Items Approved by Education Council
March 4, 2021

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Continuing Studies

Education Assistant Certificate
Program revision:

- **Admission requirements**

Rationale:
Due to advances in basic digital literacy of the students applying to this certificate, the computer fundamental admission requirement is no longer necessary to predict success in the certificate and is administratively cumbersome for students and admissions employees. For students who want to refresh their computer skills OC will recommend they take the online computer fundamentals course available.
Admission requirements:

Existing	Proposed
• BC secondary school graduation or equivalent, or 19 years of age and out of secondary school for at least one year as of the first day of classes. • A minimum grade of 60% in Computer Fundamentals or equivalent. • English 12 with a minimum 60% or alternatives. • A criminal record check clearance from the B.C. Ministry of Public Safety and Solicitor General's Criminal Records Review Office. Okanagan College's admission offices will provide applicants with instructions and forms for applicants to submit to the Solicitor General's Office and a deadline for the College to receive the clearance letter. Applicants should only initiate their criminal record check when instructed by Admissions. Failure to provide a clearance letter by the deadline will result in a cancellation of the applicant's admission application.	• BC secondary school graduation or equivalent, or 19 years of age and out of secondary school for at least one year as of the first day of classes. • English 12 with a minimum 60% or alternatives. • A criminal record check clearance from the B.C. Ministry of Public Safety and Solicitor General's Criminal Records Review Office. Okanagan College's admission offices will provide applicants with instructions and forms for applicants to submit to the Solicitor General's Office and a deadline for the College to receive the clearance letter. Applicants should only initiate their criminal record check when instructed by Admissions. Failure to provide a clearance letter by the deadline will result in a cancellation of the applicant's admission application.

Implementation date: May 2021
Cost: N/A

Floral Design Certificate
Program revision:

- **Program description**

Rationale:
Continuing Studies proposes to remove the following program description wording from the Floral Design Certificate (FD): Students will be eligible to write the Basic Florist Skills accreditation examination with Flowers Canada, after successfully completing this program along with six months of practical
experience in a retail florist business.
We are no longer accredited through Flowers Canada. Flowers Canada doesn't exists in this capacity; they do not offer examination accreditation.
The Floral Design Certificate is very popular and has strong enrollment numbers for each intake.
Program description:
Existing:
This 150-hour certificate program prepares students to work as floral designers and to upgrade the abilities and skills of those currently working in the field. Emphasis is on retail floristry including small businesses and franchise retail outlets. Program content concentrates on the basic principles of plant care, floral design, and floral arrangements for special events. Students will be eligible to write the Basic Florist Skills accreditation examination with Flowers Canada, after successfully completing this program along with six months of practical experience in a retail florist business.

Proposed:
This 150-hour certificate program prepares students to work as floral designers and to upgrade the abilities and skills of those currently working in the field. Emphasis is on retail floristry including small businesses and franchise retail outlets. Program content concentrates on the basic principles of plant care, floral design and floral arrangements for special events.
Implementation date: May 2021
Cost: N/A

Arts and Foundational Programs

INDG 295 – 3 – 3 **Special Topics in Indigenous Studies**
New course
Rationale:
To offer a course in a focused research topic related to Indigenous Studies, amenable to the contemporary topics and research capacities of INDG faculty.
Calendar description:
This course is an examination of selected topics in Indigenous Studies including, but not limited to, governance, systems theory, medicine, equity and activism. Consult with the department for current offerings. With different topics, this course may be taken more than once for credit. (3,0,0)
Prerequisites:
INDG 100 or permission of the department.
Course outline:

OKANAGAN COLLEGE
Interdisciplinary Studies Department
INDG 295: Special Topics in Indigenous Studies
3 credits; 3 hours/week
Professor: Varied

Course Description
This course is an examination of selected topics in Indigenous Studies including, but not limited to, governance, systems theory, medicine, equity and activism. Consult with the department for current offerings. With different topics, this course may be taken more than once for credit. (3,0,0)

Prerequisite
INDG 100 or permission of the department.

Outcomes
While specific outcomes will vary depending on the special topic, students will be required to demonstrate learning on the Indigenous Studies topic. This learning may be expressed in oral and/or written expression.

Course Requirements

Participation	10%
Reading Responses	20%
Research Essay	20%
Oral Presentation	30%
Final Exam	20%

Implementation date: September 2021
Cost: N/A

SOCW 295 – 3 – 3 **Special Topics in Social Work**
New course
Rationale:
To offer a course in a focused research topic related to Social Work, amenable to the contemporary topics and research capacities of SOCW faculty.
Calendar description:
This course is an examination of selected topics in Social Work including, but not limited to, gender, family, race, equity, and activism. Consult with the department for current offerings. With different topics, this course may be taken more than once for credit. (3,0,0)
Prerequisites:
Second year standing or permission of the instructor and the department chair.

Course outline:

OKANAGAN COLLEGE
Interdisciplinary Studies Department
SOCW295: Special Topics in Social Work
3 credits; 3 hours/week
Professor: Varied

Course Description
This course is an examination of selected topics in Social Work including, but not limited to, gender, family, race, equity, and activism. Consult with the department for current offerings. With different topics, this course may be taken more than once for credit. (3,0,0)

Prerequisite
Second year standing or permission of the department chair.

