COURSE ASSESSMENT REPORT

Course Number: 3100 130 **Instructor: Rock**
Course Title: Principles of Microbiology **Semester: Spring** **Year: 2005**

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1. **Course Learning Outcome(s) Being Assessed**

   1. Discipline related content
   2. Understanding and use of scientific method

2. **Instructional Techniques to Achieve the Course Learning Outcomes**

   - Use of CPS for in class exercises and practice questions
   - Used laptops so students could write group questions which were then answered using CPS
   - Placed similar questions on test

3. **Assessment Activity(ies) to Measure Student Learning (pre- post-tests, quizzes, exams, projects, assignments, self-assessment, in-class exercises)**

All techniques used multiple choice questions because CPS is designed to answer that style of question. We tried the following exercises:

- Case studies with questions were handed out and students came to class ready to answer the questions using CPS
- I distributed content themes at random to the 11 groups in the class and each group wrote a question about that theme. The question was then posted to the M drive where I accessed it so the whole class could see it and answer it with CPS
- I wrote review questions related to specific concepts and we answered them with CPS. All questions were then posted to WebCT
- I wrote scenarios that required the class to identify a logical hypothesis and chose independent and dependent variables. Most of these questions were multiple choice also.
- I incorporated 5 to 9 clicker questions into the 4 lecture exams and monitored what percentage of the class answered each type correctly.

4. **Results/Observations on each activity**

The final grades in the class for both lecture and lab were not any higher than in previous 4 terms. In comparing the percentage of students who answered the clicker questions correctly on exams vs. the non-clicker questions, the clicker percentage was 81% was and the non- clicker was 80%

I used questions requiring written responses for the scientific method concepts in three of the lecture tests and then on the comprehensive lab final. In comparison to previous years, there was some improvement on some of the written answers BUT it was not consistent throughout the term. I am not sure at this point whether using CPS can improve students' ability to express their answers in writing.

5. **Based on above Results/Observations, Suggestions for Better Achieving Course Learning Outcomes**

Find a method that allows more writing but incorporates the use of CPS as it seems to be popular with the students. I want to continue to require groups to write questions. I want to create a game using the clickers that will concentrate on content. And I will continue to explore more ways of introducing the scientific method and its use. Maybe have students write simply experimental scenarios followed by multiple choice questions. (Maybe too hard!!)