

# General Education Student Learning Report

Fall 2023 – Spring 2024

## 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	
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"> <li>1) Think critically and creatively.</li> <li>2) Acquire, analyze, and evaluate knowledge of human cultures and the physical and natural world.</li> <li>3) Use written, oral, and visual communication effectively.</li> <li>4) Develop an individual perspective on the human experience, and demonstrate an understanding of diverse perspectives and values.</li> <li>5) Demonstrate civic knowledge and engagement, ethical reasoning, and skills for lifelong learning.</li> </ol>
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.	
To provide a general liberal arts education that supports specialized academic programs and prepares students for lifelong learning and service in a diverse society.	<ol style="list-style-type: none"> <li>1) Think critically and creatively.</li> <li>2) Acquire, analyze, and evaluate knowledge of human cultures and the physical and natural world.</li> <li>3) Use written, oral, and visual communication effectively.</li> <li>4) Develop an individual perspective on the human experience, and demonstrate an understanding of diverse perspectives and values.</li> </ol>

RSU Mission	General Education Mission
	5) Demonstrate civic knowledge and engagement, ethical reasoning, and skills for lifelong learning.
To provide students with a diverse, innovative faculty dedicated to excellence in teaching, scholarly pursuits, and continuous improvement of programs.	
To provide university-wide student services, activities, and resources that complement academic programs.	
To support and strengthen student, faculty, and administrative structures that promote shared governance of the institution.	
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.	

## PART 1

### Discussion of Instructional Changes Resulting from 2022-2023 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 Curriculum or Budget
Online lab sections are going to become hybridized with some take home labs that students can order and work at home. Applies to lab sections of BIOL 1114/1144.	Y	None
BIOL 1134R was QM certified in Spring 2023.	Y	None
BIOL 1114R is scheduled to be QM certified in Fall 2023.	N	N/A
BIOL 1144R is scheduled to be QM certified in Fall 2023.	N	N/A

## PART 2

### Discussion of the University Assessment Committee's 2022-2023 Peer Review Report

The University Assessment Committee in its 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
No feedback provided.		

