|------------------------------------|-------|---|--------|---|--------|---|--------|---|--------|---|---------|---|-----------------|------|--|---|
| BIOL 1134: General Environmental Biology | Average of Unit Exams | 70% of students will have an average score of 70% or higher. | Given to all students in the Fall & Spring terms | <u>Fall</u> 0 <u>Spring</u> 10 1 of 1 sections reported data. | This table summarizes student scores for the spring term. <table border="1" data-bbox="625 724 901 997"> <thead> <tr> <th>Score Distribution</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>0</td> </tr> <tr> <td>50-59%</td> <td>0</td> </tr> <tr> <td>60-69%</td> <td>3</td> </tr> <tr> <td>70-79%</td> <td>2</td> </tr> <tr> <td>80-89%</td> <td>1</td> </tr> <tr> <td>90-100%</td> <td>4</td> </tr> <tr> <td>Average:</td> <td>80.7</td> </tr> </tbody> </table> | Score Distribution | | 0-49% | 0 | 50-59% | 0 | 60-69% | 3 | 70-79% | 2 | 80-89% | 1 | 90-100% | 4 | Average: | 80.7 | 2015-16 26.5 67% 2014-15 29.0 75% 2013-14 25.0 59% 2012-13 29.0 75% 2011-12 27.0 68% The average test score was 81%. 70% (7 of 10) scored $\geq 70\%$. Students have met the standard for this measure for the last three years. This indicates that students are adequately demonstrating an ability to acquire and analyze knowledge about the natural world. Below are data from the last three cycles. Shown are the average test score and the percentage of students that met the standard. 2014-15 80.7 70% 2014-15 77.2 70% 2013-14: 76.1 78% 2012-13: 74.5 69% 2011-12: 69.0 39% | Y |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 3 | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 80.7 | | | | | | | | | | | | | | | | | | | | | | |
| BIOL 1134: | Final Exam or | 70% of | Given to all | <u>Fall</u> | This table summarizes | The average test score | Y | | | | | | | | | | | | | | | | |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | | | |
|--|------------------------|-----------------------------------|---|--------------------|---|--------------------|------------------------------------|-------|---|--------|---|--------|---|--------|----|--------|---|---------|---|-----------------|-------------|---|--|
| General Environmental Biology (Online) | Average of Unit Exams | students will score 70% or above. | students in Fall & Spring online sections | 16 Spring 15 | student scores for the Spring term. <table border="1"> <thead> <tr> <th>Score Distribution</th> <th></th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>2</td> </tr> <tr> <td>50-59%</td> <td>0</td> </tr> <tr> <td>60-69%</td> <td>5</td> </tr> <tr> <td>70-79%</td> <td>14</td> </tr> <tr> <td>80-89%</td> <td>8</td> </tr> <tr> <td>90-100%</td> <td>2</td> </tr> <tr> <td>Average:</td> <td>75.0</td> </tr> </tbody> </table> | Score Distribution | | 0-49% | 2 | 50-59% | 0 | 60-69% | 5 | 70-79% | 14 | 80-89% | 8 | 90-100% | 2 | Average: | 75.0 | Students have met the standard for this measure for two consecutive years. This shows that students are demonstrating an ability to acquire and analyze knowledge of the physical and natural world. 2015-16 75 77% 2014-15 76 85% 2013-14 No data 2012-13 72 57% | |
| Score Distribution | | | | | | | | | | | | | | | | | | | | | | | |
| 0-49% | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 5 | | | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 14 | | | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 8 | | | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Average: | 75.0 | | | | | | | | | | | | | | | | | | | | | | |

OUTCOME 3: Use written, oral, and visual communication effectively.

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) |
|------------------------------------|--|--|--|--|---|---|------------------------------------|
| BIOL 3103: Plants and Civilization | Written Paper This term students presented their research as a poster | 70% of students will have an average score of 70% or higher. | Given to all students in the May 2013 Intercession term. | Intercession 32 1 of 1 sections reported data. | This table summarizes student scores for the spring term. | The average test score was 87%. 100% (32 of 32) of students scored $\geq 70\%$. Students met the desired | Y |

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | |
|-----------------|------------------------|--------------------------|---------------------|--------------------|---|----------------|------------------------------------|--------|---|--------|---|--------|---|--------|----|---------|----|-----------------|-------------|--|--|
| | for the whole class. | | | | <p>Score Distribution</p> <table> <tr><td>0-49%</td><td>0</td></tr> <tr><td>50-59%</td><td>0</td></tr> <tr><td>60-69%</td><td>0</td></tr> <tr><td>70-79%</td><td>3</td></tr> <tr><td>80-89%</td><td>14</td></tr> <tr><td>90-100%</td><td>15</td></tr> <tr><td>Average:</td><td>86.6</td></tr> </table> | 0-49% | 0 | 50-59% | 0 | 60-69% | 0 | 70-79% | 3 | 80-89% | 14 | 90-100% | 15 | Average: | 86.6 | standard for this measure. This shows that students are meeting the goal of effective communication. | |
| 0-49% | 0 | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 0 | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 0 | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 3 | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 14 | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 15 | | | | | | | | | | | | | | | | | | | | |
| Average: | 86.6 | | | | | | | | | | | | | | | | | | | | |

OUTCOME 4: Develop an individual perspective on the human experience, and demonstrate an understanding of diverse perspectives and values.

