



Graduate Studies Committee

Report to Academic Council
at its meeting of October 21, 2008

For Action

a) Doctor of Philosophy (PhD) in Electrical and Computer Engineering (Faculty of Engineering and Applied Science)

The Graduate Studies Committee recommends:

That Academic Council recommend to the Board of Governors the proposed Doctor of Philosophy (PhD) in Electrical and Computer Engineering, Faculty of Engineering and Applied Science, as set out in Appendix A.

Rationale:

The Faculty of Engineering and Applied Science has proposed a new doctoral program in Electrical Engineering to cap off the University's offerings in the area of Electrical and Computer Engineering. The program aims to provide graduate students with the highest level of knowledge and scholarship in preparation for careers in research in industry, government and academia. The program comprises four fields: Communications and Signal Processing, Software Systems, Control Systems, and Power and Energy Systems. Building on the highly successful bachelor and masters engineering programs, this program will further our mandate to provide forward-looking and innovative programming that is responsive to the needs of society.

In addition, the doctoral program will support UOIT's academic priorities by:

- Advancing UOIT's strategic research goals focusing on technology and engineering;
- Helping to meet the growing demand for graduate programs across the province and internationally, and enabling masters students in UOIT's ECE program to continue their studies at the highest level;
- Attracting highly-qualified faculty and graduate students to teach in our engineering programs;
- Enabling senior faculty members, those who are already leading vigorous research programs and supervising PhD students, to relocate at the university with minimal interruption to their research efforts,
- Facilitating access to grant funding that will enable faculty to carry out significant research programs and provide financial support to graduate students.

The proposal is attached as Appendix A.

b) Doctor of Philosophy (PhD) in Nuclear Engineering (Faculty of Energy Systems and Nuclear Science)

The Graduate Studies Committee recommends:

That Academic Council recommend to the Board of Governors the proposed Doctor of Philosophy (PhD) in Nuclear Engineering, Faculty of Energy Systems and Nuclear Science, as set out in Appendix A.

The Faculty of Energy Systems and Nuclear Science has proposed the establishment of a Doctor of Philosophy in Nuclear Engineering, an area that is undergoing a renaissance across the province and internationally. The program comprises two fields of strength in Nuclear Power and Energy Applications, and Radiological and Health Physics, and is unique in offering a wide range of integrated specialties with a focus on application to energy, health care, education, and public safety

In addition, the doctoral program has the following strengths:

- It helps to meet the increasing demand for graduate enrollment, particularly in the Greater Toronto Area and the Durham Region.
- It serves to advance the national agenda in the area of research, development and innovation in the area of nuclear energy.
- It provides an academic option for graduates of UOIT's MAsC/MEng undergraduate and masters programs in Nuclear Engineering, and will attract applicants from other Canadian and international institutions.
- It draws on an impressive group of well qualified faculty members, many of whom have strong industrial backgrounds, and who are conducting research in a number of areas of potential interest to doctoral candidates. UOIT also holds the candidature for an NSERC-UNENE Industrial Research Chair in Health Physics and Environmental Safety, which assures access to industrial, academic, and government partners involved in radiological health
- It provides graduate students with access to state of the art facilities that will enable them to conduct research that is timely, relevant and responsive to the province needs. In addition, plans to expand and develop additional leading-edge facilities will provide graduate students with access to the most advanced and current technologies.

The proposal is attached as Appendix B.