



Assessment Record

Program: Biology (BIO 101)

Assessment period: Fall 2018 – Summer 2019

Program or Department Mission:

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Learning Outcomes & Assessment Plan

Biology 101 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism levels.
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes

1. Students will recognize how the scientific method is utilized to explore biological processes.
2. Students will have the ability to recognize biological processes at the molecular, cellular and organismal levels.
3. Students will demonstrate an ability to identify basic anatomical structures and the correlating physiology of human systems.

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | | | Use of Results |
|--|---|---|---|-----------|--|---|
| 1. Students will recognize how the scientific method is utilized to explore biological processes | Student learning outcomes were assessed by using a 15 question standardized multiple choice examination at the end of the semester. A total of three questions (Q-1 – Q-3) were used to assess SLO-1. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 1. | Fall 2018 | Jefferson | # students tested = 56 # correct = 96 % correct = 57 | The students tested meet the requirements for success for SLO 1. The success rate for SLO 1 is 73%, a tad bit lower than last year's 74.9%. We will continue to implement the Scientific Method and case studies. |
| | | | | Shelby | # students tested = 134 # correct = 367 % correct = 76 | |
| | | | | Pell City | # students tested = 14 # correct = 23 % correct = 55 | |
| | | | | Clanton | # students tested = 13 # correct = 29 % correct = 74 | |
| | | | Spring 2019 | Jefferson | # students tested = 61 # correct = 133 % correct = 73 | |
| | | | | Shelby | # students tested = 113 # correct = 266 % correct = 78 | |
| | | | | Pell City | # students tested = 16 # correct = 32 % correct = 67 | |
| | | | | Clanton | # students tested = 23 # correct = 46 % correct = 67 | |
| | | | Summer 2019 | Jefferson | # students tested = 21 # correct = 41 % correct = 65 | |

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|--|--|---|---|-----------|-----------|---|--|-----------|--|--|-----------|--|--|---------|--|-------------|-----------|---|--|--------|--|--|-----------|--|--|---------|---|---|
| | | | <table><tr><td></td><td>Shelby</td><td># students tested = 31 # correct = 81 % correct = 87</td></tr><tr><td></td><td>Pell City</td><td># students tested = 25 # correct =58 % correct =77</td></tr><tr><td></td><td>Clanton</td><td># students tested = 20 # correct =52 % correct =87</td></tr></table> <p>Total Students Tested = 455 Total Annual Success Rate: 73</p> | | Shelby | # students tested = 31 # correct = 81 % correct = 87 | | Pell City | # students tested = 25 # correct =58 % correct =77 | | Clanton | # students tested = 20 # correct =52 % correct =87 | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 31 # correct = 81 % correct = 87 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 25 # correct =58 % correct =77 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 20 # correct =52 % correct =87 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Students will have the ability to recognize biological processes at the molecular, cellular and organismal levels | Student learning outcomes were assessed by using a 15 question standardized multiple choice examination at the end of the semester. A total of seven questions (Q4-Q10) were used to assess SLO-2. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 2. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students tested = 56 # correct = 216 % correct = 55</td></tr><tr><td></td><td>Shelby</td><td># students tested = 134 # correct = 655 % correct = 70</td></tr><tr><td></td><td>Pell City</td><td># students tested = 14 # correct = 55 % correct = 56</td></tr><tr><td></td><td>Clanton</td><td># students tested = 13 # correct = 59 % correct = 65</td></tr><tr><td>Spring 2019</td><td>Jefferson</td><td># students tested =61 # correct =283 % correct = 66</td></tr><tr><td></td><td>Shelby</td><td># students tested = 113 # correct = 568 % correct = 72</td></tr><tr><td></td><td>Pell City</td><td># students tested = 16 # correct = 76 % correct = 68</td></tr><tr><td></td><td>Clanton</td><td># students tested = 23 # correct = 104</td></tr></table> | Fall 2018 | Jefferson | # students tested = 56 # correct = 216 % correct = 55 | | Shelby | # students tested = 134 # correct = 655 % correct = 70 | | Pell City | # students tested = 14 # correct = 55 % correct = 56 | | Clanton | # students tested = 13 # correct = 59 % correct = 65 | Spring 2019 | Jefferson | # students tested =61 # correct =283 % correct = 66 | | Shelby | # students tested = 113 # correct = 568 % correct = 72 | | Pell City | # students tested = 16 # correct = 76 % correct = 68 | | Clanton | # students tested = 23 # correct = 104 | <p>The students tested did not meet the requirements for success for SLO 2.</p> <p>The success rate for SLO 2 is 68%, higher than last year’s 66.5%.</p> <p>We will continue to implement case studies, EdPuzzles, and small group reviews.</p> |
| Fall 2018 | Jefferson | # students tested = 56 # correct = 216 % correct = 55 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 134 # correct = 655 % correct = 70 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 14 # correct = 55 % correct = 56 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 13 # correct = 59 % correct = 65 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 2019 | Jefferson | # students tested =61 # correct =283 % correct = 66 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 113 # correct = 568 % correct = 72 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 16 # correct = 76 % correct = 68 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 23 # correct = 104 | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | | | | % correct = 65 | |
| | | | Summer 2019 | Jefferson | # students tested = 21 # correct = 112 % correct = 76 | |
| | | | | Shelby | # students tested = 31 # correct = 181 % correct = 83 | |
| | | | | Pell City | # students tested = 25 # correct = 150 % correct = 86 | |
| | | | | Clanton | # students tested = 20 # correct = 130 % correct = 93 | |
| | | | Total Students Tested = 455 Total Annual Success Rate: 68% | | | |
| 3. Students will demonstrate an ability to identify basic anatomical structures and the correlating physiology of human systems | Student learning outcomes were assessed by using a 15 question standardized multiple choice examination at the end of the semester. A total of five questions (Q11-Q15) were used to assess SLO-3. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 3. | Fall 2018 | Jefferson | # students tested = 56 # correct = 117 % correct = 42 | <p>The students tested did not meet the requirements for success for SLO 3.</p> <p>The success rate for SLO 3 was 50%, improved from last year's 49%.</p> <p>We will incorporate virtual dissections and dissection videos to improve scores.</p> |
| | | | | Shelby | # students tested = 134 # correct = 319 % correct = 48 | |
| | | | | Pell City | # students tested = 14 # correct = 24 % correct = 34 | |
| | | | | Clanton | # students tested = 13 # correct = 38 % correct = 58 | |
| | | | Spring 2019 | Jefferson | # students tested = 61 # correct = 134 % correct = 44 | |
| | | | | Shelby | # students tested = 113 # correct = 293 % correct = 52 | |
| | | | | Pell City | # students tested = 16 # correct = 42 | |

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| | | | | | % correct = 53 | |
| | | | | Clanton | # students tested = 23 # correct = 65 % correct = 57 | |
| | | Summer 2019 | | Jefferson | # students tested = 21 # correct = 62 % correct = 59 | |
| | | | | Shelby | # students tested = 31 # correct = 93 % correct = 60 | |
| | | | | Pell City | # students tested = 25 # correct = 109 % correct = 87 | |
| | | | | Clanton | # students tested = 20 # correct = 78 % correct = 78 | |
| | | | Total Students Tested = 455 Total Annual Success Rate: 50% | | | |
| Plan submission date: | | | Submitted by: Meena Bej | | | |



Assessment Record

Program: Biology (BIO 102)

Assessment period: Fall 2018 – Summer 2019

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Learning Outcomes & Assessment Plan**Biology 102 Course Level Assessment Rubric:****General Education Objective**

The student will read, understand, and evaluate materials written at a variety of levels and for a variety of purposes.

