## MEMORANDUM

| attention | Senate | date | September 11, 2015 |
| :--- | :--- | :--- | :--- |
| from | Gordon Myers, Chair | Pages | $1 / 2$ |
|  | Senate Committee on |  |  |
| Re: | Undergraduate Studies |  |  |
|  | Faculty of Science (SCUS 15-31) |  |  |

## For information:

Acting under delegated authority at its meeting of September 10, 2015 SCUS approved the following curriculum revision effective Summer 2016.

## 1. Department of Mathematics (SCUS 15-31g)

(i) Upper and lower division requirement changes to the Mathematics and Computing Science Joint Major program

## ATTENTION Dr. Carl Lowenberger

Department of Mathematics

## MICHAEL MONAGAN

Chair, Undergraduate Studies Committee
mailing address
Simon Fraser University 8888 University Drive Burnaby, BC V5A 1S6
Canada
CONTACT INFO
Voice: 778.782.4279
Fax: 778.782.4947
Email: mmonagan@cecm.sfu.ca

## Faculty of Science Undergraduate Curriculum Committee

FROM Michael Monagan, Chair, Undergraduate Studies Committee

## RE Calendar Changes

DATE June 26, 2015

Please find enclosed the following documents relating to undergraduate curriculum changes approved by Mathematics to be considered at the next Faculty of Science Undergraduate Curriculum Committee meeting.

## Program Changes

## Motion 1:

To make changes to the Mathematics and Computing Science Joint Major Program. (Please see attached rationale and supporting documents).

Contact: Ms. Dale Yamaura, Manager, Academic and
Administrative Services
Voice: 2-3799; Email: math_manager@sfu.ca

## From: "Edward Park" <ed park@sfu.ca>

To: clowenbe@sfu.ca
Cc: mmonagan@cecm.sfu.ca, mtrautma@sfu.ca, "John Edgar" <john edgar@sfu.ca> Sent: Friday, 22 May, 2015 13:27:51
Subject: Proposed changes to CMPT/MATH joint major program for SCUS
Hi Carl,
I just wanted to send you a quick memo that the proposed changes to the CMPT/MATH joint major program (to be presented to SCUS by you) has been approved at our FAS UCC in May.

You are welcome to take the changes on to the June SCUS meeting.
Best regards,

## Ed

Dr. Edward J. Park, PhD, PEng
Professor of School of Mechatronic Systems Engineering,
Associate Dean of Faculty of Applied Sciences,
Associate Member of Faculty of Health Sciences, Director of Biomechatronic Systems Laboratory,
Simon Fraser University
Tel: 778-782-8662
Fax: 778-782-7514
Email: ed_park@sfu.ca
Web: www.sfu.ca/mechatronics/people/faculty/edward park.html

## Motion 1 Rationale:

There are 6 routine changes.

1 Prerequisite Grade Requirement - Deletion of the statement "Students will not normally be permitted to enroll in any course for which a D grade or lower was obtained in any prerequisite". Because it is redundant (see previous paragraph) and because it sends the wrong message.

2 Lower Division Requirements -
Deletion of CMPT 150 and addition of CMPT 295.
CMPT 150 Introduction to Computer Design (3) is no longer offered.
It is replaced with CMPT 295 Introduction to Computer Systems (3).

3 Lower Division Requirements -
Deletion of the CMPT 275 software engineering option.
CMPT 275 Software Engineering (4) is no longer offered.
CMPT 276 Introduction to Software Engineering (3),
originally introduced at Surrey, is now offered at Burnaby.

## 4 Lower Division Requirements -

Changes to the mathematical software requirement MACM 203, MACM 204, MATH 294.
MACM 294 Computational Studies in Mathematics (2) is deleted because it has never been offered. The allowable substitutions are changed to require a 400 level course substitution for each of MACM 203 and 204.

These changes are the same changes made already to the Mathematics
major and Applied Mathematics major.

5 Upper Division Requirements
The textual changes make it clear that the total number of required upper division credits is 45 .

6 Faculty of Science Major Requirements.
The entire section is deleted because
The first bullet "additional upper ..." is redundant
(the program stipulates 45 upper division credits) and
the second bullet "students who ..." is no longer needed.

# Mathematics and Computing Science Joint Major Prerequisite Grade Requirement 

$\qquad$
Students will not normally be permitted to enrol in any course for which a D grade or lower was obtained in any prerequisite. ....

## Lower Division Requirements

$\qquad$

CMPT 150-Introduction to Computer Design (3)
CMPT 295 - Introduction to Computer Systems (3)
and either

GMPT 275 -Software Engineering I (4)
Өf
CMPT 276 - Introduction to Software Engineering (3)
or wo both of

MACM 203 - Computing with Linear Algebra (2) + MACM 204 - Computing with Calculus (2) + AAATH 294 - Computational Studies in Mathematies (2)
or with prior approval, one of $\wedge$

AAACM 401-Introduction to Computer Algebra (3)
AAACM 409-Numerical Linear Algebra: Algorithms, Implementation and Applications (3)
AAATH 439-Selected Topics in Algebra (3)
$\Delta$ cannot be used to satisfy other upper division requirements
$\qquad$

+ The following substitutions are also permitted.

They may not also be used to satisfy the upper division requirements below.

MACM 409 - Numerical Linear Algebra: Algorithms, Implementation and Applications (3) for MACM 203.

MACM 401 - Introduction to Computer Algebra (3) for MACM 204.

MACM 442 - Cryptography (3) for MACM 204.

## Upper Division Requirements

Students complete at least $15 \underline{45}$ units, including all of
and Additional additional work is required to total 21 upper division MATH and 24 upper division CMPT units including core requirements. .......

## Facully of Science Major Requirements

In addition to the above requirements, students must also satisfy Faculty of Science major program requirements to complete a total of 120 units including

- additional upper division units to total a minimum of 44 upper division units foxcluding EDUC 401 to -406)
- students who were-enrolled at Simon Fraser University between fall 1991 and summer 2006 are required to complete a minimum of 12 units in subjects outside the Faculty of Science (oxcluding EDUC 401 to 406) including six units minimum to be completed in the Faculty of Arts and Social Sciences

