Minutes of the Second Meeting of Senate
Friday, January 17, 2020
3:00 – 5:00 pm
Alumni Hall

Present: A. Abd-El-Aziz (Chair), D. Sutton (Secretary to Senate), D. Coll, S. Daboo, D. Dahn, C. Ding, E. Drake, N. Etkin, K. Gottschall-Pass, L. Hammell, N. Kujundzik, N. Krouglicof, T. Mady, J. MacDonald, R. MacDonald, D. Moses, C. Murray, J. Podger, C. Ryan, A. Fenech, A. Hsiao, R. Bissessur, J. Moran, J. Spears, B. Waterman

Regrets: R. Dennis, M. Murray, N. Phillips, D. McCardle(Acting Registrar), A. Braithwaite, M. Buote, B. Campbell, E. Côté, L. Doiron, A.M. Fitzgerald, S. Grant, L. Heider, G. Keefe, J. McIntyre, S. Myers, R. Raiswell, K. Ross, K. Simon, C. Stevenson, S. MacLean

Guests: K. Critchley

Recorder: D. Sutton (Secretary to Senate)

President Alaa Abd-El-Aziz called the meeting to order at 3:02 p.m.

1. **Approval of Agenda**
MOTION (T. Mady/J. Moran) to approve the agenda as presented. CARRIED

2. **Approval of Minutes – November 22, 2019**
MOTION (D. Dahn/J. Spears) to approve the minutes of November 22, 2019 as presented. CARRIED

3. **Business Arising**
Vice President of Academic & Research and the Dean of Arts are to report back on number of Faculty in the English Department.

Dr. Kujundzik, Dean of Arts, reported that he met with the President of the English Society, Editor of the Arts Journal and other students. He also indicated that he will update the Senate about any further development.

4. **Presidents Report**
President Abd-El-Aziz reported that his meeting with Chief Gould was very positive and the Chief has been invited to attend the next meeting of Senate.

The President also reported that there is an interest from the University of Mauritius in a co-degree in Climate Change and Adaptation.

MOTION (N. Etkin/S. Daboo) that Senate approve in principal that UPEI work with the University of Mauritius to offer a co-degree in Climate Change and Adaptation. CARRIED

5. **Students Applying to Graduate Before Convocation**

The list of graduates was presented by the Vice President Academic and Research and approved unanimously by the Senate.

6. **Senate Reports**

Faculty of Business

MOTION (K. Gotschall-Pass/ B. Waterman) that motion 1 be approved as noted below: CARRIED

1) **That a new calendar entry for Co-operative Education in the Faculty of Business be approved as proposed.**
(See details on the Curriculum Report Attached – Page 2-3)

Faculty of Sustainable Design Engineering

MOTION (K. Gotschall-Pass/ N. Kujundzic) that motion 2 be approved as noted below: CARRIED

2) **To approve a new course ENGN 4840 Sustainable Technology Development and Commercialization.**
(See details on the Curriculum Report Attached – Pages 4-6)

OMNIBUS Motion (K. Gotschall-Pass/ N. Kujundzic) that motions 3-8 be approved as noted below: CARRIED

3) **To approve the change in prerequisites for ENGN 1250 Materials Science.**
(See details on the Curriculum Report Attached – Page 7)

4) **To approve the change in prerequisites for ENGN 2130 Statistics for Engineering Applications.**
(See details on the Curriculum Report Attached – Page 8)

5) **To approve the change in prerequisites for ENGN 2610 Thermo Fluids I: Thermodynamics.**
(See details on the Curriculum Report Attached – Page 9)

6) **To approve the change in the prerequisites for ENGN 2810 Electric Circuits.**
(See details on the Curriculum Report Attached – Page 10)

7) **To approve the change in the course description for ENGN 4330 Innovations in Biomedical Engineering.**
(See details on the Curriculum Report Attached – Pages 11-12)

8) **To approve the change in course description for SDE 8330 Innovations in Biomedical Engineering.**
(See details on the Curriculum Report Attached – Pages 13-14)

Motion (K. Gotschall-Pass/ N. Kujundzic) that motion 9 be approved as noted below: CARRIED