## 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)																															
<b>BIOL 1114:</b> General Biology	Science Literacy Quiz  Comprises a 15-question multiple choice quiz on principles of science & the scientific method.  Given in our lab sections.	70% of students will score 70% or above.	Given to all enrolled students in Fall & Spring terms.	31	This table summarizes for student scores.  <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td style="text-align: right;">2</td> </tr> <tr> <td>50-59%</td> <td style="text-align: right;">2</td> </tr> <tr> <td>60-69%</td> <td style="text-align: right;">5</td> </tr> <tr> <td>70-79%</td> <td style="text-align: right;">2</td> </tr> <tr> <td>80-89%</td> <td style="text-align: right;">10</td> </tr> <tr> <td>90-100%</td> <td style="text-align: right;">10</td> </tr> <tr> <td><b>Average:</b></td> <td style="text-align: right;"><b>78.3%</b></td> </tr> </tbody> </table>	Score Distribution		0-49%	2	50-59%	2	60-69%	5	70-79%	2	80-89%	10	90-100%	10	<b>Average:</b>	<b>78.3%</b>	The average score was 78%.  71% (22 of 31) scored ≥70%.  Below are average score and percentage that met the standard for the last five years.  <table style="margin-left: auto; margin-right: auto;"> <tr> <td>2023-24</td> <td style="text-align: right;">78.3</td> <td style="text-align: right;">71%</td> </tr> <tr> <td>2022-23</td> <td style="text-align: right;">77.2</td> <td style="text-align: right;">76%</td> </tr> <tr> <td>2021-22</td> <td style="text-align: right;">77.2</td> <td style="text-align: right;">78%</td> </tr> <tr> <td>2020-21</td> <td style="text-align: right;">76.7</td> <td style="text-align: right;">71%</td> </tr> <tr> <td>2019-20</td> <td style="text-align: right;">76.9</td> <td style="text-align: right;">72%</td> </tr> </table>	2023-24	78.3	71%	2022-23	77.2	76%	2021-22	77.2	78%	2020-21	76.7	71%	2019-20	76.9	72%	Y
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<b>BIOL 1144:</b> General Cell Biology	<p>Science Literacy Quiz</p> <p>Comprises a 15-question multiple choice assessment on the principles of science and the scientific method.</p> <p>Given in our lab sections.</p>	<p>70% of students will score 70% or above.</p>	<p>Given to all enrolled students in Fall &amp; Spring terms.</p>	<p>120</p>	<p>This table summarizes student scores.</p> <table border="1" data-bbox="1060 613 1365 868"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>3</td> </tr> <tr> <td>50-59%</td> <td>7</td> </tr> <tr> <td>60-69%</td> <td>27</td> </tr> <tr> <td>70-79%</td> <td>24</td> </tr> <tr> <td>80-89%</td> <td>44</td> </tr> <tr> <td>90-100%</td> <td>15</td> </tr> <tr> <td><b>Avg</b></td> <td><b>75.8 %</b></td> </tr> </tbody> </table>	Score Distribution		0-49%	3	50-59%	7	60-69%	27	70-79%	24	80-89%	44	90-100%	15	<b>Avg</b>	<b>75.8 %</b>	<p>The average score was 76%.</p> <p>70% (83 of 120) scored <math>\geq 70\%</math>.</p> <p>Below are average score and percentage that met the standard for the last five years.</p> <table border="1" data-bbox="1396 808 1669 950"> <tbody> <tr> <td>2023-24</td> <td>75.8</td> <td>70%</td> </tr> <tr> <td>2022-23</td> <td>75.8</td> <td>70%</td> </tr> <tr> <td>2021-22</td> <td>78.8</td> <td>77%</td> </tr> <tr> <td>2020-21</td> <td>79.5</td> <td>80%</td> </tr> <tr> <td>2019-20</td> <td>76.5</td> <td>77%</td> </tr> </tbody> </table> <p>Students have met the standard in all of the last five years.</p> <p>This demonstrates that students can apply critical thinking in evaluating scientific evidence.</p>	2023-24	75.8	70%	2022-23	75.8	70%	2021-22	78.8	77%	2020-21	79.5	80%	2019-20	76.5	77%	<p>Y</p>
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**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)																																		
<p><b>BIOL 1114:</b> General Biology</p>	<p>Comprehensive Pre-Post Exam</p> <p>50 multiple-choice question exam on basic concepts of biology.</p> <p>Administered on first day of lecture class and at the time of final exam.</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>70% of students will score 70% or above.</p>	<p>Given to all enrolled students in Fall &amp; Spring terms.</p>	<p>60</p>	<p>This table summarizes student scores.</p> <table border="1" data-bbox="1087 428 1354 678"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>6</td> </tr> <tr> <td>50-59%</td> <td>8</td> </tr> <tr> <td>60-69%</td> <td>11</td> </tr> <tr> <td>70-79%</td> <td>18</td> </tr> <tr> <td>80-89%</td> <td>14</td> </tr> <tr> <td>90-100%</td> <td>3</td> </tr> <tr> <td><b>Average:</b></td> <td>69.6%</td> </tr> </tbody> </table>	Score Distribution		0-49%	6	50-59%	8	60-69%	11	70-79%	18	80-89%	14	90-100%	3	<b>Average:</b>	69.6%	<p>The average score was 70%</p> <p>58% (35 of 60) scored <math>\geq 70\%</math></p> <p>Below are average scores and percentage that met the standard for the last five years.</p> <table border="1" data-bbox="1423 638 1661 800"> <tbody> <tr> <td>2023-24</td> <td>69.6</td> <td>58%</td> </tr> <tr> <td>2022-23</td> <td>53.5</td> <td>12%</td> </tr> <tr> <td>2021-22</td> <td>69.4</td> <td>54%</td> </tr> <tr> <td>2020-21</td> <td>72.6</td> <td>62%</td> </tr> <tr> <td>2019-20</td> <td>73.1</td> <td>67%</td> </tr> <tr> <td>2018-19</td> <td>67.8</td> <td>47%</td> </tr> </tbody> </table> <p>Student performance on this measure hit a historic low last year. We've seen a similar decline in student performance in BIOL 1144 in 2021. Such drops are possibly due to the lingering effects of COVID on student learning. Fortunately, results from the current year have returned to the level seen before this drop..</p>	2023-24	69.6	58%	2022-23	53.5	12%	2021-22	69.4	54%	2020-21	72.6	62%	2019-20	73.1	67%	2018-19	67.8	47%	<p>N</p>
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<p><b>BIOL 1114:</b> General Biology</p>	<p>Comprehensive Pre-Post Exam</p> <p>50 multiple-choice question</p>	<p>70% of students will improve on the post-test</p>	<p>Given to all enrolled students in</p>	<p>59</p>	<p>This table summarizes the change in student scores for the pre &amp; post test scores.</p>	<p>Mean improvement was 28 percentage points.</p> <p>82% (46 of 59) of students improved their</p>	<p>Y</p>																																		