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism levels
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course level student learning outcomes

1. Students will demonstrate knowledge of evolution in both plant and animal life.
2. Students will identify general characteristics, anatomy, and taxonomy of plant and animals.
3. Students will explain the interrelationships between the varied life forms on earth and identify the role of humans within ecological systems.

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | Use of Results |
|-------------------|---------------------|----------------------|---|----------------|
|-------------------|---------------------|----------------------|---|----------------|

| | | | | | | |
|---|---|---|---|-----------|--|---|
| 1. Students will demonstrate knowledge of evolution in both plant of animal life. | Student learning outcomes were assessed by using a 25 question standardized multiple choice examination at the end of the semester. A total of 7 questions (Q1-Q7) were used to assess SLO 1. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 1. | Fall 2018 | Jefferson | # students tested = none | The students tested <u>did not</u> meet the requirements for success for SLO 1. The success rate for SLO 1 was 58%. This is well below 70% and represents a 20 point decline over two years (78%) It is difficult to draw conclusions from these data as there were 11 sections of BIO 102 during this year with >200 students and we tested slightly greater than half (5 sections with 126 students). The number of classes surveyed increased by one but the success rate of the classes surveyed continued to decline. We will continue to monitor the success rate and require that ALL sections be surveyed. This goal was undermined by in part faculty turnover. |
| | | | | Shelby | # students tested = 25 of 50 # correct = 93 % correct = 53% | |
| | | | | Pell City | # students tested = none of 21 | |
| | | | Spring 2019 | Jefferson | # students tested = 13 of 13 # correct = 56 % correct = 62% | |
| | | | | Shelby | # students tested = 46 of 46 # correct = 173 % correct = 53% | |
| | | | | Pell City | # students tested = none of 24 | |
| | | | | Clanton | # students tested = none of 17 | |
| | | | Summer 2019 | Shelby | # students tested = 20 of 26 # correct = 77 % correct = 55% | |
| | | | | Pell City | # students tested = 22 of 22 # correct = 113 % correct = 73% | |
| | | | Total Students Tested = 126 Total Annual Success Rate: 58% | | | |
| 2. Students will identify general | Student learning outcomes were | 70% or > successful | Fall 2018 | Jefferson | # students tested = none | The students tested <u>did not</u> meet the |

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| characteristics, anatomy, and taxonomy of plant and animals. | assessed by using a 25 question standardized multiple choice examination at the end of the semester. A total of 14 questions (Q8-Q21) were used to assess SLO 2. | 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 2. | | Shelby | # students tested = 25 # correct = 197 % correct = 56% | requirements for success for SLO 2. The success rate for SLO 2 was 65%. This is below the 70% goal and represents a nine percent decline over two years (74%). It is difficult to draw conclusions from these data as there were 11 sections of BIO 102 during this year with >200 students and we tested slightly greater than half (5 sections with 126 students). The number of classes surveyed increased by one but the success rate of the classes surveyed continued to decline. We will continue to monitor the success rate and require that ALL sections be surveyed. This goal was undermined by in part faculty turnover. |
| | | | | Pell City | # students tested = none of 21 | |
| | | | Spring 2019 | Jefferson | # students tested = 13 of 13 # correct = 107 % correct = 59% | |
| | | | | Shelby | # students tested = 46 of 46 # correct = 415 % correct = 64% | |
| | | | | Pell City | # students tested = none of 24 | |
| | | | | Clanton | # students tested = none of 17 | |
| | | | Summer 2019 | Shelby | # students tested = 20 of 26 # correct = 186 % correct = 66% | |
| | | | | Pell City | # students tested = 22 of 22 # correct = 254 % correct = 82% | |
| | | | Total Students Tested = 126 Total Annual Success Rate: 65% | | | |
| | | | | | | |
| 3. Students will explain the | Student learning outcomes were assessed by | 70% or > successful | Fall 2018 | Jefferson | # students tested = none | The students tested <u>did not</u> meet the |
| | | | | Shelby | # students tested = 25 of 50 | |

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|--|--|--|---|--|--|-----------------------------------|--|-----------|--------------------------------|-------------|-----------|---|--|--------|--|--|-----------|--------------------------------|--|---------|--------------------------------|-------------|--------|---|--|-----------|---|--|
| interrelationships between the varied life forms on earth and identify the role of humans within ecological systems. | using a 25 question standardized multiple choice examination at the end of the semester. A total of 4 questions (Q22-Q25) were used to assess SLO 3. | 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO 3. | <table><tr><td></td><td></td><td># correct = 63 % correct = 63%</td></tr><tr><td></td><td>Pell City</td><td># students tested = none of 21</td></tr><tr><td>Spring 2019</td><td>Jefferson</td><td># students tested = 13 of 13 # correct = 32 % correct = 62%</td></tr><tr><td></td><td>Shelby</td><td># students tested = 46 of 46 # correct = 122 % correct = 66%</td></tr><tr><td></td><td>Pell City</td><td># students tested = none of 24</td></tr><tr><td></td><td>Clanton</td><td># students tested = none of 17</td></tr><tr><td>Summer 2019</td><td>Shelby</td><td># students tested = 20 of 26 # correct = 49 % correct = 61%</td></tr><tr><td></td><td>Pell City</td><td># students tested = 22 of 22 # correct = 84 % correct = 95%</td></tr></table> <p>Total Students Tested = 126 Total Annual Success Rate: 69%</p> | | | # correct = 63 % correct = 63% | | Pell City | # students tested = none of 21 | Spring 2019 | Jefferson | # students tested = 13 of 13 # correct = 32 % correct = 62% | | Shelby | # students tested = 46 of 46 # correct = 122 % correct = 66% | | Pell City | # students tested = none of 24 | | Clanton | # students tested = none of 17 | Summer 2019 | Shelby | # students tested = 20 of 26 # correct = 49 % correct = 61% | | Pell City | # students tested = 22 of 22 # correct = 84 % correct = 95% | <p>requirements for success for SLO 3.</p> <p>The success rate for SLO 3 was 69%. This is slightly below the 70% goal and represents a 4 point increase over two years (65%).</p> <p>It is difficult to draw conclusions from these data as there were 11 sections of BIO 102 during this year with >200 students and we tested slightly greater than half (5 sections with 126 students). The success rate of the classes surveyed increased due in large part to the Pell City Data.</p> <p>We will continue to monitor the success rate and require that ALL sections be surveyed. This goal was undermined by in part faculty turnover.</p> |
| | | # correct = 63 % correct = 63% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = none of 21 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 2019 | Jefferson | # students tested = 13 of 13 # correct = 32 % correct = 62% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 46 of 46 # correct = 122 % correct = 66% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = none of 24 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = none of 17 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Shelby | # students tested = 20 of 26 # correct = 49 % correct = 61% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 22 of 22 # correct = 84 % correct = 95% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plan submission date: Plan submission date: 9/11/2019 | | | Submitted by: Charles J. Venglarik | | | | | | | | | | | | | | | | | | | | | | | | | |



Assessment Record

Program: **Biology (BIO 103)**

Assessment period: **Fall 2018 – Summer 2019**

Program or Department Mission:

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Learning Outcomes & Assessment Plan

Biology 103 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism levels
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes

1. Students will demonstrate knowledge of the fundamental concepts and processes in biology including the scientific method, evolution, biological macromolecules and biochemistry
2. Students will demonstrate an ability to identify molecular and cellular processes in prokaryotic and eukaryotic cells.
3. The student will demonstrate an ability to recognize genetic, morphological and life cycle characteristics of bacteria, fungi, and viruses.

