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MEMORANDUM

ATTENTION	Senate	**DATE**	August 2, 2024
FROM	Peter Hall, Chair Senate Committee on Undergraduate Studies	**PAGES**	1/2
RE:	Course Changes (SCUS 24-69)		

For information:

Acting under delegated authority at its meeting of August 1, 2024 SCUS approved the following curriculum revisions effective Summer 2025.

a. Faculty of Applied Sciences

1. School of Sustainable Energy Engineering

(i) Prerequisite and equivalent statement changes for SEE 221
(ii) Prerequisite and description change for SEE 222
(iii) Prerequisite change for SEE 310

b. Beedie School of Business

(i) Prerequisite changes for BUS 336, 473, and 474
(ii) Prerequisite and description, and equivalent statement change for BUS 489
(iii) Prerequisite change for BUS 401 *(Fall 2025)*

c. Faculty of Communication, Art and Technology

1. School of Interactive Arts and Technology

(i) Temporary Course Withdrawal: IAT 455

d. Faculty of Science

1. Department of Chemistry

   (i) Equivalent statement changes for CHEM 110 and 111

2. Department of Mathematics

   (i) Prerequisite change for MACM 204
   (ii) Prerequisite change for MATH 360 and 468 *(SCUS 24-59e) (Spring 2025)*

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at https://docushare.sfu.ca/dsweb/View/Collection-12682.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT	SEE	**NUMBER**	221	**TITLE**	Statics and Mechanics of Materials

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☒

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

Introduction to solid mechanics including statics, stress, strain, and deformation. Equilibrium conditions, axial loading, torsional loading, pure bending, stresses and deflections in rods and beams. Prerequisite: MSE 103 or PHYS 140, and MATH 152. Students with credit for ENSC 281, ~~MSE 221,~~ or ENSC 385 may not take this course for further credit.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

Following the MSE curriculum review, the statics portion of MSE 221 has been moved to a new course, MSE 103 (Statics and Dynamics), and its title has been changed from "Statics and Strength of Materials" to "Strength of Materials."
Also, due to new equivalency statement between Phys 140 and MSE 103, the latter is added as an acceptable prerequisite for SEE 221.
This change will drop the similarity between the courses' content to below 50%.

COURSE SUBJECT	SEE	NUMBER	222	TITLE	Engineering Materials for Energy Systems

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☒	Equivalent Statement	☐

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

~~Introduction to engineering materials by control of their structures to achieve different properties and performance. Techniques for modern materials engineering practice. Covers crystal and non-crystal structures and instruments for structure determination; principles of material failure, polymers, ceramics, nano-materials, and composites; electronic materials, and electro-chemical energy materials; quality control and reliability.~~

Introduction to engineering materials course designed around the principle of structure, property and performance relationship. Topics will include crystalline solids, diffusion, equilibrium phase diagrams, mechanical properties, principles of material failure; structure and properties of polymers, ceramics, composites, nano-materials and electronic materials.

Prerequisite: ~~PHYS 140~~, CHEM 121 or (CHEM 122 and CHEM 126).

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

The course description is updated to list topics taught in class. PHYS 140 is not required to learn the course material.

COURSE SUBJECT SEE **NUMBER** 310 **TITLE** Integrated Energy Solution II

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

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Prerequisite: Completion of one co-op work term; SEE 111, 251, 224, 242.

EFFECTIVE TERM AND YEAR FOR CHANGES
Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

To ensure students completes SEE 111 before taking upper division SEE courses. Currently SEE 111 is not listed as pre-requisite to any SEE course.

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT	BUS	NUMBER	336	TITLE	Data Analytics and Visualization

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

Investigate data analytics, visualization, and modeling approaches relevant to business decisions. The course will investigate three important pillars of analytics including decision analytics, predictive analytics, and data visualization. Prerequisite: MATH 150, MATH 151, MATH 154, or MATH 157, with a minimum grade of C-; BUS 232, ECON 233, STAT 271, or STAT 270, with a minimum grade of C-; 45 units. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

Adding STAT 271 recognizes and responds to changes in Computing Science program requirements (took effect Fall 2024).

