a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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4 March 2013

To: Vancouver Senate

From: Senate Curriculum Committee

RE: March Curriculum Proposals (approval)

The Senate Curriculum Committee has reviewed the material forwarded to it by the Faculties, and encloses those proposals it deems as ready for approval.

As such, the following is recommended to Senate:

Motion: "*That the new courses brought forward by the Faculty of Graduate Studies be approved.*"

Faculty of Graduate Studies:

Applied Science:

New courses:
CIVL 556 (3)
MECH 589 (3)

Respectfully submitted,

Dr. Peter Marshall, Chair

Senate Curriculum Committee

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Category: 1

Faculty: Applied Science **Department:** Civil Engineering **Faculty Approval Date:** November 2012 **Effective Session** 2013 Term 2 **Year for Change** 2013-2014	**Date: [**October 26, 2012] February 27, 2013 **Contact Person:** Ziad Shawwash **Phone:** 604-822-2674 **Cell: 604-649-2390** **Email:** shawwash@mail.ubc.ca
Proposed Calendar Entry: **CIVL 556 (3) Modeling and Optimization of Civil Engineering Systems** Applications of practical simulation and optimization software systems and operations research methodologies in design, analysis and operation of civil engineering systems. *This course is not eligible for Credit/D/Fail grading.* Prerequisites: CIVL 301 and CIVL 555.	**URL:** http://www.calendar.ubc.ca/vancouver/courses.cfm?page=name&code=CIVL **Present Calendar Entry:** None **Type of Action:** Create new course **Rationale:** This new course is currently being offered bi-annually as a Directed Studies lecture course in the Department of Civil Engineering (CIVL 598G 12W). Students will learn key aspects of optimization theory, currently used modeling technologies, strategies and techniques for problem formulation and how to design, validate and implement practical simulation and optimization models that are currently used in real life applications. **X Not available for Cr/D/F grading.** (Check the box if the course is NOT eligible for Cr/D/F grading. Note: Not applicable to graduate-level courses.) ☐ **Pass/Fail or** ☐ **Honours/Pass/Fail grading** (Check one of the above boxes if the course will be graded on a P/F or H/P/F basis. Default grading is percentage.)

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Faculty: Applied Science **Department:** Mechanical Engineering **Faculty Approval Date:** November 2012 **Effective Session (W or S):** W **Effective Academic Year:** 2013	**Date:** October 23, 2012 **Contact Person:** Jon Mikkelsen **Phone:** 2-2709 **Email:** mikk@mech.ubc.ca
Proposed Calendar Entry: **MECH 589 (4) Computer Control of Multi-Axis Machines** **Digital control laws for servo drives; state space and transfer function models of feed drives; tracking errors; trajectory generation of multi-axis machines; contouring analysis of multi-axes servo drives; real time linear and circular interpolation methods supported by laboratory applications.** **Credit will be given for only one of: MECH 467, MECH 589.** ***This course is not eligible for Credit/D/Fail grading.***	**URL:** http://www.calendar.ubc.ca/vancouver/courses.cfm?page=code&code=MECH **Present Calendar Entry:** N/A **Type of Action:** Create new Course **Rationale for Proposed Change:** This new course reflects recent advances in the field and pedagogy. It is intended to replace MECH 590 which currently lacks a laboratory component and does not sufficiently reflect ongoing advances in the field. MECH467 is a core course for students in the mechatronics option who take MECH366. Graduate students, who did not take MECH467, are not exposed to high level digital control course in their undergraduate curriculum. MECH589 provides advanced digital control of motion systems from MECH467 lectures, and the graduate students have to take additional advanced topics in recursive identification and adaptive control methods. [x] **Not available for Cr/D/F grading (undergraduate courses only)** (Check the box if the course is NOT eligible for Cr/D/F grading and provide the rationale for this below. Note: Not applicable to graduate-level courses.)