Outcomes
While specific outcomes will vary depending on the special topic, students will be required to demonstrate learning on the Social Work topic. This learning may be expressed in oral and/or written expression.

Course Requirements

Participation	10%
Reading Responses	20%
Research Essay	20%
Oral Presentation	30%
Final Exam	20%

Implementation date: September 2021
Cost: N/A

CRWR 219 – 3 – 3 **Intermediate Workshop in Creative Writing – Creative Non-Fiction**
Course revision:

- **Prerequisites**

Rationale:
This course is a useful option in the Communication, Culture, and Journalism Studies Diploma and 2nd-year students enrolled in the diploma do well in the course, but currently need a waiver to enroll. Students who have completed ENGL 100 University Writing and CMNS 120 Journalism Fundamentals are sufficiently prepared for success in CRWR 219 with its focus on non-fiction writing.
Prerequisites:

Existing	**Proposed**
ENGL 116 or CRWR 116 & ENGL 126 or CRWR 126	ENGL 116 or CRWR 116 & ENGL 126 or CRWR 126 Or ENGL 100 & CMNS 120

Implementation date: May 2021
Cost: N/A

ENGL 204 – 3 – 4 **Applied English Studies I**
Course revision:

- **Title –** new title **– Small Press Publishing in Canada from Curation to Production**
- **Calendar description**

Rationale:
This course title must be revised since Applied English Studies I is not useful or accurate now that our ENGL 205 course name has been changed (it was previously Applied English Studies II).
The course description is being changed for clarification and accuracy, as a result of new course developments in Writing and Publishing over the years that have refined the focus of 204.

Calendar description:
Existing:
The goal of this applied course is to promote the students' abilities in four areas: bibliographic studies, textual editing and review, digital publishing, and print publishing. Throughout the semester students will respond to lectures on the theory and the practice of literary work (creative and critical) and the material processes from authorship to publication. Students are required to register in a two-hour faculty-led computer laboratory. (2,2,0)
Proposed:
This applied course will introduce students to small-press publication in both print and digital form. ENGL 204 focuses on learning to analyse, review, and edit literary works while understanding their place in the Canadian literary landscape. Throughout the semester students will respond to lectures on the theory and practice of literary work (creative and critical) and the material processes from authorship to publication. Students are required to register in a two-hour faculty led computer laboratory. (2,2,0)
Implementation date: May 2021
Cost: N/A

Diploma in Writing and Publishing
Program revision:

- **Program outline**

Rationale:
The changes in the second year of Writing and Publishing will allow students more freedom in choosing electives and will enhance their skills in aesthetic evaluation of contemporary literature and their own work. These changes are in response to student requests for more Creative Writing and Literature options in second year and a need identified by faculty for more close reading of literary writing in students working in the publishing of literary writing.
ENGL 220 was removed from the creative writing options because it is a literature course.
The note to speak to the Chair of the English Department about the elective in year one has been removed from the program outline because it is no longer necessary due to the increase in the number of viable options for students over the last number of years.
Program outline:
Existing:
Year one:
Two first-year English literature courses (any two of):
ENGL 150 Critical Writing and Reading: Poetry and Drama; ENGL 151 Critical Writing and Reading: Short Fiction and the Novel;, ENGL 153 Critical Writing and Reading: Narrative
Two first-year creative writing courses:
CRWR 116 Introduction to Creative Writing I; CRWR 126 Introduction to Creative Writing II
Two first-year publishing courses:
FINA 170 Applied Publishing Skills; FINA 171 Design Foundations Two first-year communications courses (two of):
CMNS 100 Introduction to Communications; CMNS 110 Introduction to Mass Communication; CMNS 120 Journalism Fundamentals; CMNS 130 Introduction to Digital Media
One first-year marketing course: BUAD 116
One elective course*

Year two
Two publication design courses:
FINA 201 Introduction to Publication Design; FINA 202 Advanced Publication Design
Two intermediate applied English courses:
ENGL 204 Applied English I; ENGL 205 Applied English II Two intermediate communications courses:
CMNS 200 Communications in the Everyday; CMNS 230 Communication and Culture; CMNS 235 Professional Writing and Communications; CMNS 250 Cultural Industries in Canada
One publishing course focusing on the production process: ENGL 206 Pre-Production for Publishing
One web design course:
ENGL 207 Web Development for Publishing One professional editing course:
ENGL 209 Studies in Professional Editing One intermediate creative writing course:

CRWR 216 Intermediate Workshop in Creative Writing – Poetry; CRWR 217 Intermediate Workshop in Creative Writing – Fiction; CRWR 218 Intermediate Workshop in Creative Writing – Drama; CRWR 219 Intermediate Workshop in Creative Writing – Creative Non-Fiction; ENGL 220 Studies in the Theory and Practice of Creative Writing

* Because the list of approved elective courses scheduled conflict-free with the rest of the program changes from year to year, students should consult with the Chair of the Department of English about their options prior to registration.

