PHYSICS, ENGINEERING PHYSICS AND ASTRONOMY - DOCTOR OF PHILOSOPHY

The Departmental requirements for the Physics doctoral program are usually a minimum of six term-length graduate courses beyond the bachelor's degree level, plus research and thesis. Only two of these six graduate level courses can be jointly offered (double-numbered) with an undergraduate course. The required courses must also include two of the following three term-length courses or their equivalent:

1. PHYS 831 Electromagnetic Theory or PHYS 832 Classical Electrodynamics or an approved substitute from the Department of Electrical and Computer Engineering or the Royal Military College,
2. PHYS 825 Advanced Quantum Theory, or
3. PHYS 870 Statistical Mechanics.

In exceptional cases, subject to the approval of the Department of Physics, Engineering Physics & Astronomy, proficiency in Quantum Mechanics at the level of PHYS 345 will be accepted in lieu of PHYS 825. The requirement of PHYS 825 for PhD level students would thus be waived but the total course work requirement of the PhD is not reduced.

Up to four term-length courses may be taken from a department other than Physics, Engineering Physics and Astronomy, subject to the approval of the Department of Physics, Engineering Physics & Astronomy.

An Engineering Physics doctoral student will be required to take a minimum of four term-length graduate courses (or equivalent) beyond the Master's degree course requirement. Only 1 course may be a combined undergraduate/graduate course (also known as a double numbered 400/800 course).

For Engineering Physics students who received a Master’s from this department in the same area of study, the minimum course requirements shall be decided in consultation with the PhD Advisory Committee (or equivalent) and approved by the Department Head or Graduate Coordinator.

A comprehensive requirement must be satisfied by passing of a candidacy examination normally held during the fourth term of full-time registration. In addition, all students will be required to participate in the course on Science Leadership and Management (PHYS 904).