

Catalog of Postgraduate Programs and Curricula

Curriculum for MPhil(PHYS) (For students admitted in 2010-11)

Program Requirements for Master of Philosophy (MPhil) Program in Physics

Credits

1. To complete **at least 12 credits** of approved physics PG courses.
2. Two courses must be selected from:

PHYS 520	<i>Electro and Magneto Statics</i> ; or
PHYS 521	<i>Electromagnetic Waves, Maxwell Equations, and Relativity</i>
PHYS 525	<i>Quantum Mechanics I</i> ; or
PHYS 526	<i>Quantum Mechanics II</i>
PHYS 531	<i>Statistical Mechanics I</i>
3. A student with a first degree in an area other than Physics may be required to take additional courses.

Postgraduate Seminar

To register in PHYS 600 *Physics Seminar* for 2 semesters, and PHYS 601 *Survey of Departmental Research* in the first Fall semester of studies.

Research and MPhil Thesis Examination

1. To conduct research and enroll in PHYS 699 *MPhil Thesis Research*; and
2. To defend the MPhil thesis successfully.

Concentration

In addition to the existing program requirements, students who opt for the **Scientific Computation concentration** are required to:

- Complete MATH 6915 (1-credit), which cannot be counted toward the credit requirements;
- Complete one computation related course from the list below as a part of the 12 credits of required coursework:

MATH 5311	<i>Advanced Numerical Methods I</i>
MATH 5312	<i>Advanced Numerical Methods II</i>
MATH 5350	<i>Computational Fluid Dynamics for Inviscid Flows</i>
MATH 5360	<i>Weather, Climate and Pollution</i>
CHEM 5210	<i>Computational Chemistry</i>
PHYS 5410	<i>Numerical Modeling in Physics</i>
- Conduct research in the area of scientific computation; and
- Give a one-hour seminar on the related research within their first four regular terms of study.