Proposed:

Year one:

Two first-year English literature courses (any two of):

ENGL 150 Critical Writing and Reading: Poetry and Drama; ENGL 151 Critical Writing and Reading: Short Fiction and the Novel;, ENGL 153 Critical Writing and Reading: Narrative

Two first-year creative writing courses:

CRWR 116 Introduction to Creative Writing I; CRWR 126 Introduction to Creative Writing II

Two first-year publishing courses:

FINA 170 Applied Publishing Skills; FINA 171 Design Foundations Two first-year communications courses (two of):

CMNS 100 Introduction to Communications; CMNS 110 Introduction to Mass Communication; CMNS 120 Journalism Fundamentals; CMNS 130 Introduction to Digital Media

One first-year marketing course: BUAD 116

One elective course

Year two

Two publication design courses:

FINA 201 Introduction to Publication Design; FINA 202 Advanced Publication Design

Two intermediate applied English courses:

ENGL 204 Small Press Publishing in Canada from Curation to Publication; ENGL 205 Applied Publishing Studies: Introduction to Book Arts

English Literature course:

ENGL 210 Women in Literature; ENGL 211 Survey of English Literature I; ENGL 212 Studies in Children's Literature; ENGL 213 Studies in British Literature; ENGL 220 Studies in the Theory and Practice of Creative Writing; ENGL 221 Survey of English Literature; ENGL 222 Studies in International Literature in English; ENGL 223 Studies in Canadian Literature; ENGL 230 Topics in Women's Literature; ENGL 231 Studies in Popular Narrative; ENGL 233; Studies in American Literature; ENGL 236 Studies in Indigenous Literature in Canada; ENGL 237 Studies in Nature Writing

One publishing course focusing on the production process: ENGL 206 Pre-Production for Publishing

One web design course:

ENGL 207 Web Development for Publishing One professional editing course:

ENGL 209 Studies in Professional Editing Two intermediate creative writing courses:

CRWR 216 Intermediate Workshop in Creative Writing – Poetry; CRWR 217 Intermediate Workshop in Creative Writing – Fiction; CRWR 218 Intermediate Workshop in Creative Writing – Drama; CRWR 219 Intermediate Workshop in Creative Writing – Creative Non-Fiction; CRWR 281 Intermediate Workshop in Creative Writing – Screen-Writing

Implementation date: May 2021

Cost: N/A

Science, Technology, and Health programs

ELEN 116 – 3 – 5.5 **Programming and Interfacing**
Course revision:

- **Prerequisites**

Rationale:
Currently, ELEN126 (Digital Electronics) is offered in the first semester of the ELEN program and ELEN116 (Programming and Interfacing) is offered in the second semester. ELEN116 is a co-requisite for ELEN153 (Introduction to the Internet of Things) but the ELEN department has found that the skill set needed for ELEN153 requires a student to have completed ELEN116. We would like to move ELEN116 to the first semester so that students have the full Programming and Interfacing skill set before starting ELEN153. ELEN126 is currently a prerequisite for ELEN116, but that was set up to ensure that part-time students would follow the correct stream of courses within the program (ELEN116-ELEN126-ELEN216-ELEN226), and not because of course content. We would like to remove the ELEN126 pre-requisite from ELEN116. The content of ELEN126 is not required for ELEN116.
Prerequisites:

Existing	Proposed
ELEN 126	-

Implementation date: September 2021
Cost: N/A

ELEN 153 – 3 – 5.5 **Introduction to the Internet of Things**
Course revision:

- **Prerequisites**
- **Corequisites**

Rationale:
Currently, ELEN126 (Digital Electronics) is offered in the first semester of the ELEN program and ELEN116 (Programming and Interfacing) is offered in the second semester. ELEN116 is a co-requisite for ELEN153 (Introduction to the Internet of Things) but the ELEN department has found that the skill set needed for ELEN153 requires a student to have completed ELEN116. We would like to make ELEN116 a prerequisite for ELEN153 and move ELEN116 to the first semester (and ELEN126 to the second semester) so that students have the full Programming and Interfacing skill set before starting ELEN153.
Prerequisites and corequisites:

	Existing	Proposed
Prerequisites	ELEN 110	ELEN 110, ELEN 116
Corequisites	ELEN 116	-

Implementation date: September 2021
Cost: N/A

Electronic Engineering Technology
Program revision:

- **Program outline/ resequencing of courses**

Rationale:
Currently, ELEN126 (Digital Electronics) is offered in the first semester of the program and ELEN116 (Programming and Interfacing) is offered in the second semester. ELEN116 is a co-requisite for ELEN153 (Introduction to the Internet of Things) but the ELEN department has found that the skill set needed for ELEN153 requires a student to have completed ELEN116. We would like to move ELEN116 to the first semester so that students have the full Programming and Interfacing skill set before starting ELEN153. ELEN126 is currently a prerequisite for ELEN116, but that was set up to ensure that part-time students would follow the correct stream of courses within the program (ELEN116-ELEN126-ELEN216-ELEN226).