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	<p>exam on basic concepts of biology.</p> <p>Administered on first day of lecture class and at the time of final exam.</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>	by 20% or greater over the pre-test.	Fall & Spring terms.		<p><b>Score Distribution</b> (Post Test Improvement)</p> <table border="1"> <tr><td>0-10%</td><td>3</td></tr> <tr><td>10-20%</td><td>10</td></tr> <tr><td>20-30%</td><td>18</td></tr> <tr><td>30-40%</td><td>17</td></tr> <tr><td>40-50%</td><td>9</td></tr> <tr><td>50-60%</td><td>2</td></tr> <tr><td>60-70%</td><td>0</td></tr> <tr><td><b>Avg gain:</b></td><td><b>28.3</b></td></tr> </table>	0-10%	3	10-20%	10	20-30%	18	30-40%	17	40-50%	9	50-60%	2	60-70%	0	<b>Avg gain:</b>	<b>28.3</b>	<p>score by 20 percentage points or more.</p> <p>Below are the average score improvement and percentage that met the standard for the last six years.</p> <table border="1"> <tr><td>2023-24</td><td>28.3</td><td>82%</td></tr> <tr><td>2022-23</td><td>17.3</td><td>48%</td></tr> <tr><td>2020-21</td><td>28.3</td><td>84%</td></tr> <tr><td>2019-20</td><td>37.2</td><td>90%</td></tr> <tr><td>2018-19</td><td>29.1</td><td>70%</td></tr> <tr><td>2017-18</td><td>25.6</td><td>74%</td></tr> </table> <p>While student progress on this measure hit a historic low in AY 2022, this year's findings are more in line with those seen prior to this drop. Over 80% of the class improved over their pre-test score by at least 20 percentage points, indicating a significant improvement of student understanding of science.</p>	2023-24	28.3	82%	2022-23	17.3	48%	2020-21	28.3	84%	2019-20	37.2	90%	2018-19	29.1	70%	2017-18	25.6	74%	
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<b>BIOL 1114R:</b> General Biology (Online)	<p>Comprehensive Final Exam</p> <p>Comprehensive review of topics covered over the entire term.</p>	70% of students will score 70% or above.	Given to all enrolled students in Fall & Spring terms.	147	This frequency table summarizes student scores.	<p>The average score was 89%.</p> <p>98% (143 of 147) scored <math>\geq 70\%</math>.</p> <p>Below are exam averages and percentage that met the standard for the last five years.</p>	Y																																		

