



OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

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MEMORANDUM

ATTENTION	Senate	DATE	September 12, 2014
FROM	Gordon Myers, Chair Senate Committee on Undergraduate Studies	PAGES	1/1
RE:	Faculty of Applied Sciences (SCUS 14-35)		

A handwritten signature in black ink, appearing to read 'Gordon Myers', located to the right of the 'RE:' field.

For information:

Acting under delegated authority at its meeting of September 11, 2014 SCUS approved the following curriculum revisions effective Summer 2015.

1. School of Mechatronic Systems Engineering

- (i) New Course Proposal: MSE 405W-4, The Business of Engineering II, Entrepreneurship for Engineers and 'W' designation
- (ii) Description and prerequisite changes to MSE 410
- (iii) Removal of W Designation for MSE 411W



OFFICE OF THE DEAN

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MEMORANDUM

ATTENTION Senate Committee on Undergraduate Studies **DATE** August 26, 2014
FROM Ed Park, Associate Dean **PAGES**
RE: Curriculum Changes

The following changes have been approved by the FAS Undergraduate Curriculum Committee and are appended here for approval by SCUS and recommendation to Senate.

- 1.) School of Mechatronic Systems Engineering
 - a) New Course Proposal
 - i. MSE405W
 - b) Course Changes
 - i. MSE 410 – pre-requisite change
 - ii. MSE 411 – removal of ‘W’ designation

Thank you,

Edward Park
Associate Dean

(EP/mt)



COURSE SUBJECT/NUMBER MSE 405W

COURSE TITLE

LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation

MSE 405W The Business of Engineering II, Entrepreneurship for Engineers

AND

SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation

The Business of Engineering II

CAMPUS where course will be taught: Burnaby Surrey Vancouver Great Northern Way Off campus

COURSE DESCRIPTION (FOR CALENDAR). 50-60 WORDS MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL.

(see attached)

REPEAT FOR CREDIT NO YES How many times? 2 Within a term? YES NO

LIBRARY RESOURCES

NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.

Library report status **No new library resources are needed for this course as it will replace MSE 400 and will use the same set of resources.**

RATIONALE FOR INTRODUCTION OF THIS COURSE

MSE 405W is proposed as part of a school initiative to revise and improve the Capstone program. It will replace MSE 400, the current Business of Engineering II course. MSE 405W will include all of MSE 400's current content and learning outcomes, and will include additional writing content so that it complies with SFU's W-criteria. MSE 405W will replace MSE 411W as the Program's upper level W-Course.

SCHEDULING AND ENROLLMENT INFORMATION

Indicate effective **term** and **year** course would first be offered and planned **frequency** of offering thereafter:

Summer 2015

Will this be a required or elective course in the curriculum? Required Elective

What is the probable enrollment when offered? Estimate: 30-40



CREDITS

Indicate number of credits (units): 4

Indicate number of hours for:	Lecture	Seminar	Tutorial	Lab	Other
	3		1		

FACULTY Which of your present CFL faculty have the expertise to offer this course?

Maureen Hindy
Kevin Oldknow

WQB DESIGNATION (attach approval from Curriculum Office)

PREREQUISITE

Does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses?
If so, this should be **noted in the prerequisite.**

MSE 300 or ENSC 311. Students with credit for ENSC 312 may not take this course for further credit.

COREQUISITE

Nil.

STUDENT LEARNING OUTCOMES

Upon satisfactory completion of the course students will be able to:

- Write and speak using business-related vocabulary necessary for effective communication between Engineers and Business professionals
- recognize and employ appropriate business-writing style and conventions
- Identify factors likely to create entrepreneurial opportunities
- Recognize and apply various analytical frameworks such as:
 - Crossing the Chasm
 - Porter's 5 forces
- Generate and describe strategies for achieving sustainable competitive performance by:
 - describing an effective concept summary
 - describing a feasible business model
 - conducting a competitive analysis
 - conducting a SWOT analysis



FEES

Are there any proposed student fees associated with this course other than tuition fees? YES NO



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

OTHER IMPLICATIONS

Articulation agreement reviewed? YES NO Not applicable

Exam required: YES NO

Criminal Record Check required: YES NO

APPROVALS: APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.

