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MEMORANDUM

ATTENTION	Senate	**DATE**	January 14, 2025
FROM	Dilson Rassier, Provost and Vice-President Academic, and Chair, SCUP	**PAGES**	1/7
RE:	Program Changes for the Master of Engineering in Sustainable Energy Engineering (SCUP 25-11)		

At its meeting on January 8, 2025, SCUP reviewed the program changes for the Master of Engineering in Sustainable Energy Engineering.

> **Motion:** That Senate approve and recommend to the Board of Governors the program changes for the Master of Engineering in Sustainable Energy Engineering in the School of Sustainable Energy Engineering within the Faculty of Applied Sciences, effective Fall 2025.

C: Vahid Hosseini, Graduate Program Chair, School of Sustainable Energy Engineering

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MEMORANDUM

ATTENTION Senate Committee on University Priorities (SCUP)

DATE December 12, 2024

FROM Mary O'Brien,
Chair of Senate Graduate Studies Committee (SGSC)

RE: Program Changes

For Approval: At its meeting on December 10, 2024, the SGSC approved the following program changes and is recommending it to SCUP for approval, effective **Fall 2025:**

Motion:
That SCUP approve and recommend to Senate the program changes for the Master of Engineering in Sustainable Energy Engineering in the School of Sustainable Energy Engineering within the Faculty of Applied Sciences, effective Fall 2025.

Faculty of Applied Sciences
School of Sustainable Energy Engineering

1) Program Change: Sustainable Energy Engineering MEng

OFFICE OF THE DEAN
Faculty of Applied Sciences
Simon Fraser University

MEMORANDUM

Attention: Dr. Mary O'Brien
Dean, Graduate Studies
Date: Oct. 10, 2024
From: Dr. Parvaneh Saeedi, psaeedi@sfu.ca

Faculty of Applied Science, Graduate Studies Committee

Re: FAS-SEE MEng Program Change

The Faculty of Applied Sciences Graduate Studies Committee would like to propose the replacement of the required course BUS793 with BUS791. This substitution is driven by several key objectives:

- **Increased Flexibility:** Allowing students greater choice in their non-SEE elective courses to better align with their individual interests and preferences.
- **Reduction of Elective Requirements:** Decreasing the minimum number of elective units required for program completion from 8 to 6, resulting in a new total minimum of 31 units for the program.
- **Modified Elective Selection:** Transitioning from a required selection of an elective from a list of approved SEE graduate electives to a requirement for students to take a SEE graduate elective, excluding specific courses.

We kindly request that this change be reflected in the SEE calendar, effective Fall 2025.
Thank you for considering our proposal. We look forward to your support.

Regards,
Parvaneh Saeedi

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MEMORANDUM

ATTENTION	Associate Dean Research and Grad Studies, Faculty of Applied Sciences	**DATE**	August 27th, 2024
FROM	Dr. Vahid Hosseini, Graduate Program Chair, School of Sustainable Energy Engineering	**PAGES**	1
RE:	Changes to SEE MEng Calendar Language		

This memo is to request the replacement of required course BUS793 with required course BUS791. Increase flexibility for student preferences / interests in the non-SEE elective course. Reduce the minimum number of units of elective courses required for program completion from 8 to 6 (new total minimum units for program 31). Replace required selection of an elective from a list of approved SEE graduate electives with a requirement to take a SEE graduate elective with a list of excluded courses.

This is anticipated to appear in the SEE calendar for Fall 2025.

The rationale for these changes is: as the SEE MEng program team is preparing to launch the course, refinements on the program structure are needed to ensure that the required courses and number of units can be met by all the students.

x _____

Vahid Hosseini
SEE Graduate Program Chair

Calendar Entry Change for Sustainable Energy Engineering Master of Engineering

Summary of change:
The request changes to the program are:

1) Replace required course BUS793 with required course BUS791;
2) Increase flexibility for student preferences / interests in the non-SEE elective course;
3) Reduce the minimum number of units of elective courses required for program completion from 8 to 6 (new total minimum units for program 31);
4) Replace required selection of an elective from a list of approved SEE graduate electives with a requirement to take a SEE graduate elective with a list of excluded courses.

