



Program Assessment Report (PAR)

Microbiology + Immunology (MICB) Masters Degree

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ACADEMIC YEAR COVERED BY THIS REPORT: [AcademicYear]

I. PROGRAM LEARNING OUTCOMES

Learning Outcomes in Microbiology and Immunology

1. Knowledge Students will be able to acquire specialized knowledge in the fields of microbiology and Immunology.
2. Critical Inquiry (Competency Skills) Students will be able to engage in field-specific critical thinking through effective and ethical information search, retrieval, and evaluation strategies.
3. Applied Learning Students will be able to apply interdisciplinary knowledge across multiple subjects in the life sciences to enhance and deepen their learning experience.
4. Communication Students will be able to communicate effectively in presenting ideas orally and in writing (oral communication; written communication).
5. Ethical Reasoning Students will be able to reason ethically in evaluating various perspectives, policies and/or practices relevant to the field of microbiology and immunology

II. PROCEDURES USED FOR ASSESSMENT

A. Direct Assessment

1. ASSESSMENT MEASURES EMPLOYED • Student performance in courses (grades). • Completion of a written thesis containing original research that advances the field. • Oral presentation of research and defense of the thesis before the thesis committee • Quality of students admitted. • Employment/Further Education
2. PARTICIPANTS • Program Director • Thesis Advisor • Graduate Committee

B. Scoring of Student Work

- Course grades were assigned by individual professors in required and elective courses
- Quality of research was judged in the laboratory (research track) by

successful completion of assigned experiments with proper technique and by successful application of the scientific method to a current topic in the field (non-research track) • Both tracks were judged by depth of knowledge in the field and understanding of scientific literature • Assessments were performed by the thesis advisor and examination committee members

C. Indirect Assessment

Exit interviews were conducted by the thesis advisor and committee.

III. ASSESSMENT RESULTS/INFORMATION:

Measure A A review of the advising reports for each student in the program showed that all students were in good standing (GPA of at least 3.0) and all full time students were completing course requirements within 2 years. All graduating students completed the required core courses. All students were required to complete 2 seminars in which they review published scientific research articles and make oral presentations. These seminars required that students develop fundamental knowledge of Microbiology and Immunology and fundamental skills of communication. The students that completed their degrees during this reporting period completed this seminar requirement. Students currently in the program are completing this requirement expeditiously. Measure B Five students completed their degree over the 2019-2020 academic year. The Program Director and thesis committees certified that their theses were acceptable in terms of writing, organization, and experimental results that advance the field. Measure C The thesis committees certified that the five graduating students passed the oral seminar and thesis defense. Measure D The Graduate Committee reviewed 47 applications for admission for the 2019-2020 academic year and accepted 23 students. The average GPA of the accepted students was 3.49, while the average GPA of the denied students was 2.90. There were 11 students admitted conditionally with an average GPA of 3.04. Measure E The program had five students complete the degree over this reporting period. These students are actively seeking work or are employed in jobs related to their training.

Over the 2019-2020 academic year, 23 students were accepted and 11 of these students enrolled in the program. Five students completed degrees over this time period.

The following learning outcomes were successfully achieved by the graduating students as evidenced by their completion of 30 credit hours of coursework with a GPA of 3.0 or greater and their successful defense of a thesis 1. Students acquired specialized knowledge in the fields of microbiology and Immunology. 2.

Students engaged in field-specific critical thinking. 3. Students applied interdisciplinary knowledge across multiple subjects in the life sciences. 4. Students communicated effectively in presenting ideas orally and in writing (oral communication; written communication). 5. Students showed the ability to reason ethically in evaluating various perspectives, policies and/or practices in microbiology and immunology.

IV. ACTIONS TO IMPROVE STUDENT LEARNING

- Planned expansion of Gene Therapy course to include stem cell gene therapy. •

Planned reorganization of curriculum to clarify requirements and streamline course numbering system.

V. SUPPORTING DOCUMENTS

Additional documentation, when provided, is stored in the internal Academic Program Assessment of Student Learning SharePoint site.