



TO: Committee on Academic Policy and Programs

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AGENDA ITEM: 9

**ITEM IDENTIFICATION: Faculty of Applied Science and Engineering, Concentration in Clinical Engineering within the existing PhD in Biomedical Engineering**

**JURISDICTIONAL INFORMATION:**

The Committee on Academic Policy and Programs has the authority to approve changes to curriculum within existing degree programs that can be accomplished with existing resources.

**PREVIOUS ACTION TAKEN:** none

**HIGHLIGHTS:**

This is a proposal to create a concentration in clinical engineering within the existing IBBME PhD. Clinical engineering has become a unique sub-specialty of biomedical engineering given its specific emphasis on enhancing patient safety, quality of care and quality of life. As evidence of its maturing identity, certification in clinical engineering was introduced in Canada in 2010 by the American College of Clinical Engineers. Increasingly, there is an emerging need for research clinical engineers within hospital research institutes, universities and medical device industry to lead research and innovation. Over a third of IBBME's current clinical engineering students and recent alumni (last 2 graduating classes) have expressed an interest in pursuing a PhD with a clinical engineering concentration. Already 6% of IBBME's MHS c Clinical Engineering class are moving on to the PhD. Likewise, over half of current faculty supervising clinical engineering graduate students have indicated interest in engaging such students in doctoral level research.

Students in the concentration will complete the normal requirements of the PhD with the following changes: graduate students without a clinical engineering background will normally be required to complete an additional specified half course; students in the concentration require joint engineering-health scientist supervision; all students in the concentration must conduct research within a clinical healthcare environment. In addition, this proposal seeks to add an option in the PhD program to allow the transfer of MHS c clinical engineering graduate students into the PhD program and this concentration. The program expects an initial enrolment in the concentration of 3 to 5 students.

This proposal received approval by the Faculty of Applied Science and Engineering Council on March 8, 2011.

**FINANCIAL AND/OR PLANNING IMPLICATIONS:** There are no new/additional financial resources at the University-level required to implement the proposed concentration.

**RECOMMENDATION:**

It is recommended that the Committee on Academic Policy and Planning approve:

THAT the proposed concentration in Clinical Engineering within the Ph.D. Program in Biomedical Engineering be approved, effective July 1, 2011.