Rationale for change:
As the SEE MEng program team is preparing to launch the course, refinements on the program structure are needed to ensure that the required courses and number of units can be met by all the students. The specific rationale for each change is:

1) During the SEE MEng program development, SEE and the Beedie School agreed that that BUS790 and BUS791 would be the preferred pair of courses to meet the business-focused learning outcomes for the SEE MEng (as per Beedie school letter of support, Appendix 10 of the SEE MEng FPP). However, when the full program proposal was submitted, BUS793 was inadvertently included in the calendar entry instead of BUS791. The change proposed here corrects this error.
2) The program requirements state that all students must take one non-SEE elective, selected from either REM650 or REM658. While REM is supportive of SEE students participating in these courses, they cannot guarantee that those courses will be offered with sufficient capacity for all SEE students in a given cohort (as per REM letter of support, Appendix 10 of the SEE MEng FPP). As a result, it is possible that SEE MEng students may be unable to register for either REM650 or REM658 during their four-term program and hence would not meet their program requirements. To avoid this, we propose to change the calendar entry so that each student can choose a relevant graduate elective with approval of the SEE graduate program committee. The MEng program team within the SEE GPC will maintain a list of suitable courses offered in other FAS schools or outside SEE that are pre-approved for the MEng students. The MEng students can alternatively request to take other courses they identify. Review and approval authority will be delegated by GPC for most instances to the MEng program lead: however, the calendar language reflects that the GPC chair has ultimate responsibility for the course approval as part of his/her underlying responsibility for graduate student progression. This increase in flexibility will allow students to pursue a course that is most relevant to their future career goals, while the SEE GPC oversight ensures that the course selected is relevant to the program.
3) The program requirements state that students must complete a minimum of 8 units of elective courses. This was based on one of the electives being one of REM650 or REM658, which are both 5 unit courses. As outlined above (#2), the students need to have greater flexibility to select a relevant graduate course, including those with potentially lower number of units (minimum of 3 units per course). To ensure that a student can take their choice of elective while meeting the program requirements, we

propose to reduce the total number of elective units a student must complete to a minimum of 6. This minimum includes one SEE course (3 units) and one course selected by the student with approval of the GPC chair (3 units or more). With this change the total minimum number of units for a student to graduate from the program is reduced to 31. This is still above the minimum for an SFU Master's degree.

4) The program's intention is for each SEE MEng student to take at least one SEE graduate technical elective. As the SEE graduate program will add several new technical elective courses over the next few years, the explicit list of courses may miss new courses that would be suitable for SEE MEng students. This could cause confusion for students as to which SEE graduate elective courses can be selected to meet the program requirements, or lead to multiple appeals to include courses that are not listed in the calendar description. Instead, the calendar language update lists SEE courses that do not meet the MEng program requirements. This provides better clarity for students and more efficient program administration, reducing the number of appeals and frequency of program calendar language updates. The proposed calendar language is based on the ENSC MEng program requirements (fall 2024 calendar language).

Effective term and year:
Fall 2025

Will this change impact current students? If yes, what is the plan for current students?
No. The first cohort of students will be enrolled in Fall 2025 term. This change is to be implemented before they arrive.

FROM	TO
Program Requirements This program ~~is comprised of a set of mandatory courses (19 units), elective courses (minimum eight units), and a team-based integrated project (six units, taken over two consecutive terms).~~ Students who lack the necessary background knowledge may, at the discretion of the program chair, be asked to complete additional courses to ensure an adequate breadth of knowledge to successfully complete the full program requirements.	Program Requirements This program **consists of course work (25 units) and a Capstone Project (6 units) for a minimum of 31 units.** Students who lack the necessary background knowledge may, at the discretion of the program chair, be asked to complete additional courses to ensure an adequate breadth of knowledge to successfully complete the full program requirements.

Students must complete BUS 790 - Lab to Market (2) ~~BUS 793 - Business Models~~ (2) SEE 770 - Water, Energy and Food Nexus (3) SEE 771 - Sustainable Energy Systems I (4) SEE 772 - Sustainable Energy Systems II (4) SEE 773 - Sustainable Energy Policy (4) ~~and one of~~ ~~SEE 820 - Materials Design for Energy Systems (3)~~ ~~SEE 821 - Membranes and Filtration (3)~~ ~~SEE 850 - Energy Storage Systems (3)~~ ~~SEE 893 - Special Topics I (3)~~ ~~SEE 894 - Special Topics II (3)~~ ~~SEE 895 - Special Topics III (3)~~ ~~and one of~~ ~~REM 650 - Energy Management for a Sustainable Climate and Society (5)~~ ~~REM 658 - Research Methods and Models for Sustainability (5)~~ and a major two-term integrated project SEE 799 - Capstone Project (6)	Students must complete BUS 790 - Lab to Market (2) **BUS 791 - Opportunity Identification and Assessment** (2) SEE 770 - Water, Energy and Food Nexus (3) SEE 771 - Sustainable Energy Systems I (4) SEE 772 - Sustainable Energy Systems II (4) SEE 773 - Sustainable Energy Policy (4) **and an additional three units of SEE graduate coursework (excluding SEE 810, SEE 811)** **and one of** **REM 650 - Energy Management for a Sustainable Climate and Society (5)** **or** **REM 658 - Research Methods and Models for Sustainability (5)** **or another graduate elective course chosen in consultation with the Graduate Program Chair** and a major two-term integrated project SEE 799 - Capstone Project (6)