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	<p>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>Student performance on this measure hit two historic lows in the three year period between 2021 and 2024. Scores dropped to a historic low in AY 2021. After a rebound in AY 2022, scores have dropped a second time. Similar recent declines in performance have been seen in other biology courses. This suggests the influence of COVID on student learning is having long-lasting effects.</p>																																		
<p><b>BIOL 1144:</b> General Cell Biology</p>	<p>Comprehensive Pre-Post Exam</p> <p>50 multiple-choice question exam on basic concepts of biology.</p> <p>Administered on first day of lecture class and at the time of final exam.</p> <p>We consider two results: 1) post test scores, and 2) the difference</p>	<p>70% of students will improve on the post-test by 20% or greater over the pre-test.</p>	<p>Given to all enrolled students in Fall &amp; Spring terms.</p>	<p>117</p>	<p>This frequency table summarizes student scores.</p> <table border="1" data-bbox="1081 987 1360 1300"> <thead> <tr> <th colspan="2">Score Distribution (Post Test Improvement)</th> </tr> </thead> <tbody> <tr> <td>0-10%</td> <td>24</td> </tr> <tr> <td>10-20%</td> <td>25</td> </tr> <tr> <td>20-30%</td> <td>28</td> </tr> <tr> <td>30-40%</td> <td>22</td> </tr> <tr> <td>40-50%</td> <td>13</td> </tr> <tr> <td>50-60%</td> <td>4</td> </tr> <tr> <td>60-70%</td> <td>1</td> </tr> <tr> <td><b>Avg gain:</b></td> <td>22.7</td> </tr> </tbody> </table>	Score Distribution (Post Test Improvement)		0-10%	24	10-20%	25	20-30%	28	30-40%	22	40-50%	13	50-60%	4	60-70%	1	<b>Avg gain:</b>	22.7	<p>Mean improvement was 23 percentage points.</p> <p>58% (68 of 117) of students improved their score by <math>\geq 20\%</math>.</p> <p>Below are the average score improvement and percentage that met the standard for the last five years.</p> <table border="1" data-bbox="1402 1203 1667 1354"> <tbody> <tr> <td>2023-24</td> <td>22.7</td> <td>58%</td> </tr> <tr> <td>2022-23</td> <td>31.0</td> <td>77%</td> </tr> <tr> <td>2021-22</td> <td>18.9</td> <td>46%</td> </tr> <tr> <td>2020-21</td> <td>33.1</td> <td>94%</td> </tr> <tr> <td>2019-20</td> <td>33.2</td> <td>77%</td> </tr> </tbody> </table> <p>See comments for post test results above.</p>	2023-24	22.7	58%	2022-23	31.0	77%	2021-22	18.9	46%	2020-21	33.1	94%	2019-20	33.2	77%	<p>N</p>
Score Distribution (Post Test Improvement)																																								
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	<p>in pre-post test scores</p> <p>Here, we discuss the change between pre and pre-post test scores.</p>																																					
<b>BIOL 1144:</b> General Cell Biology (Online)	Comprehensive Final Exam	70% of students will score 70% or higher.	Given to all enrolled students in Fall & Spring terms.	40	This frequency table summarizes student scores.  <table border="1" data-bbox="1087 678 1354 930"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>17</td> </tr> <tr> <td>50-59%</td> <td>10</td> </tr> <tr> <td>60-69%</td> <td>9</td> </tr> <tr> <td>70-79%</td> <td>3</td> </tr> <tr> <td>80-89%</td> <td>1</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td><b>Average:</b></td> <td>53.7%</td> </tr> </tbody> </table>	Score Distribution		0-49%	17	50-59%	10	60-69%	9	70-79%	3	80-89%	1	90-100%	0	<b>Average:</b>	53.7%	<p>The average score was 54%.</p> <p>10% (4 of 40) scored <math>\geq 70\%</math>.</p> <p>These results are well below the standard.</p> <p>Below are the average post-test score and the percentage of students that met the standard for the last five years.</p> <table border="1" data-bbox="1430 971 1654 1109"> <tbody> <tr> <td>2023-24</td> <td>53.7</td> <td>10%</td> </tr> <tr> <td>2022-23</td> <td>54.3</td> <td>11%</td> </tr> <tr> <td>2021-22</td> <td>53.8</td> <td>29%</td> </tr> <tr> <td>2020-21</td> <td>49.7</td> <td>17%</td> </tr> <tr> <td>2019-20</td> <td>45.6</td> <td>10%</td> </tr> </tbody> </table> <p>Final exam scores in this online course have been notably low. The unit exam scores, in contrast, are much higher. The instructor indicates that the final is proctored, while the individual unit exams are not. This</p>	2023-24	53.7	10%	2022-23	54.3	11%	2021-22	53.8	29%	2020-21	49.7	17%	2019-20	45.6	10%	N
Score Distribution																																						
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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)																												
						suggests that some students may be cheating in the unproctored exams and are not prepared for the proctored final.																													
<b>BIOL 1134:</b> General Environmental Biology	Comprehensive Final Exam  Multiple-choice comprehensive exam of the concepts covered during the semester.	70% of students will score 70% or higher.	Given to all enrolled students in the Fall & Spring terms	11	This frequency table summarizes student scores.  <table border="1" data-bbox="1087 565 1354 820"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>0</td> </tr> <tr> <td>50-59%</td> <td>2</td> </tr> <tr> <td>60-69%</td> <td>5</td> </tr> <tr> <td>70-79%</td> <td>1</td> </tr> <tr> <td>80-89%</td> <td>3</td> </tr> <tr> <td>90-100%</td> <td>0</td> </tr> <tr> <td><b>Average:</b></td> <td>69.1%</td> </tr> </tbody> </table>	Score Distribution		0-49%	0	50-59%	2	60-69%	5	70-79%	1	80-89%	3	90-100%	0	<b>Average:</b>	69.1%	The average score was 69%.  36% (4 of 11) scored ≥70%.  Below are the average post-test score and the percentage of students that met the standard for the last four years.  <table border="1" data-bbox="1423 792 1669 912"> <tbody> <tr> <td>2023-24</td> <td>69.1</td> <td>36%</td> </tr> <tr> <td>2021-22</td> <td>74.1</td> <td>77%</td> </tr> <tr> <td>2020-21</td> <td>85.0</td> <td>100%</td> </tr> <tr> <td>2019-20</td> <td>78.0</td> <td>92%</td> </tr> </tbody> </table>  This measure has reliably met the standard for the last decade. A sharp decline in performance is seen in the current year. This is consistent with similar declines seen in BIOL 1114 and BIOL 1144 over the last three years. The potential of COVID having long-lasting effects on student learning is a concern.	2023-24	69.1	36%	2021-22	74.1	77%	2020-21	85.0	100%	2019-20	78.0	92%	N
Score Distribution																																			
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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)																															
<b>BIOL 1134R:</b> General Environmental Biology (Online)	Final Exam or Average of Unit Exams	70% of students will score 70% or above.	Given to all enrolled students in online sections	52	This frequency table summarizes student scores.  <table border="1" data-bbox="1087 402 1354 667"> <thead> <tr> <th colspan="2">Score Distribution</th> </tr> </thead> <tbody> <tr> <td>0-49%</td> <td>0</td> </tr> <tr> <td>50-59%</td> <td>1</td> </tr> <tr> <td>60-69%</td> <td>0</td> </tr> <tr> <td>70-79%</td> <td>2</td> </tr> <tr> <td>80-89%</td> <td>29</td> </tr> <tr> <td>90-100%</td> <td>20</td> </tr> <tr> <td><b>Average:</b></td> <td>87.3%</td> </tr> </tbody> </table>	Score Distribution		0-49%	0	50-59%	1	60-69%	0	70-79%	2	80-89%	29	90-100%	20	<b>Average:</b>	87.3%	<p>The average score was 87%.</p> <p>98% (51 of 52) scored <math>\geq 70\%</math>.</p> <p>Shown are the average test score and the percentage of students that met the standard for the last five years.</p> <table border="1" data-bbox="1409 605 1654 743"> <tbody> <tr> <td>2023-24</td> <td>87.3</td> <td>98%</td> </tr> <tr> <td>2022-23</td> <td>86.1</td> <td>100%</td> </tr> <tr> <td>2021-22</td> <td>82.1</td> <td>94%</td> </tr> <tr> <td>2020-21</td> <td>80.0</td> <td>88%</td> </tr> <tr> <td>2019-20</td> <td>77.0</td> <td>83%</td> </tr> </tbody> </table> <p>Students that had a score <math>&gt;70\%</math> has exceeded 80% in three of the last five years.</p> <p>The 86% average of this AY is the highest over this time period.</p> <p>Moreover, 100% of students met the desired standard. This is also the highest in this period.</p> <p>This shows that students demonstrate an ability to acquire and analyze knowledge about the natural world.</p>	2023-24	87.3	98%	2022-23	86.1	100%	2021-22	82.1	94%	2020-21	80.0	88%	2019-20	77.0	83%	Y
Score Distribution																																						
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**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)																															
<b>BIOL 3103:</b> Plants and Civilization	Written Paper  This term students presented their research as a poster for the whole class.	70% of students will score 70% or higher.	Given to all enrolled students in the semester.	9	This table summarizes  <table border="1"> <thead> <tr> <th colspan="2">Score Distribution</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>0</td> </tr> <tr> <td>70-79%</td> <td>1</td> </tr> <tr> <td>80-89%</td> <td>2</td> </tr> <tr> <td>90-100%</td> <td>3</td> </tr> <tr> <td><b>Average:</b></td> <td>88.0%</td> </tr> </tbody> </table> student scores.	Score Distribution		0-49%	0	50-59%	0	60-69%	0	70-79%	1	80-89%	2	90-100%	3	<b>Average:</b>	88.0%	The average score was 88%.  100% (6 of 6) scored ≥70%.  Shown are the average test score and the percentage of students that met the standard for the last five years.  <table border="1"> <tbody> <tr> <td>2023-24</td> <td>88.0</td> <td>100%</td> </tr> <tr> <td>2022-23</td> <td>92.2</td> <td>100%</td> </tr> <tr> <td>2021-22</td> <td>88.1</td> <td>100%</td> </tr> <tr> <td>2020-21</td> <td>87.2</td> <td>100%</td> </tr> <tr> <td>2019-20</td> <td>88.2</td> <td>100%</td> </tr> </tbody> </table> Student achievement with this measure has been strong. The desired standard has been met in all of the past five years. This shows students are meeting the goal of effective written & visual communication.	2023-24	88.0	100%	2022-23	92.2	100%	2021-22	88.1	100%	2020-21	87.2	100%	2019-20	88.2	100%	Y
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2019-20	88.2	100%																																				