9) **To approve the change in the grade mode from pass/fail to numeric for ENGN 4820 Directed Studies.**
(See details on the Curriculum Report Attached – Page 15)

Motion (K. Gotschall-Pass/A. Hsiao) that motion 10 be approved as noted below: CARRIED

10) **To approve the changes to the Bachelor of Science in Sustainable Design Engineering degree program.**
(See details on the Curriculum Report Attached – Page 16)

Faculty of Veterinary Medicine

OMNIBUS Motion (K. Gottschall-Pass/L. Hammell) that motions 11-12 be approved as noted below: CARRIED

11) **To approve the change in grade mode for VHM 4110 Clinical Conference.**
(See details on the Curriculum Report Attached – Page 18)

12) **To approve the change in credit value and course description for VHM 4840 Veterinary Chiropractic.**
(See details on the Curriculum Report Attached – Page 19

7. **Other Business**

a. Reporting on UPEI Cairo Campus – Dr. Kim Critchley, Provost, UPEI, Cairo Campus

Dr. Critcley showed an interest from the Cairo Campus in expanding the offering of various programs. A discussion took place which resulted in the following motion:

Motion (K. Gotschall-Pass/E. Drake) that Senate agree to enable the Faculties of Arts, Business, Sustainable Design Engineering, Education and Graduate Studies to offer UPEI programs and courses at its Cairo Campus provided the Faculties and Departments agree. CARRIED Unanimously

Agreement was also made to include Dr. Kim Critchley as a guest and non-voting member at future Senate meetings.

8. **Discussion on Strategic Enrolment Management**

Strategic Enrolment Management was deferred to an upcoming meeting.

9. **Adjournment**

Motion (T. Mady/ A. Fenech) that the meeting be adjourned at 4:45 p.m.

Respectfully submitted,
Donna Sutton
Secretary of Senate

Attachment: Fourth Curriculum Report – January 17, 2020

UNIVERSITY of Prince Edward ISLAND

Fourth Curriculum Report
December 17, 2019 (APCC)
January 17, 2020 (Senate)

NEW CALENDAR ENTRY

Motion #1

Faculty/School: **Business**

Department/Program(s): **Business**

MOTION: That a new calendar entry for Co-operative Education in the Faculty of Business be approved as proposed.

Proposed New Calendar Entry
CO-OP EDUCATION IN BUSINESS The UPEI Co-op Program is an integrated approach to university education which enables students to alternate academic terms on campus with work terms in suitable employment. The success of such programs is founded on the principle that students are able to apply theoretical knowledge from course studies in the workplace and return to the classroom with practical workplace experience. Students who successfully complete all the requirements of the program will have the notation entered on their transcripts and on the graduation parchment. Students accepted into the program, complete at least three 14-week paid work terms and three professional development courses. Credits earned through completion of work terms are counted as general electives (i.e. free or non-business electives). The Co-op option is available to full-time students in any specialization within the Faculty of Business. Applications to the Co-op Education Program are normally made after completion of the first year of study. See the Co-operative Education Program section of the UPEI Academic Calendar for more information.

Rationale for New Calendar Entry: To replace the Business Co-operative Education entry that was deleted in Spring 2019 with a more streamlined entry, consistent with all other Co-op program entries.

Effective Term: WINTER 2020

Implications for Other Programs: None **Impact on Students Currently Enrolled:** None

Resources Required: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Business	October 18, 2019
Faculty Dean's Approval: Dr. Tarek Mady	October 18, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

Summary of Faculty of Engineering Motion #'s 2-10

Course Number	Title	Implementation	Description	Prerequisites	Grading Mode	Notes
4840 (NEW)*	Sustainable Technology Development and Commercialization	Fall 2020	New	New		1
1250	Materials Science	Fall 2020		Revised		2
2130	Statistics for Engineering Applications	Fall 2020		Revised		2
2610	Thermo Fluids I: Thermodynamics	Fall 2020		Revised		2
2810	Electric Circuits	Fall 2020		Revised		2
4330	Innovations in Biomedical Engineering	Fall 2020	Revised			3
8330	Innovations in Biomedical Engineering	Fall 2020	Revised			3
4820	Directed Studies	Fall 2020			Revised	4
Degree Program	Humanities Electives	Fall 2020				5

Notes:

1. This new course provides an elective course at the 4000 level to support students in the program's commercialization and entrepreneurship stream. It follows from the existing ENGN 3430 (Technology Management and Entrepreneurship).

