

Department/Academic Unit: Biology

Degree Program: MSc

Degree Level Expectations, Learning Outcomes, Indicators of Achievement and the Program Requirements that Support the Learning Outcomes

Expectations (general descriptors from OCAV)	Learning Outcomes (program specific)** This degree is awarded to students who demonstrate...	Indicators of Achievement As evidenced by...	Relevant Courses and academic requirements (requirements that contribute to the achievement of learning outcomes and degree expectations)
Depth and breadth of knowledge	Good working knowledge of a major field of biology at a level that indicates awareness of both theoretical and empirical backgrounds in this sub-discipline.	Successful completion of required courses. Successful completion of thesis requirements. Attendance at departmental and discipline seminars.	Four one-term graduate level courses. Thesis proposal. Thesis, which must be defended orally. Field and lab safety training as needed. Attendance at departmental and discipline seminars

<p>Research and scholarship</p>	<p>Research project usually conceived and directed by thesis supervisor with opportunity for student input and innovation.</p> <p>Data collection and analysis.</p> <p>Writing thesis and papers for publication in scientific journals.</p> <p>A conceptual understanding and methodological competence that enables:</p> <p>Comprehension and application of how established techniques of research and inquiry are used to create and interpret knowledge in the field of research;</p> <p>Critical evaluation of current research and scholarship in the field; and treatment of complex issues and judgements based on established principles and techniques;</p> <p>And, on the basis of that competence, able to develop and support a sustained argument in written form;</p>	<p>Successful completion of thesis requirements.</p> <p>Research proposal and annual supervisory committee meetings.</p> <p>Annual meeting with supervisor to review progress.</p>	<p>Completion of four graduate courses as approved by supervisory committee</p> <p>Thesis proposal.</p> <p>Thesis, which must be orally defended.</p>
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Application of Knowledge	Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.	Successful completion of thesis requirements, which includes an appreciation of the relevant of literature.	Thesis proposal. Thesis, which must be orally defended.
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<p>Professional capacity/autonomy</p>	<p>Ability to plan and conduct research in biology under supervision.</p> <p>Awareness of literature and approaches to biological research</p> <p>The qualities and transferable skills necessary for employment training.</p> <p>The exercise of initiative, responsibility, and accountability.</p> <p>Decision-making in complex situations.</p> <p>The intellectual independence required for continuing professional development.</p> <p>The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research.</p> <p>The ability to appreciate the broader implications of applying knowledge to particular contexts</p>	<p>Completion of research project, completion of thesis</p> <p>Successful completion of training activities during Orientation Week.</p> <p>Submission of applications for internal and external funding and scholarships/fellowships.</p> <p>Participation in teaching, supervision, and mentorship experiences.</p> <p>Development of academic/professional networks (e.g., attending conferences; serving on unit, university-wide, and external committees; engaging in collaborative research when appropriate).</p>	<p>Four, one-term graduate level courses.</p> <p>Thesis proposal.</p> <p>Thesis, which must be orally defended.</p> <p>Attendance at departmental and discipline seminars.</p> <p>Students who meet criteria must apply for external funding</p> <p>TA work, as required.</p> <p>Mentorship and supervisory experiences.</p> <p>RA work/lab experience.</p> <p>Conference and other public presentations.</p> <p>Service on unit, university-wide, and external committees</p>
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<p>Communication Skills</p>	<p>Writing scientific papers; presentation of research seminar</p> <p>The ability to:</p> <p>Clearly communicate ideas, issues, and conclusions in written and oral work to diverse audiences;</p> <p>Read and listen carefully and critically</p>	<p>Successful completion of required courses.</p> <p>Successful completion of thesis Requirements.</p> <p>Attendance at departmental and discipline seminars</p>	<p>Four one-term graduate level courses.</p> <p>Thesis proposal.</p> <p>Thesis, which must be orally defended.</p> <p>Attendance at departmental and discipline seminars</p>
<p>Awareness of limits of knowledge</p>	<p>Appreciation of different approaches to problem solving in biology (experiment, observation, comparative methods, mathematical modeling, dialectic)</p> <p>Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.</p> <p>An appreciation of the limitations of one's own work and discipline.</p>	<p>Successful completion of thesis requirements, which includes an appreciation of the relevant literature, an oral defense before an interdisciplinary committee.</p> <p>Attendance at departmental and discipline seminars.</p>	<p>Thesis, which must be orally defended.</p> <p>Attendance at departmental and discipline seminars.</p>