## SOC APPROVALS November 15, 2023

The following proposals were approved at the November 15, 2023, meeting of the Subcommittee on Undergraduate Academic Courses (SOC).

# FACULTY OF ENGINEERING

## DEPARTMENT OF CHEMICAL AND BIOCHEMICAL ENGINEERING

Program Revision – Effective September 1, 2023, the following change(s) be made:

#### A. GENERAL CHEMICAL ENGINEERING OPTION

#### Module/Program Information

#### Second Year Program

Numerical and Mathematical Methods 2270A/B, Numerical and Mathematical Methods 2277A/B, CBE 2206A/B, CBE 2207A/B, CBE 2214A/B, CBE 2220A/B, CBE 2221A/B, CBE 2224A/B, CBE 2290A/B, CBE 2291A/B, Statistical Sciences 2143A/B, Writing 2130F/G.

#### Third Year Program

CBE 3307A/B, CBE 3310A/B, CBE 3315A/B, CBE 3316A/B, CBE 3318A/B, CBE 3319A/B, CBE 3322A/B, CBE 3323A/B, CBE 3324A/B, CBE 3395Y, two 0.5 non-

#### **Technical Electives: General Chemical Engineering Option**

CBE 4404A/B, CBE 4407A/B, CBE 4411A/B, CBE 4413A/B, CBE 4416A/B, CBE 4417A/B, CBE 4418A/B, CBE 4420A/B, CBE 4428A/B, CBE 4432A/B, CBE

central issues, methodologies, and thought processes of the humanities and social sciences. An approved list can be found on the Engineering website.

#### Technical Electives: Biochemical Engineering Option

CBE 4405A/B, CBE 4407A/B, CBE 4409A/B, CBE 4411A/B, CBE 4416A/B, CBE 4421A/B, CBE 4422A/B, CBE 4423A/B, CBE 4463A/B, CEE 3362A/B, **CBE** 4484A/B, GPE 4484A/B.

Some technical electives may not be offered in a given academic year.

Special permission from the Department is needed to take courses from Science

3311K, Business Administration 3316K, Business Administration 3321K, Business Administration 3322K, Business Administration 3323K.

#### Fourth Year Program

CBE 3307A/B, CBE 3310A/B, CBE 3315A/B, CBE 3316A/B, CBE 3318A/B, CBE 3319A/B, CBE 3322A/B, CBE 3323A/B, CBE 3324A/B, CBE 3395Y, Statistical Sciences 2143A/B.

Applied Project Requirement: Business Administration 4569.

#### Fifth Year Program

CBE 4497, ELI 4110F/G or the former ES 4498F/G, two 0.5 technical electives\*,

#### 3.0 Business Administration courses:

- x **0.5 course**: International Perspective Requirement: Business Administration 4505A/B.
- x 0.5 course: Corporations and Society Perspective Requirement: At least one 0.5 course from Business Administration - Corporations and Society designated electives offered during the academic year (Business Administration 4538A/B, Business Administration 4539A/B, Business Administration 4588A/B, Business Administration 4625A/B) or other business elective as determined and approved by the HBA Program Director to satisfy this requirement.
- x **0.5 course:** Managerial Accounting Requirement: Business Administration 4624A/B.
- x **1.5 elective courses** chosen from 4000 level Business courses.

\* Students may choose 2 technical electives from the General Chemical Engineering Option Technical Electives list.

#### **Technical Electives: General Chemical Engineering Option**

CBE 4404A/B, CBE 4407A/B, CBE 4409A/B, CBE 4411A/B, CBE 4413A/B, CBE 4416A/B, CBE 4417A/B, CBE 4420A/B, CBE 4421A/B, CBE 4422A/B, CBE 4423A/B, CBE 4432A/B, CBE 4428A/B, CBE 4463A/B, CBE 4485A/B, CBE 4493A/B, CEE 3362A/B, CBE 4405A/B, **CBE 4484A/B**, **GPE 4484A/B**, MME 4429A/B, the former CBE 4418A/B, the former CBE 4424A/B.

Some technical electives may not be offered in a given academic year. Special permission from the Department is needed to take courses from Science Program Revision – Effective September 1, 2023, the following change(s) be made:

G. CHEMICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE SYSTEMS ENGINEERING OPTION

#### Fourth Year Program

CBE 3318A/B, CBE 331A/B, CBE 3395A/B, CBE 3319A/B, AISE 3020A/B, <del>SE</del> 4430A/B, AISE 4010A/B, AISE 4020A/B, **AISE 4430A/B** (or the former SE 4430A/B), AISE 4450A/B (or the former ECE 4450A/B), 0.5 AISE technical elective\*\*, 0.5 nontechnical elective. Fifth Year Program CBE 3310A/B, AISE 4050, ECE 4450A/B, ELI 4110F, 1.0 CBE technical electives, 0.5 AISE technical elective, 1.0 non-

### Course Revision – Effective September 1, 2023, the following change(s) be made:

#### CHEMICAL AND BIOCHEMICAL ENGINEERING 3322A/B HEAT TRANSFER

Introduce chemical engineering students to the basics of heat transfer, including conduction, convection, radiation and phase change. This knowledge will be used for the design of various types of equipment such as heat exchangers with and without phase change agitated reactors, evaporators, condensers.

Prerequisite(s): CBE 2220A/B, CBE 2221A/B, or registration in the Integrated Engineering program. Corequisite(s): CBE 3395Y, or CBE 3396Y,

Course Revision – Effective September 1, 2023, the following change(s) be made:

CHEMICAL AND BIOCHEMICAL ENGINEERING 4432A/B ENERGY AND FUELS PRODUCTION SYSTEMS This course introduces students to various technologies for the production of clean and renewable fuels with emphasis on mitigation of carbon footprint. Pathways for the production of hydrogen and its utilization are discussed. Technologies for biofuels production are presented together with their integration in the existing fuels production()5 ((tb3)23WDrEf

## DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Program Revision – Effective September 1, 2024, the following change(s) be

#### Third Year Program

AISE 3309A/B (or SE 3309A/B if taken prior to 2024-25), AISE 3350A/B (or the former ECE 3350A/B), AISE 3351A/B (or the former ECE 3351A/B), AISE 4430A/B (or the former SE 4430A/B), CEE 2224, CEE 3369A/B, DS 3000A/B, AISE 3010A/B, Earth Sciences 2281A/B, ECE 3350A/B, ECE 3351A/B, SE 3309A/B, SE 4430A/B, 1.0 non-technical electives.

Note: CEE 3324a (Surveying). This course is available each summer (10 days) and must be completed before a student may graduate from a Civil Engineering program.

#### Fourth Year Program

CEE 3321A/B, CEE 3322A/B, CEE 3348A/B, CEE 3355A/B, CEE 3362A/B, CEE 3386A/B, CEE 4401A/B, CEE 4412A/B, CEE 4476A/B, CBE 4409A/B, AISE 4010A/B, Earth Sciences 3340A/B.

#### Fifth Year Program

AISE 3020A/B, AISE 4020A/B or CEE 4420A/B, AISE 4050, AISE 4450A/B (or the former ECE 4450A/B), CEE 4426A/B, CEE 4463A/B, CEE 4465A/B, CEE 4478A/B, CEE 4416A/B, ECE 4450A/B, ELI 4110F/G, 0.5 technical elective.

\*Selection of the non-technical elective must be approved by the department to satisfy the CEAB requirements of subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences. More information about approved non-technical electives can be found on the Engineering website.

#### **Environmental Engineering Technical Electives:**

CEE 4418A/B, CEE 4428A/B, CEE 4429A/B, CEE 4438A/B, CEE 4440, CEE 4458A/B, CEE 4479A/B, CEE 4480A/B, CEE 4485A/B, CBE 4405A/B, CBE 4463A/B.

#### **AISE Technical Electives:**

CEE 4414A/B, CEE 4417A/B, Computer Science 4417A/B, Statistical Sciences 4861A/B.

Some technical electives may not be offered in a given academic year.

# DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

More information about approved non-technical electives can be found on the Engineering website.

#### **Technical Electives:**

ECE 3349A/B, ECE 3380A/B, ECE 4430A/B, ECE 4431A/B, ECE 4432A/B, ECE 4433A/B, ECE 4436A/B, ECE 4438A/B, ECE 4439A/B, ECE 4445A/B, ECE 4451A/B, ECE 4455A/B, ECE 4456A/B, ECE 4457A/B, ECE 4460A/B, ECE 4464A/B, ECE 4468A/B, ECE 4469A/B, MME 4452A/B, MME 4473A/B, MME 4482A/B, MME 4487A/B, the former ECE 4470A/B, the former ECE 4489A/B.

#### AISE Technical Electives:

Computer Science 4417A/B, Statistical Sciences 4861A/B. \*Up to two MME half cour (es)4 (48)9.9colp athe448pSolv d tic lpay8be448 d4aalnal ShT1 g10

# Course Introduction – Effective September 1, 2024, the following course be introduced:

### ARTIFICIAL INTELLIGENCE SYSTEMS ENGINEERING 2205A/B ALGORITHMS & DATA STRUCTURES FOR OBJECT-ORIENTED DESIGN

(Short title: Algorithms & Data Structures)

Survey of important computer algorithms and related data structures used in object-oriented software engineering. Design, performance analysis and implementation of such algorithms, stressing their practical use and performance certification of large software applications. Understand how to "seal" designs to guarantee performance goals and to ensure that error conditions are caught.

