SFU OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

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MEMORANDUM ───────────────────────────────────

ATTENTION	Senate	**DATE**	September 15, 2017
FROM	Stephen Spector, Acting Chair	**PAGES**	1/1
	Senate Committee on		
	Undergraduate Studies		
RE:	Faculty of Applied Sciences - Course and Program Changes		

For information:

Acting under delegated authority at its meeting of September 14, 2017 SCUS approved the following curriculum revisions effective Summer 2018.

COURSE CHANGES

a. Faculty of Applied Sciences (SCUS 17-39)

1. School of Mechatronic Systems Engineering

    (i) Prerequisite change to MSE 220, 321
    (ii)Changes to the Internal Transfer requirements

PROGRAM CHANGES

a. Faculty of Applied Sciences (SCUS 17-40)

1. School of Computing Science

    (i) Lower division requirement changes to the Geographic Information Science Honours Program
    (ii) Lower division and continuation requirement changes to the Geographic Information Major Program

MEMORANDUM

ATTENTION	Senate Committee on Undergraduate Studies	**DATE**	August 15, 2017
FROM	Kevin Oldknow, Associate Dean	**PAGES**	1/1
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 Computing Science
   a. Calendar Changes
      - Revision to GIS Honours
         1. Amend error in lower division unit count
      - Revision to GIS Major
         1. Amend error in lower division unit count
         2. Revise program continuation requirement

2.) School of Mechatronic Systems Engineering
   a. Course Pre-requisite Change
      - MSE 220
         1. Removal of PHYS 140
         2. Addition of PHYS 141
      - MSE 321
         1. Removal of PHYS 344

   b. Calendar Change
      - Revision to internal transfer requirements

Thank you,

Kevin Oldknow
Associate Dean
SFU Faculty of Applied Sciences

(KO/ar)

COURSE SUBJECT | MSE | **NUMBER** | 220 | **TITLE** | Engineering 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).

> Materials, their structures, properties and performance; crystal structures and instruments for structure determination; polymers, ceramics, and composites; quality control and reliability. Prerequisite: CHEM 120 or 121; PHYS ~~140~~ 141 or 121. Students with credit for ENSC 231 or ENSC 330 may not take MSE 220 for further credit.

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

Summer 2018

RATIONALE (must be included)

> There is a typo in the description of this course. Phys 140 should be replaced with Phys 141

COURSE SUBJECT	MSE	**NUMBER**	321	**TITLE**	Engineering Thermodynamics and Heat Transfer

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 <u>underline</u>. 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).

Energy transfer as work and heat, the First Law of thermodynamics. Properties and states of simple substances. Control-mass and control-volume analyses. Entropy, the Second Law of thermodynamics. Carnot cycle. Energy conversion systems; internal combustion engines, power plants and refrigeration cycles. Heat transfer by conduction, convection, and radiation. Formulation and solution of steady and transient problems. Cooling of microelectronics, thermal solutions. Prerequisite: MATH 251, PHYS 140, and MSE 223. Students with credit for ENSC 388 ~~or PHYS 344~~ may not take MSE 321 for further credit.

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

Summer 2018

RATIONALE (must be included)

PHYS 344 is not equivalent to MSE 321. The presence of this in the description of this course has created ambiguity among students to assume that this course can be taken instead of MSE 321.

Item 3 – Internal transfer:

Under Internal transfer section in the following link:

https://www.sfu.ca/students/calendar/2017/summer/programs/mechatronic-systems-engineering/major/bachelor-of-applied-science.html

~~Internal Transfer from Another Simon Fraser University Program~~

~~Simon Fraser University students who wish to transfer to mechatronics from another faculty must have a Simon Fraser University cumulative grade point average (CGPA) of at least 2.5 and must have been enrolled in at least 12 Simon Fraser University units in the term prior to requesting the transfer to the School of Mechatronic Systems Engineering.~~

~~Former MSE students wishing to gain re-entry to the MSE program require, at minimum:~~

~~- completion of at least 100 units~~

~~- a term GPA of at least 2.67 (B-) in each of the two preceding terms~~

~~- a minimum CGPA of 2.0~~

~~- registration in at least 12 units in the term prior to admission~~

~~- no more than 5 repeat~~

Simon Fraser University students who wish to transfer to Mechatronic Systems Engineering must meet the following requirements.

Internal Transfer from another Simon Fraser University Program

1. a CGPA of at least 2.67 (B-)

2. registration in at least 12 credits units in the term prior to admission

3. no more than 5 repeats

4. meeting high school admission requirements (Math 12, Physics 12, and English 12)

Former MSE students wishing to gain re-entry to the MSE program require, at minimum

1. completion of at least 100 units

2. a term GPA of at least 2.67 (B-) in each of the two preceding terms

3. a minimum CGPA of 2.0

4. registration in at least 12 units in the term prior to admission, six of which must be from the Faculty of Science or the Faculty of Applied Sciences

Revision to Geographic Information Science Honours

John Edgar

March 2017

Description and Rationale
Amend error in lower division unit count.