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | | | Use of Results |
|--|--|---|---|-----------|---|---|
| 1. Students will demonstrate knowledge of the fundamental concepts and processes in biology including the scientific method, evolution, biological macromolecules and biochemistry | Student learning outcomes were assessed by using a 12 question standardized multiple choice examination at the end of the semester. A total of four questions (Q1 – Q4) were used to assess SLO1 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO1 | Fall 2018 | Jefferson | # students tested =51 # correct = 148 % correct = 73 | The students tested did meet the requirements for success for SLO 1. The success rate for SLO 1 is 77.7%. This is above the 70% standard we were trying to obtain. We will continue to include chemistry review and incorporate principles from SLO 1 throughout our courses. |
| | | | | Shelby | # students tested = 52 # correct = 160 % correct = 77 | |
| | | | | Pell City | # students tested =0 # correct =0 % correct = 0 | |
| | | | | Clanton | # students tested = 21 # correct = 57 % correct = 68 | |
| | | | Spring 2019 | Jefferson | # students tested = 40 # correct =153 % correct = 96 | |
| | | | | Shelby | # students tested = 72 # correct =195 % correct = 68 | |
| | | | | Pell City | # students tested = 18 # correct =57 % correct = 79 | |
| | | | | Clanton | # students tested =15 # correct =50 % correct = 83 | |
| | | | Summer 2019 | Jefferson | # students tested = 31 # correct =116 | |

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|---|--|---|---|-----------|---|---|
| | | | | | % correct = 94 | |
| | | | | Shelby | # students tested =20 # correct =59 % correct = 74 | |
| | | | | Pell City | # students tested =0 # correct = 0 % correct = 0 | |
| | | | | Clanton | # students tested = 0 # correct =0 % correct = 0 | |
| | | | Total Students Tested = 320 Total Annual Success Rate: 77.7% | | | |
| 2: Students will demonstrate an ability to identify molecular and cellular processes in prokaryotic and eukaryotic cells. | Student learning outcomes were assessed by using a 12 question standardized multiple choice examination at the end of the semester. A total of seven questions (Q5 – Q11) were used to assess SLO2 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO2 | Fall 2018 | Jefferson | # students tested = 51 # correct = 204 % correct = 57 | The students tested did not meet the requirements for success for SLO 2. |
| | | | | Shelby | # students tested =52 # correct = 213 % correct = 59 | |
| | | | | Pell City | # students tested = 0 # correct =0 % correct = 0 | |
| | | | | Clanton | # students tested = 21 # correct =72 % correct = 49 | |
| | | | Spring 2019 | Jefferson | # students tested = 40 # correct =112 % correct =93 | The success rate for SLO 2 was 58.7%, which is a slight improvement above the previous 2 years (58%). |
| | | | | Shelby | # students tested = 72 # correct =315 % correct = 63 | We will review the textbook currently used in this course and consider other |
| | | | | Pell City | # students tested = 18 # correct =61 % correct = 48 | |

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|--|--|--|---|-----------|--|--|
| | | | | Clanton | # students tested =15 # correct =71 % correct = 68 | textbooks that may make the information easier to access and understand. Additionally, we will incorporate labs that address current topics in Biology to encourage active participation in the science process which may lead to a better understanding of complex processes addressed in this SLO. |
| | | | Summer 2019 | Jefferson | # students tested = 31 # correct =187 % correct = 86 | |
| | | | | Shelby | # students tested = 20 # correct =80 % correct = 57 | |
| | | | | Pell City | # students tested =0 # correct = 0 % correct = 0 | |
| | | | | Clanton | # students tested = 0 # correct =0 % correct = 0 | |
| | | | Total Students Tested =320 Total Annual Success Rate:58.7% | | | |

| | | | | | | |
|--|--|--|-------------|-----------|--|---|
| 3: The student will demonstrate an ability to recognize genetic, morphological and life cycle characteristics of bacteria, fungi, and viruses. | Student learning outcomes were assessed by using a 12 question standardized multiple choice examination at the end of the semester. A total of three questions (Q12 – Q14) was used to assess SLO3 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered question related to SLO3 | Fall 2018 | Jefferson | # students tested =51 # correct = 100 % correct = 65 | The students tested did not meet the requirements for success for SLO 3. The success rate for SLO 3 was 63%. There was no change in the SLO percentage as compared to the previous evaluation (2017-2018). We will attempt to cover this material comparatively throughout the course instead of at the very end of the semester and this topic will be a point of consideration in the evaluation of our current textbook. |
| | | | | Shelby | # students tested =52 # correct = 69 % correct = 44 | |
| | | | | Pell City | # students tested = 0 # correct =0 % correct = 0 | |
| | | | | Clanton | # students tested =21 # correct =57 % correct = 90 | |
| | | | Spring 2019 | Jefferson | # students tested = 40 # correct =112 % correct =93 | |
| | | | | Shelby | # students tested = 72 # correct =118 % correct = 55 | |
| | | | | Pell City | # students tested = 18 # correct =22 % correct = 54 | |
| | | | | Clanton | # students tested = 15 # correct =30 % correct = 67 | |
| | | | Summer 2019 | Jefferson | # students tested = 31 # correct =70 % correct = 75 | |
| | | | | Shelby | # students tested =20 # correct =27 % correct = 45 | |
| | | | | Pell City | # students tested =0 # correct = 0 % correct = 0 | |
| | | | | Clanton | # students tested = 0 # correct =0 % correct = 0 | |

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|------------------------------------|--|--|---|--|
| | | | Total Students Tested = 320 Total Annual Success Rate: 63% | |
| Plan submission date:09/12/2019 | | | Submitted by: Amanda Swindall | |
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Assessment Record

Program: Biology (BIO 104)

Assessment period: Fall 2018 –Summer 2019

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Learning Outcomes & Assessment Plan

Biology 104 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism level
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes

1. The student will recognize the fundamental principles and supporting evidence necessary to explain Darwinian evolution.
2. The student will demonstrate an ability to identify the structural characteristics and life cycles of both plant and animal phyla.
5. The student can recognize components of community ecology and identify how biodiversity contributes to a stable ecosystem.

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | Use of Results |
|--------------------------|----------------------------|-----------------------------|--|-----------------------|
|--------------------------|----------------------------|-----------------------------|--|-----------------------|

| | | | | | | |
|---|--|--|--|-----------|---|--|
| 1. The student will recognize the fundamental principles and supporting evidence necessary to explain Darwinian evolution. | Student learning outcomes were assessed using a 20 question multiple-choice assessment at the end of each semester. A total of 9 questions (Q1-Q6 and Q 18-20) were used to assess understanding of SLO1 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions (1 to 6) related to SLO 1. (6 questions) | Fall 2018 | Jefferson | # students tested = 19 # correct = 116 % correct = 68 | The students tested did not meet the requirements for success for SLO 1. |
| | | | Spring 2019 | Jefferson | # students tested = 22 # correct =147 % correct = 74% | The success rate for SLO 1 is set at 70 % and our students scored below at 64%. We added more class discussion and review through the whole term on processes that were taught in the beginning of the semester. |
| | | | Spring 2019 | Shelby | # students tested = 20 # correct =89 % correct = 49 | |
| | | | Summer 2019 | Jefferson | # students tested = 17 # correct =47 % correct =55 | |
| | | | Summer 2019 | Shelby | # students tested = 23 # correct =147 % correct = 71 | |
| | | | Total Students Tested = 101 Total Annual Success Rate = 64% | | | We will encourage course review throughout the term in the future. |
| 2. The student will demonstrate an ability to identify the structural characteristics and life cycles of both plant and animal phyla. | Student learning outcomes were assessed using a 20 question multiple-choice assessment at the end of each semester. A total of 6 questions (Q7-Q12) were used to assess mastery of SLO2 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions (7 to 12 and 18 to 20) related to SLO 2. (9 total) | Fall 2018 | Jefferson | # students tested = 19 # correct =90 % correct = 79 | The students tested did meet the requirements for success for SLO 2. |
| | | | Spring 2019 | Jefferson | # students tested = 22 # correct =121 % correct = 92 | The success rate for SLO 2 is 70 percent and our students did master these topics with an SLO assessment success rate of 76.5% We will continue to reteach key topics and emphasize learning via class discussions. |
| | | | Spring 2019 | Shelby | # students tested = 20 # correct =79 % correct = 66 | |
| | | | Summer 2019 | Jefferson | # students tested =17 # correct =85 % correct = 83 | |
| | | | Summer 2019 | Shelby | # students tested = 23 # correct =89 % correct =64 | |
| | | | Total Students Tested = 101 | | | |