Program outline/ resequencing of courses:

Existing:

Semester 1	**Fall - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN110	Computer Fluency	3
ELEN126	Digital Electronics	3
ELEN130	Electrical Circuit Analysis I	3
PHYS126	Physics for Electronics Eng. Tech	3
CMNS133	Technical Writing and Communications I	3
MATH137	Math for Electronic Eng. Tech 1	3

Semester 2	**Winter - 16 Weeks**		
Course Number	**Course Title**	**Credits**	
ELEN116	Programming and Interfacing	3	
ELEN140	Electrical Circuit Analysis II	3	
ELEN142	Fabrication I	3	
ELEN146	Electronic Devices and Circuits	3	
ELEN153	Fundamentals of the Internet of Things	3	
MATH147	Math for Electronic Eng. Tech 2	3	
ELEN152	**Fabrication II**	**3**	**Post Semester Short Course**

Semester 3	**Fall - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN213	Engineering Project Management	3
ELEN216	Microcontroller Technology	3
ELEN240	Fundamentals of Communication Systems	3
ELEN256	Electronic Devices and Circuits II	3
ELEN263	Control Systems and Automation	3
MATH257	Math for Electronic Eng. Tech 3	3

Semester 4	**Winter - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN226	Embedded Systems	3
ELEN227	Project and Report	6
ELEN250	Analog Communication Systems	3
ELEN251	Digital Communication Systems	3
ELEN273	Applications of the Industrial Internet of Things	3

Proposed:

Semester 1	**Fall - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN110	Computer Fluency	3
ELEN116	Programming and Interfacing	3
ELEN130	Electrical Circuit Analysis I	3
PHYS126	Physics for Electronics Eng. Tech	3
CMNS133	Technical Writing and Communications I	3
MATH137	Math for Electronic Eng. Tech 1	3

Semester 2	**Winter - 16 Weeks**		
Course Number	**Course Title**	**Credits**	
ELEN126	Digital Electronics	3	
ELEN140	Electrical Circuit Analysis II	3	
ELEN142	Fabrication I	3	
ELEN146	Electronic Devices and Circuits	3	
ELEN153	Fundamentals of the Internet of Things	3	
MATH147	Math for Electronic Eng. Tech 2	3	
ELEN152	**Fabrication II**	**3**	**Post Semester Short Course**

Semester 3	**Fall - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN213	Engineering Project Management	3
ELEN216	Microcontroller Technology	3
ELEN240	Fundamentals of Communication Systems	3
ELEN256	Electronic Devices and Circuits II	3
ELEN263	Control Systems and Automation	3
MATH257	Math for Electronic Eng. Tech 3	3

Semester 4	**Winter - 16 Weeks**	
Course Number	**Course Title**	**Credits**
ELEN226	Embedded Systems	3
ELEN227	Project and Report	6
ELEN250	Analog Communication Systems	3
ELEN251	Digital Communication Systems	3
ELEN273	Applications of the Industrial Internet of Things	3

Implementation date: September 2021
Cost: N/A

SBT 102 – 3 – 3 **Introduction to Design**
New course
Rationale:
This will provide the fundamental knowledge on architectural and interior design principles and elements which will serve the proposed increase in design courses within the program, and specifically the construction drafting and biophilic design courses.
Calendar description:
Architectural and interior design are important contributors in how we experience our daily life. Students will examine architectural styles, their historical influences, and the paradigm shift towards an ecologically sensitive and human centered built environment. Topics include architectural history, principles and elements of design, human ecological design, Frank Lloyd Wright, and interior design and the human experience. (3,0,0)
Prerequisites:
Admission to SBT
Course outline:

SBT 102: Introduction to Design (3,0,0)
Course Outline
Sustainable Building Technology
Okanagan College – Penticton Campus

Credit Hours: 3,0,0
Presentation Format: Lecture 3 hrs/wk
Prerequisite: None

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1. COURSE DESCRIPTION
Architectural and interior design are important contributors in how we experience our daily life. Students will examine architectural styles, their historical influences, and the paradigm shift towards an ecologically sensitive and human centered built environment. Topics include architectural history, principles and elements of design, human ecological design, Frank Lloyd Wright, and interior design and the human experience. (3,0,0)

2. MAJOR TOPICS
- Architectural history
- Principles and elements of design
- Human ecological design
- Frank Lloyd Wright
- Interior design and the human experience

3. COURSE EVALUATION

Course Component	Percentage of Final Course Grade
Assignments	30%
Attendance & Class Participation	5%
Quizzes	20%
Term Project	45%
Total	100%

4. COURSE MATERIALS

5. LEARNING OUTCOMES
- Illustrate and describe architectural styles and their historical influences
- Identify and summarize the use of design principles and elements in a building designed by Frank Lloyd Wright
- Describe the elements of human ecological design
- Prepare a case study example of a successful human ecological design
- Present an interior design scheme project that successfully integrates the human experience

Implementation date: September 2021
Cost: N/A

SBT 212 – 3 – 3 **Construction Drafting and BIM II**
New course
Rationale:
The addition of this course allow the students to further explore the state-of-the-art processes in producing construction documentation in the construction industry. Specifically, covering the software Revit while incorporating the collaborative (Integrated Design) capabilities of Building Information Modeling (BIM) and energy modeling that would complement the new proposed course, Building Systems and Energy Management.
Calendar description:
Construction drafting is further explored through the introduction of three-dimensional modeling software and its application from design through to construction documentation. Students are introduced to the tools and concepts of working with parametric building three-dimensional models to create residential and commercial construction drawings. Additional topics include the four- and five-dimensional aspects of Building Information Modeling as they relate to the construction industry. (3,0,0)
Prerequisites:
SBT 112
Course outline:

SBT 212: Construction Drafting & BIM II (3,0,0)
Course Outline
Sustainable Building Technology
Okanagan College – Penticton Campus

Credit Hours: 3,0,0
Presentation Format: Lecture 3 hrs/wk
Prerequisite: SBT 112

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1. COURSE DESCRIPTION:

Construction drafting is further explored through the introduction of three-dimensional modeling software and its application from design through to construction documentation. Students are introduced to the tools and concepts of working with parametric building three-dimensional models to create residential and commercial construction drawings. Additional topics include the four- and five-dimensional aspects of Building Information Modeling as they relate to the construction industry. (3,0,0)

2. MAJOR TOPICS

- Autodesk Revit
- Parametric modeling
- Three-dimensional (3D) drafting
- Four- and five-dimensional aspects of Building Information Modeling (BIM)

3. COURSE EVALUATION

Course Component	Percentage of Final Course Grade
Quizzes	20%
Assignments	50%
Final Project	30%
Total	**100%**

5. COURSE MATERIALS

TBD: Eric Wing. (2020). Revit 2020 for Architecture : No Experience Required. Sybex

6. LEARNING OUTCOMES

- Apply 3D modeling tools in Autodesk Revit to create 3D building models.
- Describe the tools and concepts of working with parametric models.
- Identify and summarize the 4D and 5D aspects of BIM in construction industry.
- Produce permit ready residential and commercial building construction plans, details, and schedules using BIM software.

- Produce rendered drawings to create photorealistic views and animated scenes from building models.

Implementation date: September 2022
Cost: N/A

SBT 214 – 3 – 3 **Biophilic Design**
New course
Rationale:
Although the concepts of Biophilia and Biophilic Design in the built environment have been present since the early 20th century (and before) and is shown in Frank Lloyd Wright's architectural achievements as well as more recently in Stephen Kellert's 2018 publication on Biophilic Design, this practice is slowly emerging internationally. The need for this type of design in both architecture and interior design is continuously increasing due to its proven benefits to the occupants of both private and public buildings including enhanced healing and recovery, fewer health problems, greater motivation, improved productivity, and lowered stress. It is important for our students to gain, at a minimum, an introduction to the Biophilic Design principles and elements and their associated benefits to building occupants as they move towards becoming building technologists. In addition, Biophilic Design is included within the major sustainability assessment frameworks including Living Building Challenge and WELL.
Calendar description:
Biophilic Design is a design philosophy which aims to improve wellbeing through the human experience. Students will examine the principles, elements, practices, and benefits of incorporating biophilic design within our interior and exterior living spaces. Topics include human adaptations to nature, interrelated and integrated settings, emotional attachments to structures, the direct and indirect nature experience, as well as color psychology. (3,0,0)
Prerequisites:
SBT 102
Course outline:

SBT 214: Biophilic Design (3,0,0)
Course Outline
Sustainable Building Technology
Okanagan College – Penticton Campus

Credit Hours:	3,0,0
Presentation Format:	Lecture 3 hrs/wk
Prerequisite:	SBT 102

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1. COURSE DESCRIPTION:

Biophilic Design is a design philosophy which aims to improve wellbeing through the human experience. Students will examine the principles, elements, practices, and benefits of incorporating biophilic design within our interior and exterior living spaces. Topics include human adaptations to nature, interrelated and integrated settings, emotional attachments to structures, the direct and indirect nature experience, as well as color psychology. (3,0,0)

2. MAJOR TOPICS

- Human adaptations to nature
- Interrelated and integrated settings
- Emotional attachments to structures
- The nature experience – direct and indirect design elements
- Color psychology

3. COURSE EVALUATION

Course Component	Percentage of Final Course Grade
Quizzes	20%
Assignments	50%
Final Project	30%
Total	**100%**

5. COURSE MATERIALS

TBA

6. LEARNING OUTCOMES

- Identify and summarize the principles and elements of biophilic design.
- Analyze the potential benefits of a proposed biophilic design scheme for a prospective client.
- Differentiate between direct and indirect natural design elements.
- Integrate and apply direct and indirect elements of the nature experience in a room design.
- Test the color psychology theories on a sample of individuals using a qualitative assessment tool, as specified by the instructor.

Implementation date: September 2021
Cost: N/A

SBT 218 – 3 – 3 **Building Systems and Energy Management**
New course
Rationale:
We have received reoccurring feedback (from students and industry professional) that our students are substandard in the area of buildings systems (space heating, space cooling, DHW, lighting, HRV, equipment types and differences etc.) and energy management functions (understanding bills, labeling systems, energy rating systems for equipment, products and appliances, energy audits, modelling, measurement and verification, coming up with energy conversation measures, as well as the related financials). They are lacking in these areas with new builds, but especially struggling related to existing buildings and retrofits. This would also be a favorable class to utilize existing OC and program assets which include the SCMT Tech House and novel equipment we have such as blower test kit, infrared gun, and EMF/ELF measurement tools, among others.
Calendar description:
Students will be familiarized with mechanical and electrical systems in new and existing buildings. The focus is on Part 9 buildings but relevant systems are included for Part 3 buildings, as it pertains to the Energy Step Code. Equipment and appliance rating systems are discussed. Students examine fundamental energy management skills to effectively conduct energy modeling on new and existing buildings, energy conservation measures, financial viability of each option and post-construction performance verification. (3,0,0)
Prerequisites:
SBT 144
Course outline:

SBT 218: Building Systems and Energy Management (3,0,0)
Course Outline
Sustainable Building Technology
Okanagan College – Penticton Campus

Credit Hours:	3,0,0
Presentation Format:	Lecture 3 hrs/wk
Prerequisite:	SBT 144

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1. COURSE DESCRIPTION:

