

Assessment Report –BIOLOGY 2009-2010

Rosemont College --Undergraduate

I. General information:

Date of Report: May 16, 2010
Semesters or Academic Years Covered: 2009-2010
Division:
Department: Biology
Chair or Person Preparing the Report: Aikaterini Skokotas

II. Departmental Profile:

Number of Majors: 40
Number of Faculty: 2 *full time*
1 *part time*

Courses Offered in the Assessment Period:

BIO-0102 Life Science I and Laboratory, BIO-0103 Life Science II and Lab, BIO-0200 Microbiology and Laboratory, BIO-0220 Genetics and Laboratory, BIO-0400 Molecular Genetics, BIO-0245 Vertebrate Anatomy and Physiology I, BIO-0250 Vertebrate Anatomy and Physiology II, BIO-0235 Nutrition, BIO-0335 Immunology, BIO-0450 Introductory Research, BIO-0460 Biology Internship, BIO-0421 Senior Seminar and BIO-0130 Science Issues Lecture, BIO-0131 Science Issues Laboratory

III. Assessment results

A. Learning Outcomes for Majors

This year we collected data dealing with Goal I, Objective 1 (demonstrate knowledge in different fields of biology) and Goal III, Objective 1 (demonstrate effective oral communication skills in the field of biology). Please refer to plan for details.

B. Assessment of Majors

Goal I: Objective 1 (Demonstrate knowledge in different fields of biology)

Our 7 graduates achieved a raw score average of 144 +/-5 falling within the range of the national mean score of 153.4 +/- 13.2. Also, 71.4% (2 out of 7) of the students' scores fall within or above the range of the national mean thereby satisfying the requirement of the outcome. Two students scored just below the national mean range.

The ETS test is further divided into 4 subgroups.

- In subgroup 1 (Cell biology), students scored on average score of 52 +/- 5 falling within the national average score of 54 +/- 13.2. 100% (7 out of 7) of the students' scores fall within or above the range of the national mean thereby satisfying the requirement of the outcome.
- In subgroup 2 (Molecular Biology/Genetics) students scored on average score of 51 +/- 8 falling within the national average score of 53 +/- 13.1. 85.8% (6 out of 7) of the students' scores fall within or above the range of the national mean thereby satisfying the requirement of the outcome.
- In subgroup 3 (Organismal Biology), students scored on average score of 43 +/- 7 falling within the national average score of 54 +/- 13.5. 43% (4 out of 7) of the students' scores fall within or above the range of the national mean. Four students scored just below the national mean.
- In subgroup 4 (Population Biology /Ecology/Evolution) students scored on average score of 38 +/- 11 falling within the national average score of 55 +/- 13.3. 29% (5 out of 7) of the students' scores fall within or above the range of the national mean.

Goal III: Objective 1 (demonstrate effective oral communication skills in the field of biology).

Oral presentations were assessed in the following courses: BIO-0200 Microbiology, BIO-0220 Genetics, BIO-0335 Immunology, BIO-0400 Molecular Genetics and BIO-0421 Senior Seminar. An oral presentation rubric was used to assess the following areas of the presentation: organization, presentation skills, visual aids, handling of questions after presentation and length of presentation. Each of these areas is scored as follows: excellent (4), good (3), adequate (2) and inadequate (1) and a total score was calculated.

- In BIO-0200 Microbiology, 85% (11 out of 13) of students scored 3 or better, and 15% (2 out of 13) scored below 3.
- In BIO-0220 Genetics, 90% (9 out of 10) of students scored 3 or better, and 10% (1 out of 10) scored below 3.
- In BIO-0335 Immunology, 86% (6 out of 7) of students scored 3 or better, and 14% (1 out of 7) scored below 3.
- In BIO-0400 Molecular Genetics, 100% (6 out of 6) of students scored 3 or better.
- In BIO-0421 Senior Seminar, 86% (6 out of 7) of students scored 3 or better, and 14% (1 out of 7) scored below 3.

On average, 89.4% of students scored 3 or better.

C. Changes Based on Assessment

According to the raw ETS scores, our students performed well and their scores fell within or above the national mean. Subgroup ETS scores were consistently higher in Cell biology and Molecular/Genetics reinforcing the strength of the department in these areas. The mean subgroup scores in the Organismal and Population Biology/Ecology/Evolution sections were lower but still fell within the range of the national mean. One reason for these lower scores is that the ETS exam emphasizes plant biology, an area not well covered in our courses. As a result of this trend

in the ETS scores, Ecology is now a requirement for all biology majors in the traditional Biology track.

D. Recommendations for Improving the Assessment Process

a. After assessing the oral presentations, we have concluded that our initial expectation that all students achieve a score of 3 or better was too ambitious. Therefore, we are recommending that 75% of our students achieve 3 or better on their oral presentation assessment.