



TO: Committee on Academic Policy and Programs

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AGENDA ITEM: 6

**ITEM IDENTIFICATION: Faculty of Applied Science and Engineering, St. George,
Major Calendar Changes, 2011-12**

JURISDICTIONAL INFORMATION:

The Committee has the authority for the approval of changes to curriculum within established degree programs that can be accomplished with existing resources including the addition and deletion of specialist, major and minor programs. More significant changes are recommended to the Academic Board.

PREVIOUS ACTION TAKEN:

HIGHLIGHTS: The Faculty of Applied Science and Engineering is bringing forward two program changes.

Approval:

The Engineering Business Minor was approved by FASE Faculty Council on December 1, 2010. The two Academic certificates were approved by FASE Faculty Council on December 1, 2010.

New certificates and new minors also require approval by the Committee on Academic Policy and Programs.

Summary:

1. The creation of a new Business Engineering Minor [Appendix A]

The Minor is a collaboration between the Faculty of Applied Science and Engineering and the Rotman School of Management. Led by Engineering, this significant initiative bridges students' creativity and innovation in engineering with the skills of managing a technology-based business, and brings an academic authority to the engineering-business connection.

The Faculty anticipates that the Minor, which complements our three other highly popular engineering minors in: (i) Bioengineering, (ii) Sustainable Energy, and (iii) Environmental Engineering, will be in great demand both by engineering students and by the engineering community.

The Minor requires the current Engineering Economics course from the home program, three JRE core courses, and two additional half course equivalents from a list of approved courses (including an appropriate thesis), which is similar to current minors.

The Minor is the outcome of numerous discussions within Engineering and between Engineering and various alumni, business interests and management programs across the University. In particular, it represents two years of discussions with Rotman School of Management involving Kenneth Corts, Director, Rotman Commerce and Associate Dean, Undergraduate Education; Peter Pauly, Vice Dean, Academic and Professor of Economics and Business Economics; and Rebecca Reuber, Professor, Strategic Management.

Discussions were also held with the University of Toronto Mississauga's Gage Averill, former Vice-Principal Academic and Dean; and Hugh Gunz, Chair, UTM Management and Professor of Organizational Behaviour, Rotman School of Management; as well as University of Toronto Scarborough's Michael Krashinsky, Associate Professor, Economics for Management Studies.

Among the alumni consulted were Anthony Lacavera, Chairman and CEO, Globalive Communications Corp.; George Myhal, Senior Managing Partner, Brookfield Asset Management Inc.; Sydney Cooper; Claire Kennedy, Partner, Bennett Jones LLP; Michael Branch, President, Inovex; Tom Woods, Senior Executive Vice-President and Chief Risk Officer, Risk Management, CIBC; Adam Lorant, Vice President and Co-Founder, PolarBlue Systems Inc. and Partner, Magellan Angel Partners; and Arshia Tabrizi, Founder and Managing Partner, Tabrizi Law Office Professional Corporation.

In addition to extensive curricular review by the Faculty's Undergraduate Curriculum Committee and several discussions at Chairs & Directors meetings, the Minor was reviewed by the Executive Committee at its November 8 meeting, and by Faculty Council on December 1, where the proposal and its associated JRE 300- and 400-level courses were approved.

See the attached letter of understanding [**Appendix B**] between the Faculty of Applied Science and Engineering and the Rotman School of Management, confirming the agreement between the Faculties and the support for the new Minor.

2. The creation of two Undergraduate Academic Certificates: one in Engineering Business and the other in Global Engineering

The Faculty of Applied Science and Engineering is bringing forward two Undergraduate Academic Certificates in line with “*Guidelines Governing Undergraduate Academic Certificates in Engineering*” approved by their Faculty Council on May 26, 2010 (Appendix C). These Guidelines formally established the category of “Undergraduate Academic Certificates in Engineering” which was designed to recognize academic work beyond a single course, but less than a minor. Undergraduate Academic Certificates in Engineering are intended to

“require considerable investment typically representing three courses or course equivalents and considerable personal commitment. As a rough guideline, academic certificates represent a work load of about “half of a minor.” Programs of study will consist of some combination of specified or core courses and possible electives. Certificates will be named and recognized in areas that are not normally considered part of a regular Departmental or Engineering Science Major; they should be a specialization that merits and achieves special knowledge or skill.”

These *Guidelines* are, in turn, in line with the University’s Policy on “Diploma and Certificate Programs.”

The Faculty already offers two academic certificates, one in Preventive Engineering and Social Development and another in Entrepreneurship. The two proposed Certificates in Engineering Business and Global Engineering (Appendix D and E) would add to the range of options for students and respond to anticipated demand. The Engineering Business Certificate draws on courses developed for the proposed Business Minor. Students cannot complete both the Business certificate and the Entrepreneurship minor.

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

RECOMMENDATION:

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

The major calendar changes as described in the submission from the Faculty of Applied Science and Engineering, St. George campus, effective for the academic year 2011-2012.