Program Requirements
Lower Division Requirements

Students must complete all of the following:

CMPT 225 - Data Structures and Programming (3)
CMPT 276 - Introduction to Software Engineering (3)
CMPT 295 - Introduction to Computer Systems (3)
GEOG 100 - Our World: Introducing Human Geography (3)
GEOG 111 - Earth Systems (3)
GEOG 253 - Introduction to Remote Sensing (3)
GEOG 255 - Geographical Information Science I (3)
MACM 101 - Discrete Mathematics I (3)
MACM 201 - Discrete Mathematics II (3)

and either all of
CMPT 120 - Introduction to Computing Science and Programming I (3)
CMPT 125 - Introduction to Computing Science and Programming II (3)
CMPT 127 - Computing Laboratory (3)

or both of
CMPT 130 - Introduction to Computer Programming I (3)
CMPT 135 - Introduction to Computer Programming II (3)

and one of
GEOG 213 - Introduction to Geomorphology (3)
GEOG 214 - Weather and Climate (3)
GEOG 215 - Biogeography (3)

and one of
GEOG 221 - Economic Geography (3)
GEOG 241 - Social Geography (3)
GEOG 261 - Introduction to Urban Geography (3)

and one of
GEOG 251 - Quantitative Geography (3)
STAT 270 - Introduction to Probability and Statistics (3)

and one of
MATH 150 - Calculus I with Review (4)
MATH 151 - Calculus I (3)
MATH 154 - Calculus I for the Biological Sciences (3) †
MATH 157 - Calculus I for the Social Sciences (3) †

and one of
MATH 152 - Calculus II (3)
MATH 155 - Calculus II for the Biological Sciences (3) †
MATH 158 - Calculus II for the Social Sciences (3) †

and one of
MATH 232 - Applied Linear Algebra (3)
MATH 240 - Algebra I: Linear Algebra (3)

† with a grade of B+ or better and permission of the School of Computing Science

Revision to Geographic Information Science Major

John Edgar

March 2017

Description and Rationale

1 – Amend error in lower division unit count.

2 – Change continuation requirement to make it consistent with other programs in the participating schools.

Admission Requirements

Entry is via direct admission from high school, direct transfer from a recognized post-secondary institution, or internal transfer from within Simon Fraser University. Admission is competitive. A separate admission average for each entry route is established each term depending on available spaces and subject to the approval of the dean of applied sciences.

Admission averages and calculations for direct program admission (from high school or post-secondary) are the same as the major program. Internal transfers are assessed on the lower division requirements grade point average (see below). Only Simon Fraser University courses are used in GPA calculation. Grades from all course attempts (including repeats) are used equally to calculate the average.

Apply anytime after at least 18 Simon Fraser University lower division units (100 or 200 division courses) are completed, and all 100 division requirements (completed at either Simon Fraser University or a BC community college) have been satisfied.

~~Students must maintain a 2.5 cumulative grade point average (CGPA) to remain in the program.~~ **Prerequisite Grade Requirement: Computing Science course entry requires a grade of C- or better in each prerequisite course. Computing Science courses available to students who do not maintain at least a 2.40 CGPA may be limited. Each term, these students must consult an advisor prior to enrolment. Geography course entry requires a pass in each prerequisite course.**

Program Requirements

Lower Division Requirements

Students complete all of the following:

CMPT 225 - Data Structures and Programming (3)

GEOG 100 - Our World: Introducing Human Geography (3)

GEOG 111 - Earth Systems (3)

GEOG 253 - Introduction to Remote Sensing (3)

GEOG 255 - Geographical Information Science I (3)

MACM 101 - Discrete Mathematics I (3)

MACM 201 - Discrete Mathematics II (3)

and either all of

CMPT 120 - Introduction to Computing Science and Programming I (3)

CMPT 125 - Introduction to Computing Science and Programming II (3)

CMPT 127 - Computing Laboratory (3)

or both of

CMPT 130 - Introduction to Computer Programming I (3)

CMPT 135 - Introduction to Computer Programming II (3)

and one of

GEOG 213 - Introduction to Geomorphology (3)

GEOG 214 - Weather and Climate (3)

GEOG 215 - Biogeography (3)

GEOG 221 - Economic Geography (3)

GEOG 241 - Social Geography (3)

GEOG 261 - Introduction to Urban Geography (3)

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GEOG 251 - Quantitative Geography (3)

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MATH 157 - Calculus I for the Social Sciences (3) †

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MATH 155 - Calculus II for the Biological Sciences (3) †

MATH 158 - Calculus II for the Social Sciences (3) †

and one of
MATH 232 - Applied Linear Algebra (3)
MATH 240 - Algebra I: Linear Algebra (3)

† with a grade of B+ or better and permission of the School of Computing Science