| | | | | | | |
|--|--|--|--|-----------|--|--|
| | | | Total Annual Success Rate = 76.5% | | | |
| 3. The student can recognize components of population and community ecology and identify how biodiversity contributes to a stable ecosystem. | Student learning outcomes were assessed using a 20 question multiple-choice assessment at the end of each semester. A total of 5 questions (Q13-Q17) were used to assess mastery of SLO3 | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions (13 to 17) related to SLO 3. (5 total) | Fall 2018 | Jefferson | # students tested = 19 # correct =57 % correct = 60 | The students tested did not meet the requirements for success for SLO 3. The success rate for SLO is 70 % and our students scored below that level at 61.4% We will continue to review but will also analyze the wording of these SLOs and see if we can make the questions clearer. |
| | | | Spring 2019 | Jefferson | # students tested = 22 # correct =90 % correct = 82 | |
| | | | Spring 2019 | Shelby | # students tested = 20 # correct =53 % correct = 53 | |
| | | | Summer 2019 | Jefferson | # students tested = 17 # correct =47 % correct = 55 | |
| | | | Summer 2019 | Shelby | # students tested = 23 # correct =63 % correct = 55 | |
| | | | Total Students Tested = 101 Total Annual Success Rate = 61.4% | | | |
| Plan submission date: | | | Submitted by: M. Ross | | | |



Assessment Record

Program: Biology (BIO 201)

Assessment period: Fall 2018 – Summer 2019

Program or Department Mission:

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters

Course Student Learning Outcomes & Assessment Plan

Biology 201 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism levels.
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes Assessed

1. Students will be able to identify the terminology used in anatomy and physiology
2. Students will be able to identify and recognize the distinct characteristics of the systems listed below
 - A. Integumentary System
 - B. Skeletal System
 - C. Muscular System

D. Nervous System

3. Students will recognize the relationship between structural organization and function
4. Student will define homeostasis and identify the role of homeostasis within and between appropriate systems
5. Students will identify the major structures of each system
 - A. Integumentary System
 - B. Skeletal System
 - C. Muscular System
 - D. Nervous System

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | | | Use of Results |
|--|---|--|---|-----------|--|--|
| SLO 1: Students will be able to identify the terminology used in anatomy and physiology | Student learning outcomes were assessed by using a 16 question standardized multiple choice examination at the end of the semester. A total of 2 questions (Q2 and Q3) were used to assess SLO1 | Correct responses by 70% of the students for each SLO will be defined as a successful outcome. | Fall 2018 | Jefferson | # students tested = 84 # correct = 133 % correct = 79 | The students tested did meet the requirements for success for SLO 1. The success rate for SLO 1 is 79.9%, across all campuses, a 2.6% decrease from 2017-18. We will continue to use vocabulary terms throughout each chapter to reinforce the regional and directional terms. Faculty will emphasize the relationship |
| | | | | Shelby | # students tested = 236 # correct = 387 % correct = 82 | |
| | | | | Clanton | # students tested = 0 # correct = % correct = | |
| | | | | Pell City | # students tested = 54 # correct = 72 % correct = 67 | |
| | | | Spring 2019 | Jefferson | # students tested = 45 # correct = 73 % correct = 81 | |
| | | | | Shelby | # students tested = 150 # correct = 251 % correct = 84 | |
| | | | | Clanton | # students tested = 32 # correct = 48 % correct = 75 | |
| | | | | Pell City | # students tested = 50 | |

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|---|--|---|--|-----------|-----------|---|-------------|-----------|--|--|---------|---|--|-----------|---|-------------|-----------|---|---------------------------------|--------|--|--|---------|---|--|
| | | | <table><tr><td></td><td></td><td># correct = 69 % correct = 69</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students tested = 26 # correct = 42 % correct = 81</td></tr><tr><td></td><td>Shelby</td><td># students tested = 62 # correct = 106 % correct = 85</td></tr><tr><td></td><td>Clanton</td><td># students tested = 20 # correct = 32 % correct = 80</td></tr><tr><td></td><td>Pell City</td><td># students tested = 0 # correct = % correct =</td></tr></table> <p>Total Students Tested = 759 Total Annual Success Rate = 79.9 %</p> | | | # correct = 69 % correct = 69 | Summer 2019 | Jefferson | # students tested = 26 # correct = 42 % correct = 81 | | Shelby | # students tested = 62 # correct = 106 % correct = 85 | | Clanton | # students tested = 20 # correct = 32 % correct = 80 | | Pell City | # students tested = 0 # correct = % correct = | between structure and function. | | | | | | |
| | | # correct = 69 % correct = 69 | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students tested = 26 # correct = 42 % correct = 81 | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 62 # correct = 106 % correct = 85 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 20 # correct = 32 % correct = 80 | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | |
| SLO 2: Students will be able to identify and recognize the distinct characteristics of the systems listed below A. Integumentary System B. Skeletal System C. Muscular System D. Nervous System | Student learning outcomes were assessed by using a 16 question standardized multiple choice examination at the end of the semester. A total of 4 questions (Q5, Q8, Q11, and Q14) were used to assess SLO2 | Correct responses by 70% of the students for each SLO will be defied as a successful outcome. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students tested = 84 # correct = 278 % correct = 83</td></tr><tr><td></td><td>Shelby</td><td># students tested = 236 # correct = 733 % correct = 78</td></tr><tr><td></td><td>Clanton</td><td># students tested = 0 # correct = % correct =</td></tr><tr><td></td><td>Pell City</td><td># students tested = 54 # correct = 125 % correct = 58</td></tr><tr><td>Spring 2019</td><td>Jefferson</td><td># students tested = 45 # correct = 129 % correct = 72</td></tr><tr><td></td><td>Shelby</td><td># students tested = 150 # correct = 462 % correct = 77</td></tr><tr><td></td><td>Clanton</td><td># students tested = 32 # correct =84</td></tr></table> | Fall 2018 | Jefferson | # students tested = 84 # correct = 278 % correct = 83 | | Shelby | # students tested = 236 # correct = 733 % correct = 78 | | Clanton | # students tested = 0 # correct = % correct = | | Pell City | # students tested = 54 # correct = 125 % correct = 58 | Spring 2019 | Jefferson | # students tested = 45 # correct = 129 % correct = 72 | | Shelby | # students tested = 150 # correct = 462 % correct = 77 | | Clanton | # students tested = 32 # correct =84 | <p>The students tested did meet the requirements for success for SLO 2.</p> <p>The success rate for SLO 2 is 72.99% across all campuses, a 4.1% decrease from 2017-18.</p> <p>We will continue to stress the details of each organ system in both lecture and lab throughout the semester.</p> |
| Fall 2018 | Jefferson | # students tested = 84 # correct = 278 % correct = 83 | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 236 # correct = 733 % correct = 78 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 54 # correct = 125 % correct = 58 | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 2019 | Jefferson | # students tested = 45 # correct = 129 % correct = 72 | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 150 # correct = 462 % correct = 77 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 32 # correct =84 | | | | | | | | | | | | | | | | | | | | | | | |