Antirequisite(s): Computer Science 2210A/B, Software Engineering 2205A/B. Prerequisite(s): Computer Science 1026A/B or Engineering Science 1036A/B. Extra information: 3 lecture hours, 2 laboratory hours. Restricted to students enrolled in the Artificial Intelligence Systems Engineering program. Course Weight: 0.50

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Course Introduction – Effective September 1, 2024, the following course be introduced:

ARTIFICIAL INTELLIGENCE SYSTEMS ENGINEERING 4430A/B

# prior to 2024-25), Data Science 3000A/B, SE 3309A/B, SE 2205A/B, SE 2251A/B. Extra Information: 3 lecture hours/week, 2 lab hour/week

Course Weight: 0.50

#### Course Revision – Effective September 1, 2024, the following change(s) be made:

### SOFTWARE ENGINEERING 2205A/B ALGORITHMS & DATA STRUCTURES FOR OBJECT-ORIENTED DESIGN

Survey of important computer algorithms and related data structures used in object-oriented software engineering. Design, performance analysis and implementation of such algorithms, stressing their practical use and performance certification of large software applications. Understand how to "seal" designs to guarantee performance goals and to ensure that all error conditions are caught.

of principles and basic parameters and models), A/D and D/A conversion (electronics) and principles of data collection. Notion of information and control.

Prerequisite(s): Numerical and Mathematic Methods 2270A/B, Numerical and Mathematical Methods 2276A/B or Numerical and Mathematical Methods

Extra Information: 3 lecture hours/week, 2 lab hour/week. Course Weight: 0.50

Course Withdrawal – Effective September 1, 2024, the following course be withdrawn:

ELECTRICAL AND COMPUTER ENGINEERING 3351B16 (B16 (B16jTc 0 Tw 14.18 015 Tdp

Course Withdrawal – Effective September 1, 2024, the following course be withdrawn:

## **MECHATRONIC SYSTEMS ENGINEERING**

Program Revision – Effective September 1, 2024, the following change(s) be made:

# E. MECHATRONIC SYSTEMS ENGINEERING AND ARTIFICIAL INTELLIGENCE SYSTEMS ENGINEERING OPTION

Module/Program Information

Engineering Common First Year Program

Full-year courses: Engineering Science 1050, Business Administration 1299E.
Full-year half course: Engineering Science 1022A/B/Y.
Half-year courses: Numerical and Mathematical Methods 1411A/B, Numerical and Mathematical Methods 1412A/B, Numerical and Mathematical Methods 1414A/B, Chemistry 1302A/B, Engineering Science 1021A/B, Engineering Science 1036A/B,

satisfy the CEAB requirements of subject matter that deals with central issues,

FACULTY OF HEALTH SCIENCES

 Physics 1101A/B, or 1201A/B or the former Physics 1028A/B or the former Physics 1301A/B or Physics 1501A/B and Physics 1102A/B, or 1202A/B or the former Physics 1029A/B or the former Physics 1302A/B or Physics 1502A/B.

# FACULTY OF SOCIAL SCIENCE

## DEPARTMENT OF POLITICAL SCIENCE

Course Revision – Effective September 1, 2024, the following change(s) be made:

POLITICAL SCIENCE 3316F/G POLITICAL PARTIES An analytical study ocl[P)-5p-1 (I) 0 BDC 0.43

## HURON UNIVERSITY COLLEGE

# CENTRE FOR GLOBAL STUDIES – FACULTY OF ARTS AND SOCIAL SCIENCE

Program Revision – Effective September 1, 2024, the following change(s) be made:

# MANAGEMENT AND ORGANIZATIONAL STUDIES – FACULTY OF ARTS AND SOCIAL SCIENCE

Course Introduction – Effective September 1, 2024, the following course be introduced:

## MANAGEMENT AND ORGANIZATIONAL STUDIES 4511F/G ADVANCES IN SUSTAINABILITY AND CONSUMER BEHAVIOUR

(Short title: Adv in Sustain Consumer Behav)

This course reviews cutting-edge research tools, theories, and research findings at the intersection of sustainability and consumer behaviour. The focus is on using behavioural research methods and findings to understand, predict, and encourage sustainable consumption, while reviewing important issues in marketing and sustainability.

Prerequisite(s): At least two of MOS 3321F/G, MOS 3420F/G, MOS 3423F/G. Priority will be given to Huron University College students registered in the Honours Specialization in Marketing and Sustainability. Enrollment from students registered in MOS modules other than Marketing and Sustainability is given by special permission of the course instructor only.

Extra Information: 3 hours. Limited enrolment. Meeting minimum requirements does not guarantee admission to the course. Course Weight: 0.50

#### Course Revision – Effective September 1, 2024, the following change(s) be made:

MANAGEMENT AND ORGANIZATIONAL STUDIES 2185A/B ANIMAL WELFARE AND SUSTAINABILITY LEADERSHIP An examination of animal welfare and sustainability challenges, strategies, and solutions in sectors such as fashion, beauty, sports, entertainment, food, and animal care. This course examines pressing animal welfare and ecological challenges and builds the analytical, strategic, and leadership skills required to respond to or prevent these issues in private, public, and nonprofit organizations.

Antirequisite(s): MOS 3398A/B if taken in Winter term of 2022-23. Extra Information: 3 hours. Course Weight: 0.50