Assessment: Course Four Column

Courses (SCI) - Biology

BIOL 251:General Microbiology

Course Outcomes	Assessment Measures	Results	Actions
Microbial diversity - Improvement in student performance on microbial diversity. Chapter 11 lecture notes were extensively revised between the two semesters. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	**Exam -** Comparison of exam questions from fall 18 to spring 19. **Criterion:** Increase in percentage of correct responses.	**Reporting Period:** 2018-2019 **Criterion Met:** No Fall = 86% Spring = 83% Results Analysis: The revision increased the number of species covered, which may have overwhelmed the students. (09/17/2019)	**Action:** Revise number of species covered. (09/17/2019)
Microbe identification - Overview of course content via unknown microbe identification. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	**Assignment - Lab -** Unknown microbe identification lab project. **Criterion:** Greater than 70% identifying 1 of their 2 unknown microbes.	**Reporting Period:** 2018-2019 **Criterion Met:** Yes 100% correctly identified 1 of their 2 microbes. Results Analysis: This exercise continues to have high value. (09/17/2019)	**Action:** Significant effort was placed into rewriting my lecture notes for the microbial diversity section of the course. Specifically, I deleted some microbes from my presentation while adding others of contemporary significance. Further, I more carefully aligned my discussion of the disease process of pathogenic microbes and environmental considerations of non-pathogenic microbes with all species discussed. I am disappointed to see that there was actually a slight decline in student performance. While I did not perform a t-test to see if this was a significant difference, even a result of non-significance would

| | | | not be encouraging. Students frequently state that they feel overwhelmed in this material, and perhaps they are correct. I should note that some students do quite well with this material, and all find it interesting. My strategy for the future will be to reduce the breadth of species covered while increasing the depth on each species.

The laboratory exercise where students must identify an unknown microbe continues to be the strongest evidence of their mastery of both practical and theoretical microbiology. Each student receives a mixture of 2 unknown microbes, and has to correctly identify 1 for full credit. Over the years, I have experimented with different species and combinations of species in order to find those that are challenging, but not too challenging. The current mix is working quite well, I've no plans to change these species. (09/17/2019) |