2. To ensure that course registration is restricted to Faculty of Sustainable Design Engineering students, the following is to be added to the course prerequisites: "Admission to the Engineering Program".

3. Course description is to be revised to better reflect the actual course content being delivered.

4. The grading mode is to be changed from a Pass/Fail mode to a Numeric mode in order to be the same as the grading mode for ENGN 4810.

5. Currently, the choice of Humanities electives in the Engineering program is restricted to exclude language acquisition and economics courses. This has been consistent with the position of the Canadian Engineering Accreditation Board (CEAB) regarding eligible Humanities courses in Engineering degree programs. Recently, though, the CEAB changed its position in order to include these courses and to increase Humanities course choice for students. This change, then, will bring us in line with the national position.

NEW COURSE PROPOSAL

Motion #2

Faculty/School: **Sustainable Design Engineering**

Department/Program(s): **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve a new course ENGN 4840 Sustainable Technology Development and Commercialization.

Course Number and Title	ENGN 4840 Sustainable Technology Development and Commercialization
Description	This course engages students in technology development and commercialization. Teams of students work closely as startup companies to develop innovative and sustainable solutions to meet global challenges. Teams will be supported by instructors and industry mentors and will have access to dedicated incubator space, lab equipment and manufacturing facilities to complete their projects. Students further develop their entrepreneurial, professional and technical skills through completing the necessary steps to commercialize their new innovative technologies and products. The course will focus on learning and applying various aspects of validation, incubation and business strategy development including lean startup, design for commercialization, design for certification, manufacturing and distribution planning, investor relations, business growth planning and corporate sustainability.
Cross-Listing	N/A
Prerequisite/Co-Requisite	ENGN 3430; ENGN 4710 must be completed or taken concurrently or permission of the instructor
Credit(s)	3
Notation	Three lecture hours and three lab hours per week

This is: An Elective Course

Grade Mode: Numeric (Standard)

Anticipated Enrolment: 30

Is there an Enrolment Cap: No

Rationale for New Course: Provides an elective course offering in the area of Entrepreneurship.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

Resources Required: Existing personnel and laboratory resources within the Faculty of Sustainable Design Engineering.

In offering this course will UPEI require facilities or staff at other institutions: No

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

LIBRARY RESOURCE REQUIREMENTS FOR A NEW COURSE PROPOSAL

ENGN 4840 Sustainable Technology Development and Commercialization

Library Resource Requirements *(to be completed by the liaison and/or collections librarian)*

Existing resources:

- **Collections/Subscriptions – Relevant Subject-specific**
  - *O'Reilly* Academic Subscription (books and videos)
  - *INSPEC* (abstracting and indexing [A&I] database)
  - *Compendex* (A&I database)
  - *IEEE/IEL Electronic Library* (full text of IEEE and IEL publications including journals, conferences, and standards)
  - *ECONLIT* with full text (A&I database including full-text journal content)
  - *Business Source Complete* (A&I database including full-text journal content)
  - *Canadian Business & Current Affairs* (CBCA) *Complete* (A&I database including full-text journal content)
  - Gale's *Business Insights: Global* (A&I database including full-text journal content)
  - Gale *Onefile: Entrepreneurship* (A&I database of full-text content)
  - Gale *Onefile: Business* (A&I database of full-text content)
  - Machinery's Handbook, AccessEngineering (online handbooks) and various official standards
- **Collections/Subscriptions – interdisciplinary but supporting**
  - Academic E-book subscriptions from EBSCO and ProQuest
  - E-book "evidence-based"[1] arrangements with Cambridge, Elsevier, Project MUSE, Sage, Springer, and Wiley
  - "Big Deal" journal packages from publishers Elsevier (ScienceDirect), Oxford, Sage, Springer, and Wiley
  - JSTOR and Project MUSE
  - Other indexing and full-text databases from Gale, ProQuest, and EBSCO
- **Physical Space in Library (other than holdings, explain)**
  - Library offers group study rooms (11 rooms with capacity of 4 or more)
  - Library offers public computer area and printing capacities
- **Library Administrative/Research Support**
  - Engineering Subject librarian (one of six full-time librarians) is available for consultation
  - Subject Librarian available, if desired by the instructor, to speak to the class about Patents, Trademarks and Intellectual Property.