Students will be familiarized with mechanical and electrical systems in new and existing buildings. The focus is on Part 9 buildings but relevant systems are included for Part 3 buildings, as it pertains to the Energy Step Code. Equipment and appliance rating systems are discussed. Students examine fundamental energy management skills to effectively conduct energy modeling on new and existing buildings, energy conservation measures, financial viability of each option and post-construction performance verification. (3,0,0)

2. MAJOR TOPICS

- Heating, cooling, and domestic hot water systems
- Lighting, appliances and ventilation for new and existing residential buildings
- Energy efficiency renovation practices
- Energy auditing and data-collection
- Energy simulation modeling
- Feasibility studies and client relations

3. COURSE EVALUATION

Course Component	Percentage of Final Course Grade
Quizzes	20%
Assignments	50%
Final Project	30%
Total	**100%**

5. COURSE MATERIALS

RETScreen, HOT2000, BuildingGreen premium access

6. LEARNING OUTCOMES

- Identify and evaluate mechanical heating, cooling and ventilation systems and their costs
- Explain the operation and performance of heating, ventilation and cooling systems
- Perform basic energy simulation and analysis of new or existing residential buildings
- Recognize and propose highly efficient design principles for new construction
- Identify and assess energy conservation measures for exiting residential buildings
- Perform financial feasibility related to energy efficiency and energy conservation measures
- Describe energy auditing functions, rating systems (e.g. EnerGuide) and labelling, and measurement and verification protocols

Implementation date: September 2022
Cost: N/A

SBT 230 – 3 – 3 **Construction Conflicts and Law**
New course
Rationale:
As per faculty recommendations, this course combines the learning outcomes and content from SCMT 216: Conflicts in Construction & SCMT: 248 Construction Law that are relevant to the SBT program into one new course.
Calendar description:
The students examine basic contract law and its application to construction contracts, including the liabilities and responsibilities of all parties to a contract, and ways to avoid and resolve conflicts that often arise for a variety of reasons during construction projects. Topics also include other construction related law such as builder's liens, debt collection, bonding, insurance, and environmental and safety law. (3,0,0)
Prerequisites:
SBT 120
Course outline:

SBT 230: Construction Conflicts and Law (3,0,0)
Course Outline
Sustainable Building Technology
Okanagan College – Penticton Campus

Credit Hours:	3,0,0
Presentation Format:	Lecture 3 hrs/wk
Prerequisite:	SBT 120

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1. COURSE DESCRIPTION:

The students examine basic contract law and its application to construction contracts, including the liabilities and responsibilities of all parties to a contract, and ways to avoid and resolve conflicts that often arise for a variety of reasons during construction projects. Topics also include other construction related law such as builder's liens, debt collection, bonding, insurance, and environmental and safety law. (3,0,0)

2. MAJOR TOPICS

- Contracts

- Insurance and bonds
- Liens
- Employment law
- Causes of conflicts in construction
- Reducing and managing conflict

3. COURSE EVALUATION

Course Component	Percentage of Final Course Grade
Quizzes	20%
Assignments	50%
Final Project	30%
Total	**100%**

5. COURSE MATERIALS

N/A

6. LEARNING OUTCOMES

- Apply common legal concepts and terminology to construction contract administration
- Describe the various contracting models available to projects and identify which are most appropriate for a given project
- Define the legal obligations and liabilities of various parties in the construction industry
- Define the basic principles related to tendering, bonding, liens, and insurance
- Identify the causes of conflicts and explain their significance in terms of project hindrance
- Demonstrate ability to identify potential conflicts before they occur and how to manage and resolve them when they do
- Summarize the importance of communication and contractual documentation in conflict resolution

Implementation date: September 2022
Cost: N/A

SCMT 112 – 3 – 3 **Construction Measurements and Drafting**
Course revision:

- **Title –** new title **– Construction Measurements and BIM I**
- **Course code –** new code **– SBT 112**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
Currently this class contains some redundancy due to the material delivered in SCMT 115 Construction Methods I. Faculty have recommended that the construction measurements content be delivered in SCMT 115 as it aligns better with the theory and practice content of this class. Additionally, by removing the construction measurements related content from SCMT 112 it provides flexibility to add additional construction drafting and building information modeling (BIM) learning outcomes.
Calendar description:
Existing:
Learners gain an understanding of construction terminology and drawings (architectural, structural, electrical, plumbing, HVAC and landscaping) through interpretation and measurement of construction project plans and specifications. Learners are introduced to Building Information Modeling (BIM) and 3D drafting via Tremble Sketch-up. (3,0,0)
Proposed:
Students gain an understanding of construction terminology and documents through the interpretation and review of residential and commercial construction drawings. Students create a set of working construction drawings using three-dimensional modeling software while being introduced to the use of Building Information Modeling (BIM) in the construction industry. (3,0,0)

Prerequisites:

Existing	Proposed
Admission to SCMT	Admission to SBT

Content:
The course will focus on construction drawings, plan reading, three-dimensional 3D drafting and Building Information Modeling (BIM).
Implementation date: September 2021
Cost: N/A

SCMT 113 – 3 – 3 **Quantity Surveying and Estimating I**
Course revision:

