

Course Assessment – Part A: Your Plan

#114

Your Email *

Please select your course & name from the list. Contact Instructional Services if your course or name are incorrect or missing

BI 234 – Microbiology – McMullen – Summer 2016

Part A: Your Plan

Relate an understanding of the basic principles of microbiology to personal health and use this understanding to make informed personal and professional decisions.

1. Choose three of your course outcomes to assess and report on this term (these will also be used in your Student Course Evaluation survey):

Outcome #1 *

Outcome #2 *

Use an understanding of the impact of microbes on human cultures around the world both historically and in the present day to evaluate current health issues.

Outcome #3 *

Use scientific methods to qualitatively and quantitatively describe microbial characteristics and processes and understand their relationship to the identification of microbial species.

Have you completed an assessment for this course prior to this term?

No

If yes, are you assessing different outcomes? Yes

Comments:

2. To which degree, certificate or program outcomes do these course outcomes map? Degree, Certificate & Program Outcomes can be found at:
<http://www.cgcc.edu/curriculum/program-outcomes>

- Not Sure

Method of Assessment

3. What methods will be used to assess individual student understanding of each of these outcomes? (Please be specific.)

Outcome #1 Method to assess student understanding *

We are focusing on how microbes can be both beneficial to or detrimental to personal health. We are also discussing the role of microbes in the professional atmosphere, emphasizing aseptic technique (the reduction of the spread of microbes). To assess student understanding of the impact of the basic principles of microbiology on personal health and professional decision making; we 1) are watching videos on the topics of 'the role of microbes in the human body– both good and bad', 'how building design affects microbial communities', 'problems with antibiotic resistant bacteria', and 'STDs' and having interactive online discussion forums with both targeted and open-ended questions related to these topics. Students are also 2) completing case-study type homework assignments that apply the basic principles of microbiology to human health including a case study on 'antimicrobial resistance and susceptibility', the 'bacterial theory of ulcers', 'asthma and bacterial pneumonia', and 'the resurgence of pertussis'. Students are also 3) assigned reading from online sources on the topics of antibiotic resistance, antimicrobial control, disease and specific pathogens; and then taking online quizzes related to these reading topics. Finally, 4) we are emphasizing aseptic techniques in the

laboratory including hand washing, careful manipulation of microbial media with correct technique and disposal, and proper clean-up.

Outcome #2 Method to assess student understanding *

To assess student understanding of the impact of microbes on human cultures around the world both historically and in the present day to evaluate current health issues; we 1) are watching videos on the topics of 'Viruses-Malaria and Zika', 'Tracking Ancient Diseases Using Plaque', and 'Cholera' and having interactive online discussion forums with both targeted and open-ended questions related to these topics. The videos focused on viruses and cholera especially related the impact of microbes on cultures around the world and how this related to current health and prevention issues. The students 2) are also assigned a case-study style homework assignment on 'African Illness: a Case of Parasites?' that focuses on parasites endemic to Africa especially those that are transmitted by other hosts. This case study also discusses disease prevention and public health campaigning.

Outcome #3 Method to assess student understanding *

In the laboratory portion of the course, a strong emphasis is on the use of scientific methods to qualitatively and quantitatively describe microbial characteristics and processes and understand their relationship to the identification of microbial species. This is performed through a variety of labs including labs on colonial and cellular morphology, gram-testing, microbial metabolism, and the study of microbial fungi and bacteriophages. Student assessment is performed through weekly lab write-ups as well as weekly lab quizzes.

4. How will you know if you were successful in your efforts to teach this outcome?

Outcome #1 *

The video forums are graded more based on completion, however students are required to engage in a discussion by responding to two other students' posts in a contributing manner. I believe the use of open-ended, creative questions engages students in learning as opposed to only focusing the course on memorization. I will know if this method was successful if the students are writing interesting posts that are focused on the topic but also incorporating knowledge from a variety of sources, including their own experience and knowledge. Homework assignments are carefully graded by the instructor with lots of feedback provided to students, so this is a direct method of assessing effectiveness of this teaching method. If students are doing well on their homework assignments (especially if they are improving grades throughout the term), I would determine this method as successful. Online quizzes are automatically graded to assess comprehension of the material. Finally, in the laboratory students' understanding of aseptic technique is evaluated both through observation and direct feedback by the instructor during laboratory periods and also by weekly quizzes with questions related to aseptic technique on each quiz.

How will you know if you were successful in your efforts to teach this outcome?

Outcome #2 *

The video forums are graded more based on completion, however students are required to engage in a discussion by responding to two other students' posts in a contributing manner. I will know if this method was successful if the students are writing interesting posts that are focused on the topic but also incorporating knowledge from a variety of sources, including their own experience and knowledge. Homework assignments are carefully graded by the instructor with lots of feedback provided to students, so this is a direct method of assessing effectiveness of this teaching method.

How will you know if you were successful in your efforts to teach this outcome?

Outcome #3 *

I will know I was successful in my efforts to teach this outcome if students are performing well on laboratory quizzes and lab write-ups, and also if they are participating and engaging in the laboratory sessions.

#1

What was the most effective online teaching method used to increase your understanding of microbiology in this hybrid course?

#2

Did you gain knowledge of microbiology in this course that will help

Do you require the names of students who complete the course evaluation survey? * No

Created 29 Jun 2016 10:23:21 AM	
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