[1] The "evidence-based acquisition" model means we pay a fixed amount to the publisher for unlimited access to a selection of their book catalogue, and after the year ends we view the usage data, and "spend out" (i.e. purchase with perpetual access rights) our initial deposit, usually on the most-used books.

- Library maintains the FSDE Room Booking service (fsderooms.upei.ca) for ideation (group project) rooms.

New resources needed to support this proposal:

- This course can be supported by the library's existing resources. However, their continuance is constantly in jeopardy due to (a) the engineering library budget allocation not increasing to match inflation and rising subscription costs; (b) the library's core collections budget failing to keep pace with inflation and the rising subscription costs.

- In the proposal for the Interdisciplinary PhD in Sustainable Design Engineering, from July 2017 (rev August 2017), there was an agreement between the Library and the (then) School of Sustainable Design Engineering that "as such time when the original engineering undergraduate student enrollment target is met, we request that the sustainability of [the core undergraduate library budget, set out in 2015 as $100,000] be addressed." We look forward to sharing your success. The library's core budget is not the responsibility of the FSDE, but we appreciate your support in administrative (Senate) meetings.

Does the budget allocation for library resources in this proposal meet the requirement? – ***n/a***

Date Received by Liaison/Collections Librarian	November 1, 2019
Name of Librarian to be Contacted for Questions	Rosie Le Faive
Approved by University Librarian or Designate - Name	Donald Moses
Date Approved by UL or Designate	November 13, 2019

Form Version: September/2019

CALENDAR & CURRICULUM CHANGE

Motion #3

Revision is for a: **Pre-requisite Addition/Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in prerequisites for ENGN 1250 Materials Science.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
1250 (formerly 2250) MATERIALS SCIENCE This course focuses on the fundamental principles of chemistry as they relate to the properties and behaviour of materials in application to engineering systems. The relationship between electronic structure, chemical bonding, and atomic order is emphasized. The characterization of atomic arrangements in crystalline and amorphous solids, i.e. that of metals, ceramics, polymers, and composites are introduced. Knowledge of materials phenomena, including chemical equilibrium and kinetics, diffusion, electrochemistry, and phase transformations will be gained through experiential labs and lecture. Examples from industrial practice and emerging technologies will be used to illustrate the materials science concepts in this course. PREREQUISITE: Mathematics 1920 must be completed or taken concurrently, Chemistry 1110 Three hours lecture and three hours lab per week	1250 (formerly 2250) MATERIALS SCIENCE This course focuses on the fundamental principles of chemistry as they relate to the properties and behaviour of materials in application to engineering systems. The relationship between electronic structure, chemical bonding, and atomic order is emphasized. The characterization of atomic arrangements in crystalline and amorphous solids, i.e. that of metals, ceramics, polymers, and composites are introduced. Knowledge of materials phenomena, including chemical equilibrium and kinetics, diffusion, electrochemistry, and phase transformations will be gained through experiential labs and lecture. Examples from industrial practice and emerging technologies will be used to illustrate the materials science concepts in this course. PREREQUISITE: Admission to the Engineering program. Mathematics 1920 must be completed or taken concurrently, Chemistry 1110 Three hours lecture and three hours lab per week

Rationale for Change: To ensure that course registration is restricted to Faculty of Sustainable Design Engineering students.

Effective Term: FALL 2020 **Implications for Other Programs**: None

Impact on Students Currently Enrolled: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

CALENDAR & CURRICULUM CHANGE — Motion #4

Revision is for a: **Pre-requisite Addition/Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in prerequisites for ENGN 2130 Statistics for Engineering Applications.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
2130 STATISTICS FOR ENGINEERING APPLICATIONS This course provides an introduction to statistics through its application to engineering in the areas of reliability and experimentation. Basic statistical concepts, such as probability, descriptive measures, population distributions, and hypothesis testing will be taught in the context of engineering reliability and experimentation scenarios. Students will be introduced to fundamental concepts of reliability, such as failure and repairability rates, and analysis techniques such as reliability block diagrams and fault tree analysis. Student will also learn the basics of experimental design, including one-factor-at-a-time and factorial testing, and get hands on experience with the design, execution, analysis and interpretation of experimental results. PREREQUISITE: Mathematics 1920 Three lecture hours and three lab hours per week	2130 STATISTICS FOR ENGINEERING APPLICATIONS This course provides an introduction to statistics through its application to engineering in the areas of reliability and experimentation. Basic statistical concepts, such as probability, descriptive measures, population distributions, and hypothesis testing will be taught in the context of engineering reliability and experimentation scenarios. Students will be introduced to fundamental concepts of reliability, such as failure and repairability rates, and analysis techniques such as reliability block diagrams and fault tree analysis. Student will also learn the basics of experimental design, including one-factor-at-a-time and factorial testing, and get hands on experience with the design, execution, analysis and interpretation of experimental results. PREREQUISITE: Admission to the Engineering program. Mathematics 1920 Three lecture hours and three lab hours per week

Rationale for Change: To ensure that course registration is restricted to Faculty of Sustainable Design Engineering students.

Effective Term: FALL 2020

Implications for Other Programs: None **Impact on Students Currently Enrolled:** None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

CALENDAR & CURRICULUM CHANGE — Motion #5

Revision is for a: **Pre-requisite Addition/Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in prerequisites for ENGN 2610 Thermo Fluids I: Thermodynamics.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
2610 THERMO FLUIDS I: THERMODYNAMICS This course is designed to provide the student with a basic understanding of the fundamental concepts and principles of thermodynamics (first and second laws) and the application of these principles to engineering problems. Topics included are: the nature and forms of energy; basic concepts of systems, properties, states and processes; energy transfer as work and heat; energy and The First Law of Thermodynamics; entropy and The Second Law of Thermodynamics; and heat engine cycles. The analysis of various systems for power generation or refrigeration is also included. PREREQUISITE: Chemistry 1110 must be completed or taken concurrently; Mathematics 1920 Three hours lecture and three lab hours per week	2610 THERMO FLUIDS I: THERMODYNAMICS This course is designed to provide the student with a basic understanding of the fundamental concepts and principles of thermodynamics (first and second laws) and the application of these principles to engineering problems. Topics included are: the nature and forms of energy; basic concepts of systems, properties, states and processes; energy transfer as work and heat; energy and The First Law of Thermodynamics; entropy and The Second Law of Thermodynamics; and heat engine cycles. The analysis of various systems for power generation or refrigeration is also included. PREREQUISITE: Admission to the Engineering program. Chemistry 1110 must be completed or taken concurrently; Mathematics 1920 Three hours lecture and three lab hours per week

Rationale for Change: To ensure that course registration is restricted to Faculty of Sustainable Design Engineering students.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

CALENDAR & CURRICULUM CHANGE — Motion #6

Revision is for a: **Pre-requisite Addition/Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in the prerequisites for ENGN 2810 Electric Circuits.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
2810 ELECTRIC CIRCUITS This course is a study of topics such as: voltage, current, resistance, power, Ohm's laws, Kirchoff 's laws, sources, voltage and current division, nodal and mesh analysis, linearity and superposition, Thevenin's and Norton's theorems, capacitance and inductance, RL and RC circuits. Concepts of electric charge, force and field are also introduced. PREREQUISITE: Math 1920 Three hours lecture and two hours tutorial per week	2810 ELECTRIC CIRCUITS This course is a study of topics such as: voltage, current, resistance, power, Ohm's laws, Kirchoff's laws, sources, voltage and current division, nodal and mesh analysis, linearity and superposition, Thevenin's and Norton's theorems, capacitance and inductance, RL and RC circuits. Concepts of electric charge, force and field are also introduced. PREREQUISITE: Admission to the Engineering program. Math 1920 Three hours lecture and two hours tutorial per week