1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

Chair, Department/School Date

Chair, Faculty Curriculum Committee Date

2 Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/School/Department commits to providing the required Library funds.

Dean or designate Date

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

Other Faculties' approval indicates that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

_____ Date _____
_____ Date _____

3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):

_____ Date _____

Through the development of a business plan, MSE 405W simulates entrepreneurial activities associated with launching a technology-based start-up company. In a traditional lecture and tutorial format, students are introduced to practical and theoretical business subject-matter in engineering. Students participate in a team project and use collaborative writing strategies to produce a business plan and presentation relating to a technology-based start-up venture. Components of the business plan are submitted in multiple stages including a concept summary, proposal, marketing and operation plans, and executive summary.



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture 3 Seminar _____ Tutorial _____ Lab _____

FROM **MSE 410** **TO** **MSE 410**
Course Subject/Number _____ Course Subject/Number _____
Credits 3 Credits 3

TITLE

(1) LONG title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: **TO:**
Capstone Design Technical Project I Capstone Design Technical Project I

(2) SHORT title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: **TO:**
Capstone Design Technical Project I Capstone Design Technical Project I

DESCRIPTION

FROM:
Students will combine their technical, marketing, and entrepreneurship knowledge to conceive, and design a product. Also includes project documentation and project management. At the end of the term a comprehensive report is required.

DESCRIPTION

TO:
Students will combine their technical and mechatronic design knowledge to conceive, and design a product. A comprehensive report is required at the end of the term.

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite**.

PREREQUISITE

TO: 100 units. Students with credit for ENSC 441 may not take this course for further credit.

FROM: MSE 400 (or ENSC 312) and 100 units. Corequisite: MSE 401W. Students with credit for ENSC 441 may not take MSE 410 for further credit.

LEARNING OUTCOMES

RATIONALE

Because of the Canadian Engineering Accreditation Board requirements, the course will have to have a 100% focus on design. As a result, MSE 401W will no longer be required as a co-requisite. All writing requirements are moved to MSE 405 to meet the upper year "W" requirement. Furthermore, the existing calendar description on prerequisites is also incorrect. The MSE 400 is not a prerequisite for MSE 410, as it is offered in the Summer term after MSE 410 (A fourth year Spring offered course).

Effective term and year



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

Course number Credit Title Description Prerequisite Course deletion Learning Outcomes

Indicate number of hours for: Lecture 3 Seminar _____ Tutorial _____ Lab _____

FROM **TO**
Course Subject/Number MSE 411W Course Subject/Number MSE 411
Credits 3 Credits 3

TITLE

(1) LONG title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: **TO:**
Capstone Design Technical Project II Capstone Design Technical Project II

(2) SHORT title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: **TO:**
Capstone Design Technical Project II Capstone Design Technical Project II

DESCRIPTION

FROM:
Students will apply their technical, marketing and entrepreneurship knowledge to develop a product that was designed earlier in MSE 410. Students will then present and be able to see it to a panel of engineers, business and investment community members.

DESCRIPTION

TO:
Students will apply their technical knowledge to develop a prototype system representing a product that was designed earlier in MSE 410. Students will then present it to a panel of engineers, faculty and student members.

PREREQUISITE

Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite**.

PREREQUISITE

FROM: **TO:**

LEARNING OUTCOMES

RATIONALE

The course focus is on design and technical aspects, and therefore, it has no longer a link with MSE 400. As a result, the business and marketing aspects mentioned in the description are no longer valid. All writing requirements are moved to MSE 400 to meet the upper year "W" requirement.

Effective term and year