

Biomedical Sciences BS

Demonstrate Mastery in Core Concepts in the Fields of Biology and Biomedical Sciences

Goal Description:

Students completing the core courses required for a BS will demonstrate knowledge of core concepts of cell biology, biodiversity, genetics and evolution.

Providing Department: Biomedical Sciences BS

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

Mastery Of Core Curriculum

Learning Objective Description:

Students completing the core courses required for a BS will demonstrate knowledge of core concepts of cell biology, biodiversity, genetics and evolution.

RELATED ITEM LEVEL 2

Mastery of Core Curriculum

Indicator Description:

All students, regardless of concentration area, take the same core courses (BIOL 1406, BIOL 1407, BIOL 3450, and BIOL 4361). Faculty teaching each of these courses will agree on a set of embedded questions to include on the final exam. Students will correctly answer these embedded questions.

Criterion Description:

Students will score 70% on the embedded questions.

Findings Description:

During the past year, we started to develop the standard questions. Unfortunately, we were not able to fully integrate these questions into all sections of the core courses. For those sections that we were able to, students at or above 70% in BIOL 3450 and 4361. However, students scored below 70% in BIOL 1406 and 1407.

RELATED ITEM LEVEL 3

Mastery of Core Curriculum

Action Description:

Continue to implement the core questions in all sections of BIOL 1406, 1407, 3450, 4361 and track student scores. In courses where students are falling short of the 70%, assess where the failure lies and implement strategies to improve.

Student Engagement in Undergraduate Research

Goal Description:

Students will engage in the process of scientific discovery by participating in faculty mentored research.

Providing Department: Biomedical Sciences BS

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

Undergraduate Research

Learning Objective Description:

Students will engage in the process of scientific discovery by participating in faculty mentored research.

RELATED ITEM LEVEL 2

Undergraduate Research

Indicator Description:

Students will enroll in BIOL 4095: Undergraduate Research Topics and participate directly in faculty mentored biological research, with the goal of producing publishable research and/or quality research that can be presented at scientific conferences.

Criterion Description:

50% of each graduating class will have enrolled in BIOL 4095 . Using the departmental Faculty Evaluation Instrument, that tracks faculty engagement with undergraduate researchers, the department chair will track the number of peer-reviewed publications and presentations at scientific conference on which our undergraduate students appear on the author line.

Findings Description:

31% of the graduating class with a B.S. in Biomedical Sciences participated in research that resulted in a publication or conference presentation.

RELATED ITEM LEVEL 3

Undergraduate Research

Action Description:

Having fallen short of our desired goal, we will need to assess how to improve the research experience for undergraduates to increase the number of publications and presentations. We will form a committee to identify the barriers to publications/presentations that faculty/students are facing and come up with possible interventions.

Update to Previous Cycle's Plan for Continuous Improvement Item

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Closing Summary

We plan to identify new ways to recruit students into research in the department.

The instructors of BIOL 1406 and 1407 will look for ways to increase student engagement and develop strategies for students to master core competencies.

Update of Progress to the Previous Cycle's PCI:

We have increased the number of students engaging in research in the department, now we need to identify ways to increase output (publications and presentations).

We are looking into ways to increase student engagement in BIOL 1406 and 1407 in hopes to improve scores in core competencies.

New Plan for Continuous Improvement Item

Closing Summary:

We did not hit the benchmarks for this degree plan. We will continue to investigate strategies on improving each of the metrics for the degree plan.