Rationale for Change: To ensure that course registration is restricted to Faculty of Sustainable Design Engineering students.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

Form Version: September/2019

CALENDAR & CURRICULUM CHANGE — Motion #7

Revision is for a: **Course Description Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in the course description for ENGN 4330 Innovations in Biomedical Engineering.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
4330 INNOVATIONS IN BIOMEDICAL ENGINEERING This course introduces the study of medicine by focusing on innovations in medical devices, and future trends in materials, especially the increasing use of bio-resources, informatics, and mechatronics engineering applications in orthopedic, rehabilitation, simulation and education technologies. In its broader context, this course focuses on four areas of biotechnology, biomechanics, biomaterials and biosignals. Through a hands-on approach, the course focuses on innovative product development related to bio-signal, instrumentation, sensing, and image processing. Students will also gain an appreciation for the collaborative, interdisciplinary nature of engineering in medicine and its potential impact on society. Cross-listed with SDE 8330 (Graduate-level project will be defined). PREREQUISITES: Engineering 3710 Three hours of lecture and three hours of lab per week	4330 INNOVATIONS IN BIOMEDICAL ENGINEERING This course ~~introduces the study of medicine by focusing on innovations in medical devices, and future trends in materials, especially the increasing use of bio-resources, informatics, and mechatronics engineering applications in orthopedic, rehabilitation, simulation and education technologies. In its broader context, this course focuses on four areas of biotechnology, biomechanics, biomaterials and biosignals.~~ provides an overview of the subdisciplines that are included in field of biomedical engineering Through a hands-on approach, the course ~~focuses on innovative product development related to bio-signal, instrumentation, sensing, and image processing.~~ introduces topics including biotransport, bioelectrical phenomena, bioinstrumentation, biomechanics, diagnostic devices, medical imaging, rehabilitation, biomaterials, tissue engineering, biosensors, lab-on-a-chip and micro- and nano-technology. The course also introduces the basics of medical device regulations and ethics of medical instrumentation. Students will ~~also~~ gain an appreciation for the collaborative, interdisciplinary nature of engineering in medicine and its potential impact on society. Cross-level listed with SDE 8330 (Graduate-level project will be defined). PREREQUISITES: Engineering 3710 Three hours of lecture and three hours of lab per week

Rationale for Change: The previous course description did not reflect the content of the course.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

CALENDAR & CURRICULUM CHANGE

Motion #7

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

CALENDAR & CURRICULUM CHANGE — Motion #8

Revision is for a: **Course Description Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Master of Science in Sustainable Design Engineering**

MOTION: To approve the change in course description for SDE 8330 Innovations in Biomedical Engineering.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
SDE 8330 INNOVATIONS IN BIOMEDICAL ENGINEERING This course introduces the study of medicine by focusing on innovations in medical devices, and future trends in materials, especially the increasing use of bio-resources, informatics, and mechatronics engineering applications in orthopedic, rehabilitation, simulation and education technologies. In its broader context, this course focuses on four areas of biotechnology, biomechanics, biomaterials and biosignals. Through a hands-on approach, the course focuses on innovative product development related to bio-signal, instrumentation, sensing, and image processing. Students will also gain an appreciation for the collaborative, interdisciplinary nature of engineering in medicine and its potential impact on society. Graduate project will be defined. Cross-listed with ENGN 4330. Credit cannot be received for both courses. Three hours of lecture and three hours of lab per week	SDE 8330 INNOVATIONS IN BIOMEDICAL ENGINEERING This course ~~introduces the study of medicine by focusing on innovations in medical devices, and future trends in materials, especially the increasing use of bio-resources, informatics, and mechatronics engineering applications in orthopedic, rehabilitation, simulation and education technologies. In its broader context, this course focuses on four areas of biotechnology, biomechanics, biomaterials and biosignals.~~ provides an overview of the subdisciplines that are included in field of biomedical engineering Through a hands-on approach, the course ~~focuses on innovative product development related to bio-signal, instrumentation, sensing, and image processing.~~ introduces topics including biotransport, bioelectrical phenomena, bioinstrumentation, biomechanics, diagnostic devices, medical imaging, rehabilitation, biomaterials, tissue engineering, biosensors, lab-on-a-chip and micro- and nano-technology. The course also introduces the basics of medical device regulations and ethics of medical instrumentation. Students will ~~also~~ gain an appreciation for the collaborative, interdisciplinary nature of engineering in medicine and its potential impact on society. Graduate project will be defined. Cross-level listed with ENGN 4330. Credit cannot be received for both courses. Three hours of lecture and three hours of lab per week

