



Academic Program Assessment Report for AY 2017-2018

(Due: June 1, 2019)

Program: Biology

Date report completed: 24 May 2019

Completed by: Moussa M. Diawara

Assessment contributors (other faculty involved): _____

Please describe the 2017-2018 assessment activities and follow-up for your program below. Please complete this form for each undergraduate major, minor, certificate, and graduate program (e.g., B.A., B.S., M.S.) in your department. Please copy any addenda (e.g., rubrics) and paste them in this document, save and submit it to both the Dean of your college/school and to the Assistant Provost as an email attachment before June 1, 2018. You'll also find this form on the assessment website at <https://www.csupueblo.edu/assessment-and-student-learning/resources.html>. Thank you.

I. Assessment of Student Learning Outcomes (SLOs) in this cycle. Including processes, results, and recommendations for improved student learning. Use Column H to describe improvements planned for 2018-2019 based on the assessment process.

| A. Which of the program SLOs were assessed during this cycle? Please include the outcome(s) verbatim from the assessment plan. | B. When was this SLO <u>last</u> assessed? (semester and year) | C. What method was used for assessing the SLO? Please include a copy of any rubrics used in the assessment process. | D. Who was assessed? Please fully describe the student group(s) and the number of students or artifacts involved. | E. What is the expected achievement level and how many or what proportion of students should be at that level? | F. What were the results of the assessment? Include the proportion of students meeting proficiency. | G. What were the department's conclusions about student performance? | H. What changes/improvements to the <u>program</u> are planned based on this assessment? |
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| 1) Students will develop a broad-based knowledge of concepts and terminology in molecular, cellular, organismal and | AY 2018-2019 | ETS Biology MFAT (Major Field Assessment Test) We also administered the same GRE | All Biology majors enrolled in BIOL 493 Senior Seminar for Spring 2019 | Biology majors enrolled in BIOL 493 Senior Seminar will have mean score \geq 50%th | 43.8% (14/32) of Biology seniors in Spring 2018 BIOL 493 scored over 50% percentile nationally. One or our seniors scored in the | The % of our seniors scoring over 50% nationally was lower in 2018 compared to 2817 (45.9% v. 55%). Overall, the 2019 scores are below | We will continue to have freshmen and seniors take GRE and compare these scores. |

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| ecological biology. | | to both First Year Seminar (BIOL 171) and Senior Seminar (BIOL 493) students and compared their scores. | | percentile nationally. | 98%, and 12.5 % (4/32) scored at 90% or above. The average percentile for all 32 Biology seniors in BIOL 493 was 45.9%. The average GRE score for 61 freshmen in BIOL 171 was 27.6%, while the seniors in BIOL 493 scored at 45% average. | those of Spring 2018. One possible explanation for this difference might be the fact that Biology major and the new Wildlife Major course requirements are different. The department will examine this discrepancy at our fall retreat. Analysis of the GRE scores for our seniors showed that Biology majors did better in molecular and Wildlife majors scored higher in organismal. | |
| 4) Students will demonstrate critical thinking and problem solving skills using experimental design and the scientific method. | AY 2018-2019 | Two different evaluation forms were used to assess this: Form a) BIOL 493 Research Seminar Evaluation, completed by faculty, students, as | 32 Biology students in a section of BIOL 493 Senior Seminar in Spring 2019 | The department currently does not have a formal achievement level defined for the two evaluations listed in colum C. | Form a): Each of the 32 presentations in BIOL 493 Seminar were evaluated by faculty and senior students. The average faculty score for these presentations | | |

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| | | <p>well as any audience member attending the presentation; and Form b) SLO4-BS in Biology Program Assessment, completed by faculty only. (see attached);</p> | | | <p>was 87.5% and the average student score was 97.7%, showing almost a whole letter grade discrepancy. This was consistent with last year's trend.</p> <p>Form b): A total of 201 evaluations were completed by 3-8 faculty members who attended presentations by 45 students in BIOL 493 Senior Seminar in fall 2018 and spring 2019. The majority of these evaluations found our students to be proficient (53%) or excellent (41). However, 23 students (11.4%) were developmental. The limitations of</p> | | |
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| | | | | | <p>this assessment are two-folds: 1) It is unclear how many faculty evaluated each of the 45 seniors; and 2) the same faculty did not evaluate all seniors, so we do have consistency in the results.</p> | |
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Comments on part I:

II. Closing the Loop. Describe at least one data-informed change to your curriculum during the 2017-2018 cycle. These are those that were based on, or implemented to address, the results of assessment from previous cycles.

| A. What SLO(s) did you address? Please include the outcome(s) verbatim from the assessment plan. | B. When was this SLO last assessed to generate the data which informed the change? Please indicate the semester and year. | C. What were the recommendations for change from the previous assessment? | D. How were the recommendations for change acted upon? | E. What were the results of the changes? If the changes were not effective, what are the next steps or the new recommendations? |
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Comments on part II: