<u>COMMITTEE ON UNDERGRADUATE STUDIES</u>

Paper for: Information

Title: **Minor Changes to Courses and Programs**

Purpose: Departments/Schools reported for information of CUS the minor changes to courses and programs that are effective from Spring 2020-21 and beyond

Prepared by: CUS Secretariat

<u>BACKGROUND</u>

1.   Departments have submitted proposals for minor changes to courses and programs, which have been endorsed by the respective School Boards, to take effect from Spring 2020-21 and beyond.

2.   Summaries of the proposed minor changes to courses and programs are presented in <u>Appendices 1 and 2</u> respectively. These changes will be incorporated and published in the *Program and Course Catalog* as appropriate.

3.   Additional information on these changes shown on the forms of *Undergraduate Course Change/ Deletion* and *Changes to the Existing Undergraduate Program* will be available upon request.

<u>ACTION SOUGHT</u>

4.   CUS is invited to note for information the minor changes to courses and programs, to take effect from Spring 2020-21 and beyond, as presented in <u>Appendices 1 to 2.</u>

Minor Course Changes to Take Effect in Spring 2020-21 and Beyond

School of Science

Code	From:	To:

LIFS 1903[1]

Catalog description: This is a practical course accompanied by the lecture course LIFS 1901. It provides students with some basic concepts and some hands-on experience in biological investigation within the areas covered by LIFS 1901. The emphasis is on the understanding and application of the scientific principles underlying the experimental designs and procedures. Graded P or F.

To: This is a practical course accompanied by the lecture course LIFS 1901. It provides students with some basic concepts and some hands-on experience in biological investigation within the areas covered by LIFS 1901. The emphasis is on the understanding and application of the scientific principles underlying the experimental designs and procedures. Graded P or F. For students in their first, second year of study; or third or fourth year students with instructor's approval.

Enrollment restriction: N/A

To: Students in their third or fourth year of study should seek instructor's approval prior to enrollment in the course.

LIFS 1904[1]

Catalog description: This is a practical course accompanied by the lecture course LIFS 1902. It provides students with some basic concepts and hands-on experience in biological investigation within the areas covered by LIFS 1902, including plant biology, human biology and ecology. The emphasis is on the understanding and application of the scientific principles underlying the experiments. Graded P or F.

To: This is a practical course accompanied by the lecture course LIFS 1902. It provides students with some basic concepts and hands-on experience in biological investigation within the areas covered by LIFS 1902, including plant biology, human biology and ecology. The emphasis is on the understanding and application of the scientific principles underlying the experiments. Graded P or F.For students in their first and second year of study; or third and fourth year students with instructor's approval.

Enrollment restriction: N/A

To: Students in their third or fourth year of study should seek instructor's approval prior to enrollment in the course

SCIE 1120[1]

Exclusion(s): Nil

To: Any 2000-level or above courses in CHEM, LIFS, CENG, BIEN.

School of Engineering

Code	From:	To:

CIVL 4330[2]

Prerequisite(s): CIVL 2110 AND MATH 2011 AND MATH 2111

To: CIVL2120 AND MATH2011 AND MATH 2350

COMP 2611[(1)]

Exclusion(s):	ELEC 2300	ELEC2300 or ELEC2350

COMP 3511[(1)]

Prerequisite(s):	COMP 2611 OR [ELEC 2300 AND (COMP 2011 OR COMP 2012H)]	COMP 2611 OR [(ELEC2300 or ELEC2350) AND (COMP 2011 OR COMP 2012H)]

COMP 4521[(1)]

Prerequisite(s):	(COMP 2611 OR ELEC 2300) AND COMP 3511	[COMP 2611 OR (ELEC2300 or ELEC2350)] AND COMP 3511

COMP 4611[(1)]

Prerequisite(s):	COMP 2611 or ELEC 2300	COMP 2611 or ELEC2300 or ELEC2350

ELEC 1100[(1)]

Catalog description:	The course introduces the fundamental knowledge on the design, implementation and evaluation of a robot and its sub-systems. It covers the basic principles of analog and digital circuits as well as robot sensing and control mechanisms. Students have to apply the knowledge and principles learned to design and build a functional robot by the end of the course. Students who have completed ELEC 2200, ELEC 2400, ELEC 2410, or ELEC 2420, must obtain instructor's approval to take this course.	The course introduces the fundamental knowledge on the design, implementation and evaluation of a robot and its sub-systems. It covers the basic principles of analog and digital circuits as well as robot sensing and control mechanisms. Students have to apply the knowledge and principles learned to design and build a functional robot by the end of the course. Students who have completed ELEC2200, ELEC2350, ELEC2400, ELEC2420 or ELEC3310 must obtain instructor's approval to take this course.

ELEC 2350[(1)]

Exclusion(s):	COMP 2611, ELEC 2300	COMP 2611, ELEC 2300, ISDN 4000F

ELEC 3300[(1)]

Prerequisite(s):	COMP 2611 OR ELEC 2300 OR ELEC 2350	COMP 2611 OR ELEC 2300 OR ELEC 2350 OR ISDN 4000F

ELEC 3310[(1)]

Exclusion(s):	ELEC 2200	ELEC 2200, ISDN 4000D

ELEC 4310[(1)]

Prerequisite(s):	(COMP 2611 AND ELEC 2200) OR ELEC 2300	(COMP 2611 AND (ELEC 2200 OR ELEC3310)) OR ELEC 2300 OR ELEC 2350 OR ISDN 4000F

ELEC 4320[(1)]

Prerequisite(s):	ELEC 2300	ELEC 2300 OR ELEC 2350 OR ISDN 4000F

ELEC 4330[(1)]

Prerequisite(s):	ELEC 2300 OR ELEC 2350	ELEC 2300 OR ELEC 2350 OR ISDN 4000F

ELEC 4410[1]

Prerequisite(s):	ELEC 2200	ELEC 2200 OR ELEC 3310 OR ISDN 4000D

ISDN 2300[2]

Full title:	Digital Design	Introduction to 3D Design
Catalog description:	This course will provide the theoretical principles and real-life examples of a wide variety of digital design technology. The course includes using computer-aided techniques to convert sketches into digital ones. Topics covered will include 3D scanning and digital sculpturing, NURBS, 3D rendering, and Animation and computer aided engineering to check the designs.	This course will provide the theoretical principles and real-life examples of a wide variety of digital design technology. The course includes using computer-aided techniques to convert sketches into digital 3D models, animate static 3D models into computer animation, and finally render the 3D models to become the final product image or video. The course also describes how the 3D models and renderings are being used in Virtual Reality and Augmented Reality. Topics covered will include Photogrammetry, Fundamentals of 3D Modeling, NURBS, Principles of Traditional Animation, Computer Animation, 3D Rendering, Virtual Reality and Augmented Reality. Instructor's approval is required for enrollment in the course.

MECH 1907[1]

Catalog description:	Introduction to the field of Aerospace engineering, discussion of basic aerospace systems and disciplines, working vocabulary of the field. Basic concepts. Demonstration through examples. Wind tunnel visit.	Introduction to the field of Aerospace engineering, discussion of basic aerospace systems and disciplines, working vocabulary of the field. Basic concepts. Demonstration through examples.

MECH 2907[1]

Delivery mode:	This course's aim is to broaden the professional and engineering interests of students by enhancing their practicum/team-based experience through initiatives different from those of traditional lectures and tutorials. This is a project-based course to develop the students' knowledge/experience in designing and building a practical mechatronics system (formerly called Industrial Training). Students will work in teams to identify the needs for their designed prototype. Also, students will be given the opportunity to design and build various mechatronics components including electronic circuits, motors, sensors, etc. from CAD drawings, and practise their engineering knowledge through all laboratory sessions. The main goal is to develop and nurture skills in problem-solving, communication, interpersonal interaction, project and time management, etc. via the entire project.	This course's aim is to broaden the professional and engineering interests of students by enhancing their practicum/team-based experience through initiatives different from those of traditional lectures and tutorials. This is a project-based course to develop the students' knowledge/experience in designing and building a practical mechatronics system (formerly called Industrial Training). Students will work in teams to identify the needs for their designed prototype. Also, students will be given the opportunity to design and build various mechatronics components including electronic circuits, motors, sensors, etc. from CAD drawings, and practise their engineering knowledge through all laboratory sessions. The main goal is to develop and nurture skills in problem-solving, communication, interpersonal interaction, project and time management, etc. via the entire project. [EXP]

School of Business and Management

Code	From:	To:
ISOM 2310[(2)]		
Full title:	Chronicle of Internet Commerce	Fundamentals of E-Commerce: Business, Technology, and the Society
ISOM 2500[(1)]		
Exclusion(s):	CIVL 2160, IEDA 2510, LIFS 3150, MATH 2411, MATH 3423	In Spring 2020-21, CIVL 2160, IEDA 2510, IEDA 2520, IEDA 2540, LIFS 3150, MATH 2411, MATH 3423; Effective from 2021-22 Fall, CIVL 2160, IEDA 2520, IEDA 2540, LIFS 3150, MATH 2411, MATH 3423
RMBI 4980[(2)]		
Prerequisite(s):	Nil	COMP4331 OR ISOM3360

Interdisciplinary Programs Office

Code	From:	To:
ENVR 4010[(1)]		
Catalog description:	Faculty directed independent study of selected topics in Environmental issues. For EVMT students and students with consent from the instructor. Graded P or F.	Faculty directed independent study of selected topics in Environmental issues. For EVMT students and students with consent from the instructor. Graded letter grade or P/F subject to different offerings.

(1) to take effect in Spring 2020-21
(2) to take effect in Fall 2021-22

Minor Program Changes to Take Effect in Spring 2020-21 and Beyond

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School of Science

BSc in Chemistry *(for 2020-21 intake and after)* [2]

- Change(s) to required courses:
  - Add CHEM 2550 and CHEM 2555
  - Remove CHEM 2150, CHEM 2250, CHEM 2350 and CHEM 2450

Program:

BSc in Data Science and Technology *(for 2017-18 intake and after)* [1]

- Change(s) to required courses:
  - (LANG 2010/ LANG 2010H <u>OR</u> LANG 2030/ LANG 2030H) AND (LANG 3021 OR LANG 4030) instead of (LANG 2010 AND LANG 3021) OR (LANG 2030 AND LANG 4030)

Undergraduate Minor Program in Actuarial Mathematics [1]

- Change(s) to elective requirements:
  - Add IEDA 2540 as one of the courses to replace MATH 2411

School of Engineering

BEng in Computer Engineering *(for 2017-18 intake and after)* [1]

- Change(s) to elective requirements under:
  - ➢ *Requirements for COMP/ELEC electives*
    - Area Courses (At least 2 courses should be taken from one single area and at least 2 courses outside that area. Courses taken as Major Required Courses may not be counted towards the elective requirement.)
  - ➢ *Artificial Intelligence / Theory Area*
    - Add COMP 4471, COMP 5223, ELEC 3180, ELEC 3210, ELEC 4230 and ELEC 4240
  - ➢ *Communications Area*
    - Remove ELEC 4630 (sunset course already removed from the 2020-21 course catalog)
  - ➢ *Embedded System / Robotics Area*
    - Add COMP 4511, ELEC 3210 and ELEC 4250
  - ➢ *Graphic / Multimedia Area*
    - Add COMP 4471
  - ➢ *Semiconductor / VLSI Area*
    - Add ELEC 3310
  - ➢ *Signal Processing Area*
    - Remove ELEC 4140 (sunset course already removed from the 2020-21 course catalog)

BEng in Computer Science *(for 2017-18 intake and after)* [1]

- Change(s) to specific elective requirements under:
  - *Artificial Intelligence / Theory Area*
    - Remove COMP 5312 (sunset course approved by CPS in May 2019)
  - *Software / Database Area*
    - Remove COMP 5312 (sunset course approved by CPS in May 2019)

BEng in Mechanical Engineering *(for 2019-20 intake and after)* [1]

- Change(s) to required courses:
  - Add MECH 3710 as an alternative to 'MECH 3300 or MECH 3420 OR MECH 3520'

Undergraduate Minor Program in Design *(for 2018-19 intake and before)* [1]

- Change(s) to required courses:
  - Add ISDN 1100

Undergraduate Minor Program in Design *(for 2019-20 intake and after)* [2]

- Changes to elective requirements:
  - Replace the course code of ISDN 3200 with ISDN 2700

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(1) to take effect in Spring 2020-21
(2) to take effect in Fall 2021-22