Annual Assessment Report

Academic Year: 2013/14
Department: Microbiology and Immunology
Program(s): Microbiology

1. What Was Done

Based on our assessment plan, we evaluated program Learning Outcomes 2 and 5 this year.

2. Our graduates will be able to experimentally design and test a hypothesis

5. Our graduates will be able to verbally communicate microbiological concepts

2. What Data Were Collected

2. An assignment from our Research Methods in Microbiology (BIOM 455) course was collected, and a random sample of the assignment was scored using our ‘Microbiology Assessment Form Learning Objective 2’ scoring rubric (a copy of the form is attached).

5. Presentations from our capstone course (BIOM 494) and Educational Methods course (BIOM 497) were evaluated from a random sample of the student presentations and scored using our ‘Microbiology Assessment Form for Learning Objective 5’ scoring rubric. (a copy of form is attached).

3. What Was Learned

2. Students scored above the threshold on all aspects of ‘experimental design and hypothesis testing.

5. While the majority of the aspects of communication on the scoring rubric scored at or above our threshold values, we identified some weakness in the ability to explain information, make critical judgments and effectively interpret scientific information in some students.
4. How We Responded

2. Our assessment indicated that no changes are needed regarding learning objective 2.

5. Additional emphasis on organization of information, making critical judgments and effective interpretation of scientific information will be covered in the Educational methods and Capstone courses.
Microbiology Assessment Form Scoring Rubric: Learning Objective 2

Course: ____________________________  Semester ______
Evaluator: ____________________________
Dept. of Evaluator________________________

Type of Learning Activities(s) Assessed: choose one of the following:
Written examination
Written assignment
In class activities (role play, class discussion, presentations)
Performance of Lab Procedure
Out of class activities (projects)
Other (please specify)

Learning Objective Assessed:

2. Experiment Design & Test Hypothesis

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student should:</td>
<td></td>
</tr>
<tr>
<td>a. demonstrate an ability to formulate hypotheses and design experiments based on</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>the scientific method</td>
<td></td>
</tr>
<tr>
<td>b. analyze and interpret results from a variety of microbiological methods and</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>apply these methods to analogous situations</td>
<td></td>
</tr>
<tr>
<td>c. show they can make critical judgements about scientific material</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>

1 = Not Done

* 2 = Performed but with poor execution – threshold level (see note below)
3 = Adequate Performance; Met Expectations
4 = Performance Well Executed; Exceeds Expectation
5 = Performance Excellent; Exceeds Expectations Plus

◆ threshold level: if student performance falls below this threshold faculty action will be taken to improve the program.
Microbiology Assessment Form Scoring Rubric: Learning Objective 5

Course: ____________________________  Semester ______
Evaluator: ____________________________  Dept. of Evaluator ____________________________

**Type of Learning Activities(s) Assessed:** choose one of the following:
- Written examination
- Written assignment
- In class activities (role play, class discussion, presentations)
- Performance of Lab Procedure
- Out of class activities (projects)
- Other (please specify)

**Learning Objective Assessed:**

5. **Verbally Communicate about a fundamental and modern microbiological concepts**

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student should:</td>
<td></td>
</tr>
<tr>
<td>a. show they can effectively <strong>explain information</strong> related to Microbiology</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>b. show they can <strong>summarize information</strong> related to Microbiology</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>c. show they can <strong>make critical judgements about</strong> scientific material</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>d. show they can <strong>effectively interpret</strong> scientific information</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
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**threshold level:** if student performance falls below this threshold faculty action will be taken to improve the program.