Rationale for Change: The course description for ENGN 4330 has been updated to better reflect the content of the course and since SDE 8330 is cross-level listed with ENGN 4330 the course description needed updating also.

Effective Term: FALL 2020

CALENDAR & CURRICULUM CHANGE — Motion #8

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainability Design Engineering	December 2, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	December 2, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

Form Version: September/2019

CALENDAR & CURRICULUM CHANGE — Motion #9

Revision is for a: **Grade Mode Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the change in the grade mode from pass/fail to numeric for ENGN 4820 Directed Studies.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
4810-4820 DIRECTED STUDIES IN ENGINEERING Available to advanced engineering students at the discretion of the department. Entry to the course, course content, and the conditions under which the course may be offered will be subject to the approval of the Chair of the Department and the Dean of the Faculty. (See Academic Regulation 9 for Regulations Governing Directed Studies.)	*No change*

Rationale for Change: To match the grading mode of the ENGN 4810 Directed Studies course.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

Form Version: September/2019

CALENDAR & CURRICULUM CHANGE — Motion #10

Revision is for a: **Calendar Entry Change**

Faculty/School/Department: **Sustainable Design Engineering**

Department/Program(s)/Academic Regulations: **Bachelor of Science in Sustainable Design Engineering**

MOTION: To approve the changes to the Bachelor of Science in Sustainable Design Engineering degree program.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
Program Year 1—Term 2 Engineering 1220—Engineering Analysis Engineering 1250—Materials Science Engineering 1310—Computer Programming with Engineering Applications Engineering 1340 – Engineering Mechanics II: Dynamics Mathematics 1920—Single Variable Calculus II One (1) humanities elective (courses typically offered by the Faculty of Arts, except language acquisition or economics courses) **Program Year 4—Term 8** Engineering 4720—Project-Based Professional Practice IV One (1) engineering focus area elective* One (1) science or business elective One (1) humanities elective (courses typically offered by the Faculty of Arts, except language acquisition or economics courses)	**Program Year 1—Term 2** Engineering 1220—Engineering Analysis Engineering 1250—Materials Science Engineering 1310—Computer Programming with Engineering Applications Engineering 1340 – Engineering Mechanics II: Dynamics Mathematics 1920—Single Variable Calculus II One (1) humanities elective (courses typically offered by the Faculty of Arts~~, except language acquisition or economics courses~~) **Program Year 4—Term 8** Engineering 4720—Project-Based Professional Practice IV One (1) engineering focus area elective* One (1) science or business elective One (1) humanities elective (courses typically offered by the Faculty of Arts~~, except language acquisition or economics courses~~)

Rationale for Change: To create more elective options for students.

Effective Term: FALL 2020

Implications for Other Programs: None **Impact on Students Currently Enrolled:** None

Authorization	***Date:***
Departmental Approval: N/A	N/A
Faculty/School Approval: Faculty of Sustainable Design Engineering	October 23, 2019
Faculty Dean's Approval: Dr. Nicholas Krouglicof	October 23, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

