

Degree Level Expectations - Physics, Engineering Physics and Astronomy (M.Sc.)

Graduates of the MSc will be able to: apply advanced knowledge and skills of physics to develop models, theories, technologies or devices as, or complete experimental measurements that provide answers to, solutions to problems of a physical science nature, and complete an independent research project within one of the fields of specialization.

DLE	Learning Outcomes	Relevant Courses, Academic Requirements	Indicators of Achievement
Depth & breadth of knowledge	Apply knowledge of physics and the quantitative and critical skills of a physicist to find, identify, assess, investigate, interpret and solve complex, open-ended problems of a physical science nature.	<p>Four one-term courses or equivalent as deemed appropriate to the research topic.</p> <p>Submission of annual progress report independently by student and research supervisor.</p> <p>Thesis which must be defended orally.</p>	Successful completion of the M.Sc. thesis.
Research & Scholarship	Formulate testable scientific hypotheses, indicating the awareness of the current problems and situated within the body of knowledge of a field of physics or applied physics.	<p>Thesis</p> <p>Submission of annual progress report</p>	Successful completion and defense of thesis.
Level of application of knowledge	Develop and undertake a research implementation plan,	Thesis which includes a literature review.	Successful completion of the thesis.

	<p>using the appropriate literature and possibly laboratory and/or computational techniques.</p> <p>Demonstrate the ability to place their scholarship into the broader knowledge of their field, including the historical context as appropriate.</p>		
Level of communication skills	Communicate effectively orally and in writing to both a technical and non-technical audience.	<p>Annual progress reports.</p> <p>Oral defense of thesis.</p> <p>Normally includes a Teaching Assistantship.</p> <p>Opportunities for presentations within research group/ department / wide scientific community.</p>	<p>Successful completion of all requirements for the MSc.</p> <p>May include a presentation of research in a public forum and/or at conference (s).</p> <p>May include publication of research.</p>
Awareness of limits of knowledge	Demonstrate professional awareness of the complexity and limitations of knowledge, methods, data and interpretations.	<p>Oral defense of thesis.</p> <p>Opportunity to discuss limitations of results, errors in research design/ measurement / interpretation, societal context.</p>	Successful completion of thesis which includes a review of the literature, and oral defense before interdisciplinary panel.