

# Program-Level Assessment Plan

Program: MMI Graduate Program	Degree Level: Doctoral - PhD
Department: Mol. Micro. and Immunology (MMI)	College/School: School of Medicine
Date (Month/Year): 08/18/2021	Primary Assessment Contact: Ryan Teague, PhD

Note: Each cell in the table below will expand as needed to accommodate your responses.

#	Student Learning Outcomes	Curriculum Mapping	Assessment Methods	
			Artifacts of Student Learning (What)	Evaluation Process (How)
	<p>What do the program faculty expect all students to know or be able to do as a result of completing this program?</p> <p>Note: These should be measurable and manageable in number (typically 4-6 are sufficient).</p>	<p>In which courses will faculty intentionally work to foster some level of student development toward achievement of the outcome? Please clarify the level at which student development is expected in each course (e.g., introduced, developed, reinforced, achieved, etc.).</p>	<p><b>Artifacts of Student Learning (What)</b></p> <ol style="list-style-type: none"> <li>1. What artifacts of student learning will be used to determine if students have achieved this outcome?</li> <li>2. In which courses will these artifacts be collected?</li> </ol>	<p><b>Evaluation Process (How)</b></p> <ol style="list-style-type: none"> <li>1. What process will be used to evaluate the artifacts, and by whom?</li> <li>2. What tools(s) (e.g., a rubric) will be used in the process?</li> </ol> <p>Note: Please include any rubrics as part of the submitted plan documents.</p>
1	<p>Demonstrate sufficient knowledge of the biomedical sciences to support independent biomedical research related to immunology, virology and molecular biology.</p>	<p>The outcome is learned throughout the students' time in the MMI graduate program. In the first year of the program, students take required advanced courses in immunology and virology:</p> <p>MB.6650: Basic Immunobiology MB.6350: Virology</p> <p><b>Preliminary Exam:</b> Following successful completion of MB.6650 and MB.6350, students are tested on this information and basic biomedical science in a oral exam by 5 MMI faculty members.</p> <p><b>Candidacy Exam:</b> Following their second year in the department, students write an NIH R21 style grant proposal based on their planned thesis research and defend the proposal orally in front of a committee of 5 MMI faculty members.</p>	<p>The following artifacts are used to monitor the achievement of this learning outcome:</p> <ol style="list-style-type: none"> <li>1. Passing grades in all required courses.</li> <li>2. A passing grade on the preliminary oral exam.</li> <li>3. A passing grade on the written and oral sections of the PhD candidacy exam.</li> </ol>	<ol style="list-style-type: none"> <li>1. A passing grade in MB.6650 and MB.6350 is determined based performance on several written exams throughout each course. Exams are written by the course directors in cooperation with other lecturers who participate in the course.</li> <li>2. The preliminary exam is an oral examination of basic topics in biomedical science relevant to cell biology, molecular biology, immunology and virology. Each category is overseen by an individual faculty member and a 5<sup>th</sup> member is passive during questions and is typically the student's faculty mentor. Upon completion of questioning, all 5 members vote to pass or fail. The final decision is based on the majority vote.</li> <li>3. The candidacy exam has a written and an oral presentation component. A 5 faculty</li> </ol>

				member committee critiques the written component and provides feedback and questions during the oral presentation. At the conclusion of the presentation, all 5 members vote to pass or fail. The final decision is based on the majority vote.
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.	Required coursework beyond the first year include annual presentation in MMI journal club and presentation of their own research in MMI colloquium.  MB.690: MMI Journal Club MB.6920: MMI Colloquium	<ol style="list-style-type: none"> <li>1. Annual evaluations both verbal and in written form describing their progress in their dissertation research is provided by the MMI graduate oversight committee following the student's colloquium presentation.</li> <li>2. MB.6920</li> </ol>	Directly following a student's annual colloquium, they meet with all 3 members of the MMI graduate oversight committee and their own mentor discuss progress both on their thesis research and the requirements achieved toward graduation. Feedback is provided verbally and in via an annual review form.
3	Understand the expectations for responsible conduct of research.	Saint Louis University provides a series of 2-hour workshops throughout the year on conflict of interest, intellectual property, authorship and peer review, scientific misconduct, IRB, animals in research and data confidentiality. Each interactive workshop consists of instruction in the topic, engaged discussion, and applied cases. Additionally, graduate students supported by research funds from NIH and/or NSF are required to complete RCR online modules through the Collaborative Institutional Training Initiative (CITI).	Online training sessions typically include questions and answers modules that have to be passed in order to complete the training.	Online training and attendance at four workshops is a university requirement, and graduate students can't graduate without attending the required # of sessions. Attendance is taken and tracked carefully for federal compliance.
4				
5				

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### Use of Assessment Data

1. How and when will analyzed data be used by program faculty to make changes in pedagogy, curriculum design, and/or assessment practices?

It is the responsibility of the MMI Graduate Oversight committee to conduct routine internal reviews of these assessment procedures. We annually address one of the program learning outcomes each summer semester. We will alternate between the foundational knowledge outcome (1-2) and the responsible conduct training outcome (3) annually.

2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?

Once a year (during the summer semester), the MMI Graduate Oversight committee will be conduct an evaluation of the impact of assessment-informed changes made in previous years. Dr. Teague will provide a report from this meeting to entire faculty during a regular monthly faculty meeting to elicit feedback.

### Additional Questions

1. On what schedule/cycle will program faculty assess each of the program's student learning outcomes? (Please note: It is not recommended to try to assess every outcome every year.)

Student learning outcomes 1-2 are core aspects of the MMI mission for graduate education and it will be evaluated yearly. Student learning outcome 3 will be evaluated every 2 years.

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

The MMI Graduate Oversight committee has routinely solicited feedback and approval from MMI faculty members in development of this plan. The plan is discussed at least annually at an MMI faculty meeting.

**IMPORTANT: Please remember to submit any rubrics or other assessment tools along with this plan.**