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) | | | | | | | | | | | | | | |
|--|--------------------------|--|--|---|---|----------------|------------------------------------|--------|---|--------|---|--------|---|--------|----|---------|----|-----------------|-------------|--|---|
| BIOL 3103: Plants and Civilization | Comprehensive Final Exam | 70% of students will have an average score of 70% or higher. | Given to all students in the May 2013 Intercession term. | Intercession 32 1 of 1 sections reported data.. | <p>This table summarizes scores for the term.</p> <p>Score Distribution</p> <table> <tr><td>0-49%</td><td>0</td></tr> <tr><td>50-59%</td><td>0</td></tr> <tr><td>60-69%</td><td>4</td></tr> <tr><td>70-79%</td><td>2</td></tr> <tr><td>80-89%</td><td>16</td></tr> <tr><td>90-100%</td><td>10</td></tr> <tr><td>Average:</td><td>84.4</td></tr> </table> | 0-49% | 0 | 50-59% | 0 | 60-69% | 4 | 70-79% | 2 | 80-89% | 16 | 90-100% | 10 | Average: | 84.4 | The average test score was 84%. 88% (28 of 32) of students scored $\geq 70\%$. These results meet our desired standard. This shows that our students are meeting the goal of developing an understanding of the human experience. | Y |
| 0-49% | 0 | | | | | | | | | | | | | | | | | | | | |
| 50-59% | 0 | | | | | | | | | | | | | | | | | | | | |
| 60-69% | 4 | | | | | | | | | | | | | | | | | | | | |
| 70-79% | 2 | | | | | | | | | | | | | | | | | | | | |
| 80-89% | 16 | | | | | | | | | | | | | | | | | | | | |
| 90-100% | 10 | | | | | | | | | | | | | | | | | | | | |
| Average: | 84.4 | | | | | | | | | | | | | | | | | | | | |

OUTCOME 5: Demonstrate civic knowledge and engagement, ethical reasoning, and skills for lifelong learning.

| A. Course | B. Assessment Measures | C. Performance Standards | D. Sampling Methods | E. Sample Size (N) | F. Results | G. Conclusions | H. Performance Standards Met (Y/N) |
|-----------|------------------------|--------------------------|---------------------|--------------------|------------|----------------|------------------------------------|
| | | | | | | | |

PART 4

Proposed Instructional Changes Based on Conclusions Drawn from Evidence Presented Above

State any proposed instructional or assessment changes to be implemented for the next academic year. They should be based on conclusions reported in Part 3 (above) or on informal activities, such as faculty meetings and discussions, conferences, pilot projects, textbook adoption, new course proposals, curriculum modifications, etc. Explain the rationale for these changes and how they will impact student learning and other considerations, such as curriculum, degree plan, assessment process, or budget. If no changes are planned, simply state "No changes are planned."

| General Education Outcomes | Instructional or Assessment Changes | Rationale for Changes | Impact of Planned Changes on Student Learning and Other Considerations. |
|----------------------------|-------------------------------------|-----------------------|---|
| | | | |

PART 5

Shared Pedagogical Insight that Improves Student Learning or Classroom Engagement



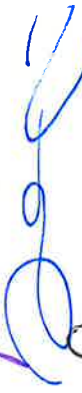



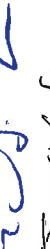
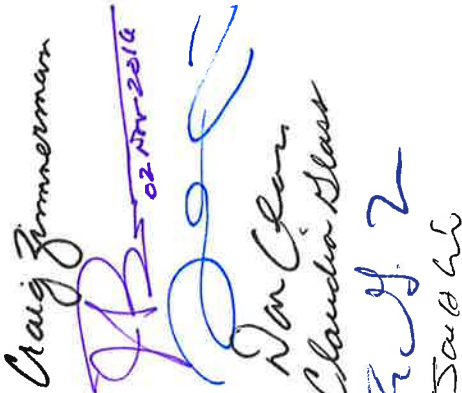
(OPTIONAL) If your department or a faculty member has developed a method or technique of teaching that seems especially effective in improving student learning or student engagement in the classroom, please provide a brief description below. More detail can be communicated during the face to face peer review session.

| Description |
|-------------|
| None |





PART 6 (A & B)

Documentation of Faculty Participation and Review

A. Provide the names and signatures of all faculty members who contributed to this report and indicate their respective roles.

| Faculty Members | Roles in the Assessment Process (e.g., collect data, analyze data, prepare report, review report, etc.) | Signatures |
|---|--|---|
| <u>Full-time Faculty</u> Craig Zimmermann | Provided data, analyzed data, and prepared report |  |
| Jerry Bowen | Analyzed data and prepared report |  |
| Jin Seo | Provided data and prepared report |  |
| Don Glass | Provided data and reviewed report |  |
| Claudia Glass | Provided data and reviewed report |  |
| Eric Lee | Reviewed report |  |
| Jae-Ho Kim | Reviewed report |  |
| <u>Adjunct Faculty</u> Emily Shelton Janette Tuckey Gifty Benson Richard Hart | Provided data Provided data Provided data Provided data |  |

B. Reviewed by:

| Titles | Names | Signatures | Date |
|-----------------|---|---|------------|
| Department Head |  |  | 02/20/2016 |
| Dean |  |  | 1/8/16 |