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|--|---|---|---|-----------|-----------|---|--|-----------|--|-------------|-----------|--|--|-----------|---|-------------|-----------|--|---|-----------|---|--|
| | | | <table><tr><td></td><td></td><td>% correct = 66</td></tr><tr><td></td><td>Pell City</td><td># students tested = 50 # correct = 108 % correct = 54</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students tested = 26 # correct = 73 % correct = 70</td></tr><tr><td></td><td>Shelby</td><td># students tested = 62 # correct = 156 % correct = 63</td></tr><tr><td></td><td>Clanton</td><td># students tested = 20 # correct = 68 % correct = 85</td></tr><tr><td></td><td>Pell City</td><td># students tested = 0 # correct = % correct =</td></tr></table> <p>Total Students Tested = 759 Total Annual Success Rate = 72.99%</p> | | | % correct = 66 | | Pell City | # students tested = 50 # correct = 108 % correct = 54 | Summer 2019 | Jefferson | # students tested = 26 # correct = 73 % correct = 70 | | Shelby | # students tested = 62 # correct = 156 % correct = 63 | | Clanton | # students tested = 20 # correct = 68 % correct = 85 | | Pell City | # students tested = 0 # correct = % correct = | |
| | | % correct = 66 | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 50 # correct = 108 % correct = 54 | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students tested = 26 # correct = 73 % correct = 70 | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 62 # correct = 156 % correct = 63 | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 20 # correct = 68 % correct = 85 | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | |
| SLO 3: Students will recognize the relationship between structural organization and function | Student learning outcomes were assessed by using a 16 question standardized multiple choice examination at the end of the semester. A total of 4 question (Q1, Q7, Q9, Q13) was used to assess SLO3 | Correct responses by 70% of the students for each SLO will be defied as a successful outcome. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students tested = 84 # correct = 198 % correct = 59</td></tr><tr><td></td><td>Shelby</td><td># students tested = 236 # correct = 532 % correct = 56</td></tr><tr><td></td><td>Clanton</td><td># students tested = 0 # correct = % correct =</td></tr><tr><td></td><td>Pell City</td><td># students tested = 54 # correct = 77 % correct = 36</td></tr><tr><td>Spring 2019</td><td>Jefferson</td><td># students tested = 45 # correct = 89 % correct = 49</td></tr></table> | Fall 2018 | Jefferson | # students tested = 84 # correct = 198 % correct = 59 | | Shelby | # students tested = 236 # correct = 532 % correct = 56 | | Clanton | # students tested = 0 # correct = % correct = | | Pell City | # students tested = 54 # correct = 77 % correct = 36 | Spring 2019 | Jefferson | # students tested = 45 # correct = 89 % correct = 49 | <p>The students tested did not meet the requirements for success for SLO 3.</p> <p>The success rate for SLO 3 is 53.7% across all campuses, a 2.8% decrease from 2017-18.</p> <p>We will stress the relationship of structure and</p> | | | |
| Fall 2018 | Jefferson | # students tested = 84 # correct = 198 % correct = 59 | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 236 # correct = 532 % correct = 56 | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 54 # correct = 77 % correct = 36 | | | | | | | | | | | | | | | | | | | | |
| Spring 2019 | Jefferson | # students tested = 45 # correct = 89 % correct = 49 | | | | | | | | | | | | | | | | | | | | |

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|--|---|---|--|-----------|-----------|--|--|---------|--|--|-----------|--|-------------|-----------|--|--|--------|---|--|---------|--|--|-----------|---|---|
| | | | <table><tr><td></td><td>Shelby</td><td># students tested = 150 # correct = 336 % correct = 56</td></tr><tr><td></td><td>Clanton</td><td># students tested = 32 # correct = 56 % correct = 44</td></tr><tr><td></td><td>Pell City</td><td># students tested = 50 # correct = 80 % correct = 40</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students tested = 26 # correct = 67 % correct = 64</td></tr><tr><td></td><td>Shelby</td><td># students tested = 62 # correct = 144 % correct = 58</td></tr><tr><td></td><td>Clanton</td><td># students tested = 20 # correct = 52 % correct = 65</td></tr><tr><td></td><td>Pell City</td><td># students tested = 0 # correct = % correct =</td></tr></table> <p>Total Students Tested = 759 Total Annual Success Rate = 53.7%</p> | | Shelby | # students tested = 150 # correct = 336 % correct = 56 | | Clanton | # students tested = 32 # correct = 56 % correct = 44 | | Pell City | # students tested = 50 # correct = 80 % correct = 40 | Summer 2019 | Jefferson | # students tested = 26 # correct = 67 % correct = 64 | | Shelby | # students tested = 62 # correct = 144 % correct = 58 | | Clanton | # students tested = 20 # correct = 52 % correct = 65 | | Pell City | # students tested = 0 # correct = % correct = | function in both lecture and lab for all organ systems covered. We will also supplement lecture content with activities and/or videos that emphasize the relationship between structure and function. Additionally, we will assess and update SLO questions for relevance to content. |
| | Shelby | # students tested = 150 # correct = 336 % correct = 56 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 32 # correct = 56 % correct = 44 | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 50 # correct = 80 % correct = 40 | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students tested = 26 # correct = 67 % correct = 64 | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 62 # correct = 144 % correct = 58 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 20 # correct = 52 % correct = 65 | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | |
| SLO 4: Student will define homeostasis and identify the role of homeostasis within and between appropriate systems | Student learning outcomes were assessed by using a 16 question standardized multiple choice examination at the end of the semester. A total of 2 questions (Q15 | Correct responses by 70% of the students for each SLO will be defied as a successful outcome. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students tested = 84 # correct = 157 % correct = 93</td></tr><tr><td></td><td>Shelby</td><td># students tested = 236 # correct = 401 % correct = 85</td></tr><tr><td></td><td>Clanton</td><td># students tested = 0 # correct = % correct =</td></tr><tr><td></td><td>Pell City</td><td># students tested = 54 # correct = 65 % correct = 60</td></tr></table> | Fall 2018 | Jefferson | # students tested = 84 # correct = 157 % correct = 93 | | Shelby | # students tested = 236 # correct = 401 % correct = 85 | | Clanton | # students tested = 0 # correct = % correct = | | Pell City | # students tested = 54 # correct = 65 % correct = 60 | The students tested did meet the requirements for success for SLO 4. The success rate for SLO 4 is 83.5% across all campuses, a 3.5% decrease from 2017-2018. | | | | | | | | | |
| Fall 2018 | Jefferson | # students tested = 84 # correct = 157 % correct = 93 | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 236 # correct = 401 % correct = 85 | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 54 # correct = 65 % correct = 60 | | | | | | | | | | | | | | | | | | | | | | | |