COURSE SUBJECT	BUS	NUMBER	473	TITLE	Advanced Operations Management

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

The systems approach to management of operations including the design, implementation, control and improvement of processes in order to grow social, environmental, and economic value for stakeholders involved in bringing goods and services to market. Prerequisite: Students admitted prior to Fall ~~2022~~ 2023 with (BUS 373 or BUS 336) and BUS 360W, or students admitted Fall ~~2022~~ 2023 onward with BUS 373 and BUS 360W; both with a minimum grade of C-; 60 units.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

BUS 373 was introduced as a program requirement for students admitted to the BBA program in Fall 2023 onward. Students admitted to the program prior to Fall 2022 are required to complete BUS 336 as part of their program requirements rather than BUS 373. BUS 336 is a concentration requirement for Operations Management.

Allowing students to access BUS 373 or BUS 336 from Fall 2023 will provide greater access to students transitioning the change in program requirements.

COURSE SUBJECT BUS **NUMBER** 474 **TITLE** Supply Chain Management

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

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Exploration of the entire network of companies that work to design, produce, distribute, service and recycle their goods and services to customers. Efficient flow of information, material and finances along the entire chain allows firms to collaborate in a manner that benefits both corporations and customers. Analysis of the broader supply chain enables improvements in procurement, customer response time, risk sharing, on-time delivery, inventory levels, and transportation and global logistics. Prerequisite: Students admitted prior to Fall ~~2022~~ 2023 with (BUS 373 or BUS 336) and BUS 360W, or students admitted Fall ~~2022~~ 2023 onward with BUS 373 and BUS 360W; both with a minimum grade of C-; 60 units. Students who have taken BUS 490-495 under this topic may not take this course for further credit.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

BUS 373 was introduced as a program requirement for students admitted to the BBA program in Fall 2023 onward. Students admitted to the program prior to Fall 2022 are required to complete BUS 336 as part of their program requirements rather than BUS 373. BUS 336 is a concentration requirement for Operations Management.

Allowing students to access BUS 373 or BUS 336 from Fall 2023 will provide greater access to students transitioning the change in program requirements.

COURSE SUBJECT	BUS	NUMBER	489	TITLE	Management Practices for Sustainability

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☒	Equivalent Statement	☒

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

~~Businesses are realigning and in some cases, reinventing their organizations toward more sustainable business models. Management systems and initiatives will be examined that enable organizations to reduce their firms' negative environmental and social impacts while, in many cases, increasing profits and competitive advantage.~~

Businesses are realigning and reinventing their organizations to support environmental and social sustainability. This course emphasizes the people and cultural side of management practices for sustainability and will equip students with the knowledge and skills they need to act as change makers and help embed sustainability into an organization's culture, strategy, and operations.
Prerequisite: BUS 360W and (BUS 381 or BUS 374), or Corporate Environmental and Social Sustainability certificate students with ~~(BUS 374 or BUS 381) and~~ an upper division Writing (W) course, all with a minimum grade of C-; 60 units.
~~Students who have taken BUS 457 cannot take this course for further credit.~~

EFFECTIVE TERM AND YEAR FOR CHANGES
Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

Course description updated to better reflect the current course content and to better differentiate it from other sustainability course. In this course, the emphasis is placed on the people and cultural aspects of management for sustainability. Whereas, BUS 275 Business in a Sustainable Society provides and overview of the fundamentals, BUS 475 focuses on sustainable operations, and BUS 453 focuses on innovating for sustainability.

CESS students are not required to complete BUS 374 or 381 as part of the CESS certificate and as such, removal of this pre-req for non-BUS CESS students increases accessibility to the course.

BUS 457 was last offered in 2009 with 9 students (class of 2020). No longer required.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT	BUS	NUMBER	401	TITLE	Developing Organizational Opportunities

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

Organizational opportunities exist in social and commercial contexts at organizational and individual levels. Through intensive experiential learning, students will experience firsthand the challenges involved in the discovery, evaluation and implementation of activating opportunities. Prerequisite: BUS 311 (or BUS 254 and BUS 312), ~~BUS 340,~~ BUS 341, and corequisite BUS 340, all with a minimum grade of C-; 60 units. The course is only open to students in the business minor program.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2025

Changing BUS 340 to corequisite will support timely completion of the Business Minor program.