Summary of Faculty of Veterinary Medicine Motion #'s 11-12

Health Management Department

VHM 4110	Grade Mode Change
VHM 4840	Credit Value and Course Description Change

CALENDAR & CURRICULUM CHANGE — Motion #11

Revision is for a: **Grade Mode Change**

Faculty/School/Department: **Veterinary Medicine**

Department/Program(s)/Academic Regulations: **Department of Health Management**

MOTION: To approve the change in grade mode for VHM 4110 Clinical Conference.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
VHM 4110 CLINICAL CONFERENCE This is a clinical seminar course with participation by students, house officers, and other professionals. Each student prepares and presents a seminar based on a case-report format with in-depth discussion of the selected disease condition. A manuscript of the case report is required. PREREQUISITE: Fourth year standing in the DVM Program Two hours per week	VHM 4110 CLINICAL CONFERENCE This is a clinical seminar course with participation by students, house officers, and other professionals. Each student prepares and presents a seminar based on a case-report format with in-depth discussion of the selected disease condition. A manuscript of the case report is required. This course is graded Pass/Fail. PREREQUISITE: Fourth year standing in the DVM Program Two hours per week

Rationale for Change: With the change in grading mode for all fourth year clinical rotations a number of years ago, it makes sense to make a similar change in grading mode for this core fourth year course. A detailed evaluation rubric is available and ensures that students still get valuable, specific feedback on their presentation and manuscript.

Effective Term: FALL 2020

Implications for Other Programs: None

Impact on Students Currently Enrolled: This change will be in effect for the Class of 2021 but will have no adverse consequences.

Authorization	***Date:***
Departmental Approval: Dr. Laurie McDuffee, Chair of Health Management	November 5, 2019
Faculty/School Approval: AVC Curriculum Committee	November 5, 2019
Faculty Dean's Approval: Dr. Greg Keefe, Dean	November 12, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019

CALENDAR & CURRICULUM CHANGE — Motion #12

Revision is for a: **Credit Change**

Faculty/School/Department: **Veterinary Medicine**

Department/Program(s)/Academic Regulations: **Department of Health Management**

MOTION: To approve the change in credit value and course description for VHM 4840 Veterinary Chiropractic.

Reproduction of Current Calendar Entry	Proposed revision with changes underlined and deletions indicated clearly
VHM 4840 Veterinary Chiropractic In this course, students learn the fundamentals of veterinary chiropractic medicine and apply its principles to the management of patients with problems of gait, posture, and movement. Lectures and laboratories in the biomechanics and neurophysiology of manipulative therapeutics are supplemented with clinical cases admitted to the Veterinary Teaching Hospital. Students are introduced to the basic skills, instrumentation, and examination methods required for successful treatment of animal patients by using chiropractic medicine. This course includes students from other veterinary colleges and encourages cooperative learning of a specialty discipline. Three weeks in duration.	VHM 4840 Veterinary Chiropractic In this course, students learn the fundamentals of veterinary chiropractic medicine and apply its principles to the management of patients with problems of gait, posture, and movement. Lectures and laboratories in the biomechanics and neurophysiology of manipulative therapeutics are supplemented with clinical cases admitted to the Veterinary Teaching Hospital. Students are introduced to the basic skills, instrumentation, and examination methods required for successful treatment of animal patients by using chiropractic medicine. ~~This course includes students from other veterinary colleges and encourages cooperative learning of a specialty discipline.~~ ~~Three~~ Two weeks in duration.

Rationale for Change: Due to resource limitations, this clinical rotation can no longer accept additional students from other Colleges. Minimum and maximum enrolment will continue to be set at 3 and 6, respectively. In addition, incremental efficiencies gained from experience in teaching this course over a number of years mean that the required content, as stated, can be completed in two weeks rather than three.

Effective Term: SUMMER 2020 **Implications for Other Programs:** None

Impact on Students Currently Enrolled: None. AVC/UPEI students are not affected.

Authorization	***Date:***
Departmental Approval: Dr. Laurie McDuffee, Department Chair	October 7, 2019
Faculty/School Approval: AVC Curriculum Committee	November 5, 2019
Faculty Dean's Approval: Dr. Greg Keefe, Dean	November 12, 2019
Graduate Studies Dean's Approval: N/A	N/A
Registrar's Office Approval: Darcy McCardle	December 11, 2019
APCC Meeting Date Approval	December 17, 2019