SAINT LOUIS UNIVERSITY.

Program-Level Assessment: Annual Report

Program Name (no acronyms): Graduate Program in
Molecular Microbiology and Immunology

Department: MMI

Degree or Certificate Level: Ph.D.

College/School: School of Medicine

Date (Month/Year): Nov. 21, 2023

Assessment Contact: Ryan Teague

In what year was the data upon which this report is based collected? 2022-23

In what year was the program's assessment plan most recently reviewed/updated? 2023

Is this program accredited by an external program/disciplinary/specialized accrediting organization or subject to state/licensure requirements? No

If yes, please share how this affects the program's assessment process (e.g., number of learning outcomes assessed, mandated exams or other assessment methods, schedule or timing of assessment, etc.): N/A

1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle? (Please provide the complete list of the program's learning outcome statements and **bold** the SLOs assessed in this cycle.)

1. Demonstrate sufficient knowledge of the biomedical sciences to support independent biomedical research related to immunology, virology and molecular biology. This outcome is learned throughout the students' time in the MMI graduate program. In the previous year of the program, students taking the required advanced courses in immunology MB.6650 and virology MB.6350 all passed. For eligible students, Preliminary and Candidacy exam outcomes were also assessed, and all participating students passed.

2. Demonstrate the ability to effectively communicate biomedical research with respect to content, organization, logical flow, presentation, and appropriate use of language incorporating the use of visual aids. All MMI graduate students participated in and passed the required MMI journal club MB.6900 and presentation of their own research in MMI colloquium MB.6920 in the last year.

2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please describe the artifacts in detail, identify the course(s) in which they were collected, and if they are from program majors/graduates and/or other students. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

Grades in classes (MB.6650 and MB.6350) are determined based on the cumulative performance on multiple written exams. The outcome of each exam is shared with students after final grading and any questions or discussions about the exam are welcomed and transparent. The department journal club and colloquium grades determined by participation but feedback is provided both verbally and in a written form during a meeting with the Graduate Oversight Committee directly following the student presentation. Preliminary and Candidacy exams are assessed by a majority vote of a 5-member faculty committee overseen by the Director of the Graduate Oversight Committee.

a). All courses, journal club and colloquium presentations were delivered in-person beginning in fall of 2022.
        *No coursed in MMI were provided online after spring of 2020.
b). No involvement with the Madrid campus
c). No involvement with the off-campus locations

3. **Assessment Methods: Evaluation Process**

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and **include them in/with this report document** (please do not just refer to the assessment plan).

> This is an apprenticeship style program, so the majority of the feedback to the students is immediate and occurs in one-on-one discussions between the students and their research mentors and/or other faculty. Additional feedback is provided by performance reports from the MMI course directors to the MMI Graduate Oversight Committee and by reviewing the students' grades. All of this information is collated by the Graduate Oversight Committee in annual reports synchronized with the students' annual research updates to the entire faculty.

4. **Data/Results**

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

> All participating students in the past academic year passed all required courses and exams. Moreover, all students currently in the program are in good standing and viewed to be progressing as expected.

5. **Findings: Interpretations & Conclusions**

What have you learned from these results? What does the data tell you? Address both a) learning gaps and possible curricular or pedagogical remedies, and b) strengths of curriculum and pedagogy.

> We have worked continually to refine our program to provide a robust and challenging learning experience for our graduate students without being overwhelming or causing significant burnout. This is a constant balancing act but one that has benefited from establishing good dialog between our students and faculty. Although students are always significantly stressed about their courses and especially their Preliminary and Candidacy exams, the fact that all have passed suggests the program is preparing them well and is effectively communicating expectations.

6. **Closing the Loop: Dissemination and Use of <u>Current</u> Assessment Findings**

A. When and how did your program faculty share and discuss the results and findings from this cycle of assessment?

> Discussions at meetings of the MMI Graduate Oversight Committee and at monthly faculty meetings. Additionally, our graduate program underwent a top-to-bottom external review in 2022-23. Our faculty have met to discuss the external report and will meet again in Feb. 2024 to discuss opportunities for improvement based on reviewer suggestions.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies	• Course content • Teaching techniques • Improvements in technology • Prerequisites	• Course sequence • New courses • Deletion of courses • Changes in frequency or scheduling of course offerings
Changes to the Assessment Plan	• Student learning outcomes • Artifacts of student learning • Evaluation process	• Evaluation tools (e.g., rubrics) • Data collection methods • Frequency of data collection

Please describe the actions you are taking as a result of these findings.

Although the details have not been work out yet, one planned change concerns the two qualifying exams (Preliminary and Candidacy, mentioned above). The reviewers felt this may be too onerous and that one exam should be sufficient to obtain the level of "Ph.D. Candidate." MMI faculty are largely in agreement and we are currently working on the details of implementing this change in our curriculum.

If no changes are being made, please explain why.

N/A

7. **Closing the Loop: Review of <u>Previous</u> Assessment Findings and Changes**
   A. What is at least one change your program has implemented in recent years **as a result of previous assessment data**?

   See 6B above

   B. How has the change/have these changes identified in 7A been assessed?

   See 6B above

   C. What were the findings of the assessment?

   See 6B above

   D. How do you plan to (continue to) use this information moving forward?

   See 6B above

IMPORTANT: Please submit any assessment tools (e.g., artifact prompts, rubrics) with this report as separate attachments or copied and pasted/appended into this Word document. Please do not just refer to the assessment plan; the report should serve as a stand-alone document. Thank you.