RATIONALE (must be included)

SIMON FRASER UNIVERSITY

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April 30, 2024

SIAT is temporarily withdrawing IAT 455 as we are instating other new 400-level courses that will likely replace the need for IAT 455's offerings.

Permanent removal of IAT 455 will likely follow at a later date.

Andrew Hawryshkewich
SIAT Undergraduate Curriculum Chair

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT CHEM **NUMBER** 110 **TITLE** Introductory Chemistry

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☐
Title	☐	Description	☐	Equivalent Statement	☒

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, chemical bonding; properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course has the same lecture component as CHEM 111 but no laboratory work. Students who intend to take further laboratory courses in chemistry should take CHEM 111 instead. Prerequisite: Pre-Calculus 12 (or equivalent), MATH 100 (may be taken concurrently), or permission of the Department. No previous training in chemistry is required for this course. Students with a grade of ~~C~~ B or better in Chemistry 12 (or equivalent), or who have credit for CHEM 111, or any university chemistry course may not take this course for further credit. Quantitative/Breadth-Science.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

To align with the new minimum Chemistry 12 prerequisite grade for CHEM 120 and CHEM 121.

COURSE SUBJECT	CHEM	NUMBER	111	TITLE	Introductory Chemistry and Laboratory

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☐
Title	☐	Description	☐	Equivalent Statement	☒

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General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, chemical bonding; properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course includes a laboratory component. Prerequisite: Pre-Calculus 12 (or equivalent), MATH 100 (may be taken concurrently), or permission of the Department. No previous training in chemistry is required for this course. Students with a grade of ~~C~~ B or better in Chemistry 12 (or equivalent), or who have credit for CHEM 110, or any university chemistry course may not take this course for further credit. Quantitative/Breadth-Science.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer 2025

RATIONALE (must be included)

To align with the new minimum Chemistry 12 prerequisite grade for CHEM 120 and CHEM 121.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT MACM **NUMBER** 204 **TITLE** Computing with Calculus

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

One of CMPT 102, 120, 126, 128 or 130 ~~and MATH 251~~ and one of MATH 152, 155, or 158.. ~~MATH 251 can be taken as a corequisite~~. Students in excess of 80 units may not take MACM 204 for further credit.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Summer2025

RATIONALE (must be included)

MATH 152/155/158 is a sufficient prerequisite for the Calculus requirement for MACM 204; the topics in MATH 251 that are covered in MACM 204, namely 3D plotting, partial derivatives, critical points, and tangent planes for functions of two variables, are all covered from scratch in MACM 204, and are also covered from a visual perspective.

The change will allow students to take MACM 204 earlier in their program which is desirable.

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

COURSE SUBJECT	MATH	NUMBER	360	TITLE	Introduction to Biomathematics

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

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Prerequisite: MATH 260 with a minimum grade of C- ~~OR~~ or (MATH 155 with a minimum grade of A- and BISC 204 with a minimum grade of C-). Corequisite: BISC 204 may be taken as a co-requisite. Strongly Recommended: Experience with a computing platform such as R, MATLAB, or Python.

EFFECTIVE TERM AND YEAR FOR CHANGES
Fall, Spring, Summer and year (please enter in textbox)

Spring 2025

RATIONALE (must be included)

Addition of BISC 204 provides greater familiarity of model contexts to balance lesser mathematical experience of MATH 155 (compared to MATH 260).

COURSE SUBJECT MATH **NUMBER** 468 **TITLE** TOPICS IN BIOMATHEMATICS

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	☐	Units	☐	Prerequisite	☒
Title	☐	Description	☐	Equivalent Statement	☐

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Prerequisite: MATH 360 and (MATH 348 or STAT 380), both with a minimum grade of C-. Corequisite: MATH 348 or STAT 380 may be taken as a corequisite. Strongly Recommended: Experience with a computing platform such as R, MATLAB, or Python.

EFFECTIVE TERM AND YEAR FOR CHANGES
Fall, Spring, Summer and year (please enter in textbox)

Spring 2025

RATIONALE (must be included)

Changes to Math department course scheduling makes it likely that MATH 468 will occur in the same term (Spring) as MATH 348 and STAT 380.