**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)
<b>BIOL 3103:</b> Plants and Civilization	Comprehensive Final Exam	70% of students will	Given to all enrolled	9	This table summarizes student scores.	The average score was 89%.	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)																																		
		score 70% or higher.	students in the semester.		<table border="1"> <thead> <tr> <th colspan="2">Score Distribution</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>0</td> </tr> <tr> <td>70-79%</td> <td>0</td> </tr> <tr> <td>80-89%</td> <td>3</td> </tr> <tr> <td>90-100%</td> <td>3</td> </tr> <tr> <td><b>Average:</b></td> <td>89.3%</td> </tr> </tbody> </table>	Score Distribution		0-49%	0	50-59%	0	60-69%	0	70-79%	0	80-89%	3	90-100%	3	<b>Average:</b>	89.3%	<p>100% (6 of 6) scored <math>\geq 70\%</math>.</p> <p>Shown are the average test score and the percentage of students that met the standard for the last five years.</p> <table border="1"> <tbody> <tr> <td>2023-24</td> <td>89.3</td> <td>100%</td> </tr> <tr> <td>2022-23</td> <td>77.5</td> <td>78%</td> </tr> <tr> <td>2021-22</td> <td>82.9</td> <td>92%</td> </tr> <tr> <td>2020-21</td> <td>76.2</td> <td>88%</td> </tr> <tr> <td>2019-20</td> <td>82.0</td> <td>97%</td> </tr> <tr> <td>2018-19</td> <td>89.6</td> <td>100%</td> </tr> </tbody> </table> <p>Student progress in this measure has remained robust over the last five years. The desired standard has been met in every year it has been assessed. This shows students are meeting the goal of developing an understanding of the human experience.</p>	2023-24	89.3	100%	2022-23	77.5	78%	2021-22	82.9	92%	2020-21	76.2	88%	2019-20	82.0	97%	2018-19	89.6	100%	
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**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)
N/A							

