**Course Prefix, Number, and Title: BIO 251 Introduction to Microbiology**

**Section Number(s): 1006**

**Department: Biology**

**Instructor:Dr. Rita Pujari**

**Academic Year: Spring 2020**

**Semester: Spring**

**Is this a GenEd class? No**

**Complete and submit your assessment report electronically to your department chair. As needed, please attach supporting documents and/or a narrative description of the assessment activities. You may use as many or as few outcomes as necessary.**

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| Class/Course Outcomes | Assessment Measures | Assessment Results | Outcome Results Analysis |
| In the boxes below, summarize the outcomes assessed in your class or course during the last year. If this is a GenEd class, include the appropriate GenEd objectives. | In the boxes below, summarize the methods used to assess course outcomes during the last year. Include the criterion you’ll use to judge whether or not students have achieved the expected outcome. | In the boxes below, summarize the results of your assessment activities during the last year. Include your judgement as to whether or not the criterion for student achievement has been met. | In the boxes below, please reflect on this outcome’s results and summarize how you plan to use the results to improve student learning. |
| Outcome #1:Functional Anatomy of Cells - Describe the cellular structure of prokaryotic cells and cell walls. Apply this information to disease processes. | Assessment Measure:Lecture exam- 1, laboratory quizzes.  Criterion for achievement:60% and above | Results:  Lecture Exam - 1  Avg Score - 74%  Highest score - 100%  Lowest score- 42%  SD- 17.44%  Avg Time -1:16:27  Criterion Met: Yes | 1. Results Analysis: The result explains the wide range of students based on their scores in the class. The students with lower scores ended up dropping the class later in the semester. Some students were just not ready for the challenges of this class.  2. Action Plan:  This part of the class has been going well and all the terms associated with Microbiology is taught to them via both lecture and labs and I plan on continuing to do so. |
| Outcome #2:  Aseptic Technique and Culture of Microorganisms  Proficiency in aseptic technique | Assessment Measure:  Lab experiences and Unknown Report success and quality with subjective evaluation by instructor  Criterion for achievement:60% and above | Results:Lab exam - 1  Highest score - 50/50  Lowest score - 33/50  Criterion Met: Yes/No | 1. Results Analysis: Most of the students by now (mid semester) have to know about aseptic techniques and they are constantly being evaluated on how they are working in the lab which is reflected in their technical evaluation score at the end of the semester.  2. Action Plan: Continue doing the same with no significant changes. |
| Outcome #3:  Microbial Growth and Control Thereof.  Describe requirements for microbial growth and apply these concepts to strategies for controlling microbial growth in medically relevant situations. | Assessment Measure:  Lecture exam, laboratory quizzes together with Handwashing Experiment report.  Criterion for achievement:60% and above | Results:  Lecture exam - 2  Average score - 73%  Highest score - 95%  Lowest score- 51%  SD - 12.16  Avg Time - 1:07:87  Criterion Met: Yes | 1. Results Analysis:  Students did well and were able to apply concepts learnt in lecture to the lab experiments and vice versa.  2. Action Plan: None needed for this part. |
| Outcome #4:  Microbial Diversity with medically relevant examples.  Describe the diversity and medical relevance of microorganisms. | Assessment Measure:  Lecture exam, laboratory quizzes together with lab exercises and discussion.  Criterion for achievement:60% and above | Results:  Lecture Exam - 3  Highest score 50/50  Lowest - 0/50  (They were the ones who did not attend the class neither did they drop the class before the due date)  Criterion Met: Yes | 1. Results Analysis:  This part of the class (almost 25%) was completely revamped this semester and I integrated all the bacteria and Viruses which are classified based on the diseases they cause in the organ system into one chapter where they are classified based on their structure, Gram stains and morphology.The examples selected were of medically relevant microbes for this chapter. The layout of the chapter turned out to be excellent and students appreciated it though there were a couple of complaints of it being too lengthy at times.  Due to unusual circumstances this semester I could not do unknown identification in the lab as I normally do but I did manage to show them very superficially of how it is done before we went online completely.  In order to compensate for the lab portion /exam , i asked them to review a book written by David Quammen, “Spillover”. Though it was a late addition to the class but it worked well and aptly supplemented the topic of medically relevant microbes I was teaching in the class.  2. Action Plan: I am going to revise this portion of the two chapters again next year and make it a little more concise. Maybe delete a few examples or information which may be redundant.  I am going to add the ”Spillover” book to my assignments next year in place of the “Disease report” and will continue teaching the lecture portion after revisions as i did now but I am not sure of how much i will be able to complete it next time. This semester I had the liberty of using lab time to teach which may not be the case next year. The verbal feedback on this part of class was “Excellent’ but i am waiting for the student evaluations to make necessary changes to the course next year. |

**Notes: Overall a good class given the circumstances we were in. I am glad I was able to complete 95% of the lab before we went online as I used my lectures time too for the labs. The overall 25% change in the syllabus turned out to be excellent and thanks to Prof. Pete Bagley for suggestions, feedback and for sharing his notes. This is one of my efforts to align my teaching material with Elko folks.**

I have reviewed this report:

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Department Chair Dean

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Vice President of Academic Affairs and Student Services

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_