Graduate Learning Outcomes for the MCB PhD program.

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<th>LEARNING OUTCOME</th>
<th>MEANS OF ASSESSMENT</th>
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| 1. Entering MCB graduate students will have met the learning outcomes in a relevant undergraduate discipline (Objective-B1). | • BS or BA in a relevant discipline.  
• Minimum admission standards.  
• Assessment of application materials, such as general GRE scores, TOEFL scores for international students and letters of recommendation.  
• Phone or in person interviews by the MCB Admissions Committee and MCB faculty prior to admission. |
| 2. MCB graduates shall produce and defend an original significant contribution to knowledge (Objective A-1a). | • Written thesis and a final oral defense  
• Authorship on at least one original research paper. |
| 3. MCB graduates shall demonstrate mastery of subject material (Objective A-1b). | • Successful completion of MCB core and programmatic coursework with a B grade.  
• Graded mid-term and/or cumulative exams for MCB core courses.  
• A pass/fail oral preliminary and final exam. |
| 4. MCB graduates shall be able to conduct scholarly activities in an ethical manner (Objective A-1c). | • Completion of the Scientific Skills and Ethics (MCB 557) with a P grade.  
• A pass/fail oral preliminary and final exam. |
| 5. MCB graduates shall be able to summarize major central tenets and issues as well as current research problems in their field and other disciplines both orally and in writing for peers and other audiences, including the lay public (Objective B-2a/b). | • Graded mid-term and/or cumulative exams for MCB core courses.  
• A pass/fail oral preliminary and final exam.  
• Completion of 3 seminars or public presentations documented through the Presentation of Public Lectures Form in the student’s MCB file.  
• Authorship on at least one original research paper. |
| 6. MCB students shall be able to communicate general scientific concepts and ideas to students in a classroom or laboratory setting (Objective B2b) | • Successful completion of 2 terms of instruction as a Graduate Teaching Assistant. |
| 7. MCB graduates will have developed professional attributes appropriate to the field | • Participation in at least one professional society.  
• Oral or poster presentations in at least one local/regional/national meeting.  
• Attendance at least one professional development workshop. |