**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. 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."

<b>General Education Outcomes</b>	<b>Instructional or Assessment Changes</b>	<b>Rationale for Changes</b>	<b>Impact of Planned Changes on Student Learning and Other Considerations.</b>
SLO 1 / SLO 2	BIOL 1114R was QM certified in Spring 2023.	QM certification ensures quality online instruction. It is a key part of the university initiative to deliver quality distance learning.	QM review results in better course design, which makes navigation easier for students, reduces barriers to student achievement, and results in better outcomes
SLO 1 / SLO 2	BIOL 1144R is scheduled to be QM certified in Fall 2023.	See above.	

**PART 6 (A & B)**


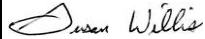
**Documentation of Faculty Participation and Review**

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

<b>Faculty Members</b>	<b>Roles in the Assessment Process</b>	<b>Signatures</b>
Craig Zimmermann	Provided data, analyzed data, prepared report	Craig Zimmermann*
Jerry Bowen	Provided data and reviewed report	
Mark Peaden	Provided data and reviewed report	Mark Peaden*
Hannah King	Provided data and reviewed report	Hannah King*
Rance Kingfisher	Provided data and reviewed report	Rance Kingfisher*
Cheyanne Olson	Provided data and reviewed report	Cheyanne Olson*
Keith Martin	Provided data and reviewed report	Keith Martin*
Jae-Ho Kim	Reviewed report	Jae-Ho Kim*
Jin Seo	Reviewed report	Jin Seo*
Gifty Benson	Provided data	N/A

\*Denotes approval by email.

**B.** Reviewed by:

<b>Titles</b>	<b>Names</b>	<b>Signatures</b>	<b>Date</b>
Department Head	Dr. Jin Seo		5/31/24
Dean	Dr. Susan Willis		5-31-24