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|---|---|---|--|-------------|-----------|---|--|--------|--|--|---------|--|--|-----------|--|-------------|-----------|--|--|--------|---|--|---------|--|--|-----------|---|--|
| | and Q16) were used to assess SLO4 | | <table><tr><td>Spring 2019</td><td>Jefferson</td><td># students tested = 45 # correct = 80 % correct = 89</td></tr><tr><td></td><td>Shelby</td><td># students tested = 150 # correct = 259 % correct = 86</td></tr><tr><td></td><td>Clanton</td><td># students tested = 32 # correct = 40 % correct = 63</td></tr><tr><td></td><td>Pell City</td><td># students tested = 50 # correct = 71 % correct = 71</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students tested = 26 # correct = 47 % correct = 90</td></tr><tr><td></td><td>Shelby</td><td># students tested = 62 # correct = 112 % correct = 90</td></tr><tr><td></td><td>Clanton</td><td># students tested = 20 # correct = 36 % correct = 90</td></tr><tr><td></td><td>Pell City</td><td># students tested = 0 # correct = % correct =</td></tr></table> <p>Total Students Tested = 759 Total Annual Success Rate = 83.5%</p> | Spring 2019 | Jefferson | # students tested = 45 # correct = 80 % correct = 89 | | Shelby | # students tested = 150 # correct = 259 % correct = 86 | | Clanton | # students tested = 32 # correct = 40 % correct = 63 | | Pell City | # students tested = 50 # correct = 71 % correct = 71 | Summer 2019 | Jefferson | # students tested = 26 # correct = 47 % correct = 90 | | Shelby | # students tested = 62 # correct = 112 % correct = 90 | | Clanton | # students tested = 20 # correct = 36 % correct = 90 | | Pell City | # students tested = 0 # correct = % correct = | We will continue to stress the importance of homeostasis in each organ system. |
| Spring 2019 | Jefferson | # students tested = 45 # correct = 80 % correct = 89 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 150 # correct = 259 % correct = 86 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 32 # correct = 40 % correct = 63 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 50 # correct = 71 % correct = 71 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students tested = 26 # correct = 47 % correct = 90 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 62 # correct = 112 % correct = 90 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 20 # correct = 36 % correct = 90 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SLO 5: Students will identify the major structures of each system A.Integumentary System B.Skeletal System C.Muscular System D.Nervous System | Student learning outcomes were assessed by using a 16 question standardized multiple choice examination at the end of the | Correct responses by 70% of the students for each SLO will be defied as a successful outcome. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students tested = 84 # correct = 256 % correct = 76</td></tr><tr><td></td><td>Shelby</td><td># students tested = 236 # correct = 747 % correct = 79</td></tr><tr><td></td><td>Clanton</td><td># students tested = 0 # correct = % correct =</td></tr></table> | Fall 2018 | Jefferson | # students tested = 84 # correct = 256 % correct = 76 | | Shelby | # students tested = 236 # correct = 747 % correct = 79 | | Clanton | # students tested = 0 # correct = % correct = | The students tested did meet the requirements for success for SLO 5. The success rate for SLO 5 is 75.5% across all | | | | | | | | | | | | | | | |
| Fall 2018 | Jefferson | # students tested = 84 # correct = 256 % correct = 76 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students tested = 236 # correct = 747 % correct = 79 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students tested = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | semester. A total of 4 questions (Q4, Q6, and Q10, Q12) were used to assess SLO5 | | | Pell City | # students tested = 54 # correct = 121 % correct = 56 | campuses, a 2.4% decrease from 2017-18. We will continue to emphasize the major structures of each organ system and focus on the relationship between structure and function. |
| | | | Spring 2019 | Jefferson | # students tested = 45 # correct = 122 % correct = 68 | |
| | | | | Shelby | # students tested = 150 # correct = 472 % correct = 79 | |
| | | | | Clanton | # students tested = 32 # correct = 96 % correct = 75 | |
| | | | | Pell City | # students tested = 100 # correct = 147 % correct = 74 | |
| | | | Summer 2019 | Jefferson | # students tested = 26 # correct = 80 % correct = 77 | |
| | | | | Shelby | # students tested = 62 # correct = 196 % correct = 79 | |
| | | | | Clanton | # students tested = 20 # correct = 56 % correct = 70 | |
| | | | | Pell City | # students tested = 0 # correct = % correct = | |
| | | | Total Students Tested = 759 Total Annual Success Rate = 75.5% | | | |
| Plan submission date: | | Submitted by: Julie Maharrey | | | | |



Assessment Record

Program: Biology (BIO 202)

Assessment period: Fall 2018- Summer 2019

Program or Department Mission:

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Learning Outcomes & Assessment Plan

Biology 202 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental, cellular, molecular, and organism levels.
3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community
4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes Assessed

1. Students will define and describe the systems listed below.
 - A. Endocrine System
 - B. Cardiovascular System
 - C. Lymphatic and Immune System
 - D. Respiratory System
 - E. Digestive System
 - F. Urinary System
 - G. Reproductive System
2. Students will define homeostasis and identify the role of homeostasis within and between appropriate systems.
3. Students will be able to recognize the major structures of each system listed below.
 - A. Endocrine System
 - B. Cardiovascular System
 - C. Lymphatic and Immune System
 - D. Respiratory System
 - E. Digestive System
 - F. Urinary System
 - G. Reproductive System

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | | | Use of Results |
|--|---|---|---|-----------|---|---|
| 1: Students will define and describe the systems listed below. <ol style="list-style-type: none"> A. Endocrine System B. Cardiovascular System C. Lymphatic and Immune System D. Respiratory System E. Digestive System | Student learning outcomes were assessed by using a 12 question standardized multiple choice examination at the end of the semester. A | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions | Fall 2018 | Jefferson | # students tested = 46 #correct = 173 % correct = 75% | The students tested did meet the requirements for success for SLO 1. The success rate for SLO 1 was 73% across all campuses. This is consistent with |
| | | | | Shelby | # students tested = 99 #correct = 355 % correct = 72% | |
| | | | | Clanton | # students tested = NA #correct = NA % correct = NA | |
| | | | | Pell City | # students tested = 5 #correct = 20 | |

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|--|---|--|--|-----------|--|---|
| F. Urinary System G. Reproductive System | total of five questions (Q2, Q4, Q7, Q8, Q12) were used to assess SLO1. | related to SLO 1. | | | % correct = 80% | results from 2017-2018. Efforts have been made to ensure students have a complete understanding of the various organ systems. Case studies have been implemented across various sections. We will continue to reinforce the various organ systems in both lecture and lab. |
| | | | Spring 2019 | Jefferson | # students tested = 54 #correct =218 % correct =81% | |
| | | | | Shelby | # students tested = 136 #correct = 484 % correct = 71% | |
| | | | | Clanton | # students tested = 55 #correct = 198 % correct = 72% | |
| | | | | Pell City | # students tested = 44 #correct = 161 % correct = 73% | |
| | | | Summer 2019 | Jefferson | # students tested = 39 #correct = 155 % correct = 79% | |
| | | | | Shelby | # students tested = 60 #correct = 230 % correct = 77% | |
| | | | | Clanton | # students tested = 20 #correct = 53 % correct = 53% | |
| | | | | Pell City | # students tested =NA #correct = NA % correct = NA | |
| | | | Total Students Tested = 558 Total Annual Success Rate = 73% | | | |
| 2: Students will define homeostasis and identify the role of homeostasis within and between appropriate systems. | Student learning outcomes were assessed by using a 12 question standardized multiple choice | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly | Fall 2018 | Jefferson | # students tested = 46 #correct = 75 % correct = 82% | The students tested did meet the requirements for success for SLO 2. The success rate for SLO 2 is 81% |
| | Shelby | # students tested = 99 #correct =168 % correct = 85% | | | | |
| | Clanton | # students tested = NA | | | | |

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| | examination at the end of the semester. A total of 2 questions (Q1 and Q6) were used to assess SLO2. | answered questions related to SLO2. | | | #correct = NA % correct = NA | <p>which again is consistent with the data collected in 2017-18. Homeostasis is stressed in both 201 and 202 and throughout every chapter. This is an underlying theme across all sections taught.</p> <p>We will continue to stress the importance of homeostasis in each chapter and with each organ system.</p> |
| | | | | Pell City | # students tested = 5 #correct = 6 % correct = 60% | |
| | | | Spring 2019 | Jefferson | # students tested = 54 #correct = 101 % correct = 94% | |
| | | | | Shelby | # students tested = 136 #correct = 217 % correct = 80% | |
| | | | | Clanton | # students tested = 55 #correct = 75 % correct = 68% | |
| | | | | Pell City | # students tested = 44 #correct = 74 % correct = 84% | |
| | | | Summer 2019 | Jefferson | # students tested = 39 #correct = 68 % correct = 87% | |
| | | | | Shelby | # students tested = 60 #correct = 101 % correct = 84% | |
| | | | | Clanton | # students tested = 20 #correct = 15 % correct = 38% | |
| | | | | Pell City | # students tested = NA #correct = NA % correct = NA | |
| | | | Total Students Tested = 558 Total Annual Success Rate = 81% | | | |
| 3: Students will be able to recognize the major | Student learning outcomes were | 70% or > successful | Fall 2018 | Jefferson | # students tested = 46 #correct = 197 % correct = 86% | The students tested did meet the requirements |

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|---|---|---|--|-----------|--|--|
| structures of each system listed below. A. Endocrine System B. Cardiovascular System C. Lymphatic and Immune System D. Respiratory System E. Digestive System F. Urinary System G. Reproductive System | assessed by using a 12 question standardized multiple choice examination at the end of the semester. A total of 5 questions (Q3, Q5 and Q9-Q11) were used to assess SLO3. | 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO3. | | Shelby | # students tested = 99 #correct = 424 % correct = 86% | for success for SLO 3. The success rate for SLO 3 is 81% which is consistent with data collected in 2017-18. Efforts have been made across the campuses to increase the quality and number of models in BIO 202. We will continue to teach organ system identification in the lab. |
| | | | | Clanton | # students tested = NA #correct = NA % correct = NA | |
| | | | | Pell City | # students tested = 5 #correct = 18 % correct = 72% | |
| | | | Spring 2019 | Jefferson | # students tested = 54 #correct = 224 % correct = 83% | |
| | | | | Shelby | # students tested = 136 #correct = 532 % correct = 78% | |
| | | | | Clanton | # students tested = 55 #correct = 250 % correct = 91% | |
| | | | | Pell City | # students tested = 44 #correct = 154 % correct = 70% | |
| | | | Summer 2019 | Jefferson | # students tested = 39 #correct = 162 % correct = 83% | |
| | | | | Shelby | # students tested = 60 #correct = 228 % correct = 76% | |
| | | | | Clanton | # students tested = 20 #correct = 72 % correct = 72% | |
| | | | | Pell City | # students tested = NA #correct = NA % correct = NA | |
| | | | Total Students Tested = 558 Total Annual Success Rate = 81% | | | |

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| Plan submission date: September 11, 2019 | | | Submitted by: Erin K Arnold | |



Assessment Record

Program: Biology (BIO 220)

Assessment period: Fall 2018- Summer 2019

Program or Department Mission:

The mission of the Biology Department is consistent with the mission of Jefferson State Community College. The department provides biology courses appropriate for students majoring in both science and non-science disciplines. Our teaching aims to help prepare students for their future professions both inside and outside of the scientific field and also to be a more informed member of their community, able to make responsible decisions in biological matters.

Course Student Outcomes & Assessment Plan

Biology 220 Course Level Assessment Rubric:

General Education Objective

The student will demonstrate ability to apply reasoning and logic to assess ideas and situations, support positions, draw conclusions, and solve problems

The student will demonstrate understanding of mathematical concepts and scientific principles, and ability to use computers

Department Level Student Learning Outcomes

1. Students will understand the principles and processes that are fundamental to life.
2. Students will understand the fundamental principles of biology at the elemental,

cellular, molecular, and organism levels.

3. Students will receive the appropriate Biological knowledge to support a career within the Scientific, Medical, or Health and Fitness community

4. Students will understand principles of human biology that relate to health and fitness

Course Level Student Learning Outcomes Assessed

1. Students will be able to identify the differences between prokaryotic and eukaryotic cells as well as the structure and function of microorganisms in various environments.
2. Students will recognize the metabolic and genetic pathways in microorganisms as well as the clinical and industrial applications of these properties.
3. Students will be able to identify the relationship between microorganism infection and disease, interactions with the host immune system, and various methods for controlling the growth and dissemination of microorganisms.
4. Students will be able to recognize proper laboratory technique and protocols including aseptic technique, media selection, slide preparation, and microscopy.

| Intended Outcomes | Means of Assessment | Criteria for Success | Summary & Analysis of Assessment Evidence | | | Use of Results |
|--|---|---|---|-----------|--|--|
| 1. Students will be able to identify the differences between prokaryotic and eukaryotic cells as well as the structure and function of microorganisms in various environments. | Student learning outcomes were assessed by using a 13 question standardized multiple choice examination at the end of the semester. A total of two questions (Q1 and Q2) were used to assess SLO-1. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO-1. | Fall 2018 | Jefferson | # students = 47 # correct = 66 % correct = 70% | The students tested did not meet the requirements for success for SLO 1. The success rate for SLO 1 was 56%. Though it was a slight increase from the previous 2017-2018 data period(54%) it did not meet the projected mark. It should be noted again that students are not required to take BIO 103 |
| | | | | Shelby | # students = 77 # correct = 66 % correct = 43% | |
| | | | | Clanton | # students = 14 # correct = 5 % correct = 18% | |
| | | | | Pell City | # students = 25 # correct = 24 % correct = 48% | |

