

Catalog of Postgraduate Programs and Curricula

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

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

Credits

1. To complete a total of **12 credits** of approved coursework.
2. Students with a first degree in an area other than that of their postgraduate program may be required to take additional courses.

Postgraduate Seminar

1. To take CHEM 600 *Chemistry Seminar* in all but one semester of full-time enrollment; and
2. To present in 1 seminar related to the thesis topic during the program.

Research and MPhil Thesis Examination

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

Concentration

1. In addition to the existing program requirements, students who opt for the **Nano Science and Technology concentration** are required to:
 - Take at least one NANO course as a part of the 12 credits of required coursework;
 - Complete NANO 601 *Advanced Topics in Nano Science and Technology* once; and
 - Conduct research in nano area.
2. In addition to the existing program requirements, students who opt for the **Molecular Medicine concentration** are required to:
 - Take BISC 666 *Molecular Medicine* and at least one course from the following course list as a part of the 12 credits of required coursework; and

BISC	338	<i>Pharmacology and Toxicology</i>
BISC	376	<i>Biochemistry of Diseases</i>
BISC	526	<i>Biochemical and Molecular Basis of Diseases</i>
CHEM	516	<i>Medicinal Chemistry</i>
 - Conduct research in the area of molecular medicine.
3. 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.