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|--|--|---|--|-------------|-----------|---|--|--------|---|--|---------|--|--|-----------|--|-------------|-----------|---|--|--------|--|--|---------|--|--|-----------|--|---|
| | | | <table><tr><td>Spring 2019</td><td>Jefferson</td><td># students = 62 # correct = 85 % correct = 69%</td></tr><tr><td></td><td>Shelby</td><td># students = 101 # correct = 93 % correct = 46%</td></tr><tr><td></td><td>Clanton</td><td># students = 19 # correct = 26 % correct = 68%</td></tr><tr><td></td><td>Pell City</td><td># students = 15 # correct = 20 % correct = 67%</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students = 66 # correct = 103 % correct = 78%</td></tr><tr><td></td><td>Shelby</td><td># students = 56 # correct = 54 % correct = 48%</td></tr><tr><td></td><td>Clanton</td><td># students = 19 # correct = 21 % correct = 55%</td></tr><tr><td></td><td>Pell City</td><td># students = 0 # correct = % correct =</td></tr></table> <p>Total Students Tested = 501 Total Annual Success Rate = 56%</p> | Spring 2019 | Jefferson | # students = 62 # correct = 85 % correct = 69% | | Shelby | # students = 101 # correct = 93 % correct = 46% | | Clanton | # students = 19 # correct = 26 % correct = 68% | | Pell City | # students = 15 # correct = 20 % correct = 67% | Summer 2019 | Jefferson | # students = 66 # correct = 103 % correct = 78% | | Shelby | # students = 56 # correct = 54 % correct = 48% | | Clanton | # students = 19 # correct = 21 % correct = 55% | | Pell City | # students = 0 # correct = % correct = | <p>as a prerequisite for BIO 220 and are therefore lacking foundational knowledge in biology.</p> <p>We will continue to emphasize the differences between prokaryotic and eukaryotic cells throughout the semester. As noted previously, some instructors also administer quizzes on comparing the two cell types; where others provide worksheets.</p> <p>We have also decided to evaluate questions two and three of the SLO assessment.</p> |
| Spring 2019 | Jefferson | # students = 62 # correct = 85 % correct = 69% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 101 # correct = 93 % correct = 46% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students = 19 # correct = 26 % correct = 68% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students = 15 # correct = 20 % correct = 67% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students = 66 # correct = 103 % correct = 78% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 56 # correct = 54 % correct = 48% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students = 19 # correct = 21 % correct = 55% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Students will recognize the metabolic and genetic pathways in microorganisms as well as the clinical and industrial applications of these properties. | Student learning outcomes were assessed by using a 13 question standardized multiple choice examination at the end of the semester. A total of three | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO-2. | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students = 47 # correct = 114 % correct = 81%</td></tr><tr><td></td><td>Shelby</td><td># students = 77 # correct = 161 % correct = 70%</td></tr><tr><td></td><td>Clanton</td><td># students = 14 # correct = 20</td></tr></table> | Fall 2018 | Jefferson | # students = 47 # correct = 114 % correct = 81% | | Shelby | # students = 77 # correct = 161 % correct = 70% | | Clanton | # students = 14 # correct = 20 | <p>The students tested did meet the requirements for success for SLO 2.</p> <p>The success rate for SLO 2 was 73.4% which was a slight decrease when</p> | | | | | | | | | | | | | | | |
| Fall 2018 | Jefferson | # students = 47 # correct = 114 % correct = 81% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 77 # correct = 161 % correct = 70% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students = 14 # correct = 20 | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--|---|--|--|--|--|-----------|-----------|--|--|-----------|---|---|-----------|---|--|--------|--|--|---------|--|--|-----------|--|-------------|-----------|---|--|--------|---|--|---------|--|--|-----------|--|--|
| | questions (Q3 - Q5) were used to assess SLO-2. | | <table><tr><td></td><td></td><td>% correct = 48%</td></tr><tr><td></td><td>Pell City</td><td># students = 25 # correct = 56 % correct = 75%</td></tr><tr><td>Spring 2019</td><td>Jefferson</td><td># students = 62 # correct = 146 % correct = 78%</td></tr><tr><td></td><td>Shelby</td><td># students = 101 # correct = 208 % correct = 69%</td></tr><tr><td></td><td>Clanton</td><td># students = 19 # correct = 37 % correct = 65%</td></tr><tr><td></td><td>Pell City</td><td># students = 15 # correct = 32 % correct = 71%</td></tr><tr><td>Summer 2019</td><td>Jefferson</td><td># students = 66 # correct = 171 % correct = 86%</td></tr><tr><td></td><td>Shelby</td><td># students = 56 # correct = 122 % correct = 77%</td></tr><tr><td></td><td>Clanton</td><td># students = 19 # correct = 36 % correct = 63%</td></tr><tr><td></td><td>Pell City</td><td># students = 0 # correct = % correct =</td></tr></table> | | | | | % correct = 48% | | Pell City | # students = 25 # correct = 56 % correct = 75% | Spring 2019 | Jefferson | # students = 62 # correct = 146 % correct = 78% | | Shelby | # students = 101 # correct = 208 % correct = 69% | | Clanton | # students = 19 # correct = 37 % correct = 65% | | Pell City | # students = 15 # correct = 32 % correct = 71% | Summer 2019 | Jefferson | # students = 66 # correct = 171 % correct = 86% | | Shelby | # students = 56 # correct = 122 % correct = 77% | | Clanton | # students = 19 # correct = 36 % correct = 63% | | Pell City | # students = 0 # correct = % correct = | compared to data from 2017-2018(75%). We will continue to illustrate how the metabolic and genetic pathways relate to the activities at hand during laboratory exercises. |
| | | % correct = 48% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students = 25 # correct = 56 % correct = 75% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 2019 | Jefferson | # students = 62 # correct = 146 % correct = 78% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 101 # correct = 208 % correct = 69% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students = 19 # correct = 37 % correct = 65% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students = 15 # correct = 32 % correct = 71% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2019 | Jefferson | # students = 66 # correct = 171 % correct = 86% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 56 # correct = 122 % correct = 77% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clanton | # students = 19 # correct = 36 % correct = 63% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pell City | # students = 0 # correct = % correct = | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Students will be able to identify the relationship between microorganism infection and disease, | Student learning outcomes were assessed by using a 13 question standardized multiple choice | 70% or > successful 69% or < unsuccessful The percent is based upon the average of | <table><tr><td>Fall 2018</td><td>Jefferson</td><td># students = 47 # correct = 89 % correct = 95%</td></tr><tr><td></td><td>Shelby</td><td># students = 77 # correct = 144 % correct = 94%</td></tr></table> | | | Fall 2018 | Jefferson | # students = 47 # correct = 89 % correct = 95% | | Shelby | # students = 77 # correct = 144 % correct = 94% | The students tested did meet the requirements for success for SLO 3. The success rate for SLO 3 was 91% which is | | | | | | | | | | | | | | | | | | | | | | | | |
| Fall 2018 | Jefferson | # students = 47 # correct = 89 % correct = 95% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Shelby | # students = 77 # correct = 144 % correct = 94% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| interactions with the host immune system, and various methods for controlling the growth and dissemination of microorganisms. | examination at the end of the semester. A total of two questions (Q6 and Q7) were used to assess SLO-3. | correctly answered questions related to SLO-3. | | Clanton | # students = 14 # correct = 23 % correct = 82% | consistent with last years success rate (90%). We will continue to emphasize content related to infectious diseases during lecture and lab sessions. Implementation of case-studies in a variety of the science courses may also lend to the success rate in this content area. |
| | | | | Pell City | # students = 25 # correct = 39 % correct = 78% | |
| | | | Spring 2019 | Jefferson | # students = 62 # correct = 109 % correct = 88% | |
| | | | | Shelby | # students = 101 # correct = 185 % correct = 92% | |
| | | | | Clanton | # students = 19 # correct = 33 % correct = 87% | |
| | | | | Pell City | # students = 15 # correct = 27 % correct = 90% | |
| | | | Summer 2019 | Jefferson | # students = 66 # correct = 124 % correct = 94% | |
| | | | | Shelby | # students = 56 # correct = 105 % correct = 94% | |
| | | | | Clanton | # students = 19 # correct = 30 % correct = 79% | |
| | | | | Pell City | # students = 0 # correct = % correct = | |
| | | | Total Students Tested = 501 | | | |
| Total Annual Success Rate = 91% | | | | | | |

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| 4. Students will be able to recognize proper laboratory technique and protocols including aseptic technique, media selection, slide preparation, and microscopy. | Student learning outcomes were assessed by using a 13 question standardized multiple choice examination at the end of the semester. A total of 6 questions (Q8 – Q13) were used to assess SLO-4. | 70% or > successful 69% or < unsuccessful The percent is based upon the average of correctly answered questions related to SLO-4. | Fall 2018 | Jefferson | # students = 47 # correct = 263 % correct = 93% | The students tested did meet the requirements for success for SLO 4. The success rate for SLO 4 was 82% which was a decrease from the 2017-2018 data rate (85%). We will continue to emphasize the proper laboratory techniques and protocols throughout the semester. |
| | | | | Shelby | # students = 77 # correct = 375 % correct = 81% | |
| | | | | Clanton | # students = 14 # correct = 58 % correct = 69% | |
| | | | | Pell City | # students = 25 # correct = 99 % correct = 66% | |
| | | | Spring 2019 | Jefferson | # students = 62 # correct = 322 % correct = 87% | |
| | | | | Shelby | # students = 101 # correct = 474 % correct = 78% | |
| | | | | Clanton | # students = 19 # correct = 104 % correct = 91% | |
| | | | | Pell City | # students = 15 # correct = 76 % correct = 84% | |
| | | | Summer 2019 | Jefferson | # students = 66 # correct = 335 % correct = 85% | |
| | | | | Shelby | # students = 56 # correct = 258 % correct = 77% | |
| | | | | Clanton | # students = 19 # correct = 98 % correct = 86% | |
| | | | | Pell City | # students = 0 # correct = % correct = | |
| | | | Total Students Tested = 501 | | | |

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|--|--|--|--|--|
| | | | Total Annual Success Rate = 82% | |
| Plan submission date: Fall 2019 | | | Submitted by: Stephanie Miller | |