- **Course code –** new code **– SBT 113**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
Changes in the learning outcomes are meant to target a skill based, procedural approach to breaking down tasks and introducing strong estimating habits, highly translatable to a broad range of estimating fields within construction.
Calendar description:
Existing:
Learners are introduced to the role and responsibilities of the quantity surveyor and construction estimator. Topics covered include overhead contingencies, labor and equipment costs in construction, estimating by division, and due diligence methods associated with determining the accuracy of estimating takeoffs. Leaners are introduced to the General Conditions costs on a project (Division 1) and prepare cost estimates for various construction projects. (3,0,0)
Proposed:
Students are introduced to the role and responsibilities of the quantity surveyor and construction estimator. Topics covered include overhead, contingencies, labor and equipment costs in construction, estimating by division, and due diligence methods associated with determining the accuracy of estimating takeoffs. Students are introduced to the General Conditions costs on a project (Division 1) and prepare cost estimates for various construction projects. (3,0,0)
Prerequisites:

Existing	Proposed
SCMT 112	SBT 112

Content:
The content change reflects the revised learning outcomes which include the application of procedural breakdown of tasks necessary for accurate estimates and summarizing the benefits of accurate estimating in the context of sustainability.
Implementation date: September 2021
Cost: N/A

SCMT 114 – 3 – 3 **Sustainability and Ethics in Construction**
Course revision:

- **Course code –** new code **– SBT 114**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from Admission to SCMT to Admission to SBT.
Calendar description:
Existing:
Learners are introduced to the ethical foundations of sustainability for construction professionals, the various interpretations and applications of sustainability, and the role of technology in addressing sustainability issues. Learners explore the fundamental principles involved in making and implementing decisions in the midst of complex sustainability issues including intergenerational equity, social justice in the global community, interspecies respect and protection, and ecological economics. (3,0,0)

Proposed:
Engineer, Architects, Technologists and Construction professionals who deeply engage in the development and application of sustainable construction principles make decisions that have implications that impact the health and welfare of society as well as the built and natural environment. Students are provided with basic instruction in the ethical foundations of sustainability for construction professionals. Students will learn the various interpretations and applications of sustainability, the role of technology in addressing sustainability issues, and the ethical principles essential for attending to these concerns. Students are introduced to a basic set of principles that will help learners consider such issues as intergenerational equity, social justice in the global community, interspecies respect and protection, and ecological economics. Students will also explore the challenges involved in making and implementing decisions in the midst of complex sustainability issues. (3,0,0)

Prerequisites:

Existing	Proposed
Admission to SCMT	Admission to SBT

Implementation date: September 2021
Cost: N/A

SCMT 115 – 4 - 6 **Construction Methods I**

Course revision:

- **Course code –** new code **– SBT 115**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
Updating the learning outcomes to reflect the addition of the use of a scale model, energy efficient framing, BC Energy Step Code, and surveying building layout.

Calendar description:
Existing:
This introductory course on construction methods provides an overview of the equipment and materials associated with construction projects. Learners study the basic principles of equipment and material selection, safety implications and operational procedures. Learners physically construct a range of construction systems and details that are commonly used in projects. Many of these construction elements are related to foundations and formwork. (3,3,0)
Proposed:
This introductory course on construction methods provides an overview of the equipment and materials associated with construction projects. Students study the basic principles of project delivery, equipment and material selection, building site layout, and safety implications. Students design a scale model to demonstrate energy-efficient construction methods that conform to the BC Building Code. (3,3,0)

Prerequisites:

Existing	Proposed
Admission to SCMT	Admission to SBT

Content:
This course is incorporating building site layout using surveying equipment, as well as curriculum in energy-efficient construction methods within the context of the BC Building Code.
Implementation date: September 2021
Cost: N/A

SCMT 116 – 2 – 2 **Scheduling and Cost Control**

Course revision:

- **Course code –** new code **– SBT 116**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from no prerequisite to SBT 112.

Calendar description:
Existing:
This course provides an introduction to critical path scheduling and budget management for construction projects. Learners review the construction contract to the context of completion dates, penalties, hours of work, and

implications to the project budget. Learners are introduced to Critical Path Management (CPM) scheduling software commonly used in construction, as well as project cash flow, profitability, cost planning, and cost accounting. (1,1,0)
Proposed:
This course provides an introduction to critical path scheduling and budget management for construction projects. Students review the construction contract to the context of completion dates, penalties, hours of work, and implications to the project budget. Students are introduced to Critical Path Management (CPM) scheduling software commonly used in construction, as well as project cash flow, profitability, cost planning, and cost accounting. (1,1,0)
Prerequisites:

Existing	Proposed
-	SBT 112

Implementation date: September 2021
Cost: N/A

SCMT 120 – 3 – 3 **Procurement Process**
Course revision:

- **Title –** new title **- Project Delivery**
- **Course code –** new code **– SBT 120**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
The first half of the course is proposed to focus on Conventional Project Delivery while the second would focus on Integrated/ Sustainable Project Delivery, and LEAN. Both original courses, Procurement (SCMT 120) and Lean Construction (SCMT 206) seem extended beyond what is necessary to deliver value to students on most pertinent topics related to each. Moreover, the concepts are rather abstract as they relate to senior roles in organizations (project managers, construction managers, project coordinators, management in general, professional like architects and engineers) which is not in alignment with typical student industry experience.
Calendar description:
Existing:
Learners are introduced to the different procurement methods commonly used in construction projects. Learners gain knowledge in basic principles of procurement, the associated risks and benefits of varying procurement options, the efficient implementation of sustainability in each route and the effect of project delivery methods on sustainability objectives. (3,0,0)
Proposed:
Students will explore conventional project delivery methods in construction, as well as novel concepts including integrated project delivery and lean construction management. Students gain knowledge in basic principles of procurement and the effect project delivery methods have on sustainability objectives. The general characteristics of the project delivery methods are examined including their associated risks and benefits, and strategies to most effectively implement sustainability in each. (3,0,0)
Prerequisites:

Existing	Proposed
SCMT 112	SBT 112

Content:
This course is streamlining the important curriculum content that was originally found in SCMT 120 (Procurement Process) while integrating the important aspect that were found in Lean Construction (SCMT 206) which is being deleted.
Implementation date: September 2021
Cost: N/A

SCMT 124 – 3 – 3 **Sustainability and the Built Environment**
Course revision:

- **Course code –** new code **– SBT 124**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 114 and Admission to SCMT to Admission to SBT.

Calendar description:
Existing:
This introductory course provides learners with an overview of the history and global perceptions of the sustainability movement as it relates to the built environment. Through case studies and live projects, learners investigate the effect that sustainable policies and green building certifications have on energy efficiency, water conservation, and indoor environmental quality issues. (3,0,0)
Proposed:
Students will be introduced to the opportunities and methods commonly used to enhance sustainable practice within the construction industry. Through case study and live projects, students investigate the mitigation of pollution, renewable energy systems (utility scale and building scale), energy efficiency, water conservation, sustainable materials and integrated design solutions.
Prerequisites:

Existing	Proposed
SCMT 114 and admission to SCMT	Admission to SBT

Implementation date: September 2021
Cost: N/A

SCMT 125 – 4 – 6 **Construction Methods II**
Course revision:

- **Course code –** new code **– SBT 125**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
Updating the learning outcomes to reflect the addition of energy-efficient framing, BC Building Code Part 9, Part 3, and surveying building layout.
Calendar description:
Existing:
This introductory course is a continuation of SCMT 115 and expands on equipment and materials associated with construction projects. Learners study basic principles of equipment and materials selection, safety implications and operational procedures. Learners physically construct a range of construction systems and details that are commonly used in projects. Many of these construction elements are related to framing. (3,3,0)
Proposed:
This course is a continuation of Construction Methods I. Students continue to design and construct a scale model house to demonstrate various energy-efficient construction details that conform to Part 9 of the BC Building Code. Students apply a range of construction methods and examine the advantages and constraints of different methods and materials. (3,3,0)
Prerequisites:

Existing	Proposed
SCMT 115	SBT 115

Content:
The learning outcomes are being updated to reflect the addition of energy-efficient framing, BC Building Code Part 9 and the advantages and constraints of different construction systems.
Implementation date: September 2021
Cost: N/A

SCMT 132 – 3 – 3 **Introduction to Sustainability Assessment Drafting**
Course revision:

- **Course code –** new code **– SBT 132**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 114 to SBT 114.
Prerequisites:

Existing	Proposed
SCMT 114	SBT 114

Implementation date: September 2021
Cost: N/A

SCMT 134 – 3 – 3 **Green Building Principles**
Course revision:

- **Course code –** new code **– SBT 134**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 124 to SBT 124.
Calendar description:
Existing:
Learners are introduced to a whole systems thinking approach to the development of green buildings which includes: modern and vernacular design strategies, the human needs for comfort and shelter, heat transfer and loss, building form, bioclimatic design, passive heating and cooling, green roofs and walls, daylighting, and ultra-low energy buildings. (3,0,0)
Proposed:
Students are familiarized with a whole systems thinking approach to the development of green buildings. Students will be introduced to modern and vernacular design strategies; the human needs for comfort and shelter; heat transfer and loss; building form; bioclimatic design; passive heating and cooling; green roofs and walls; daylighting; and thermal envelopes. (3,0,0)
Prerequisites:

Existing	Proposed
SCMT 124	SBT 124

Implementation date: September 2021
Cost: N/A

SCMT 144 – 3 – 3 **Sustainable Methods and Technologies**
Course revision:

- **Course code –** new code **– SBT 144**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 124 to SBT 124.
Calendar description:
Existing:
Learners study construction technologies and methods that reduce or eliminate the environmental impacts of construction activities and projects. Methods and technologies include low impact development, wastewater and rainwater systems, high performance building envelopes, waste segregation and recycling, and natural building methods. (3,0,0)
Proposed:
Students study construction technologies and methods that reduce or eliminate the environmental impacts of construction activities and projects. Methods and technologies include low impact development, wastewater and rainwater systems, high performance building envelopes, waste segregation and recycling, and natural building methods. (3,0,0)
Prerequisites:

Existing	Proposed
SCMT 124	SBT 124

Implementation date: September 2021
Cost: N/A

SCMT 212 – 3 – 3 **Quantity Surveying and Estimating II**
Course revision:

- **Course code –** new code **– SBT 213**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:
Changes to learning outcomes are intended to produce a well-rounded, detail oriented graduate that has highly adaptable skills with proficiency in acquiring information efficiently from a range of complex construction documents.

Students will enhance their takeoff skills implementing an organized and clear process using software templates, and deliver and present a professional, detailed project estimate.

Calendar description:

Existing:

Learners investigate complex construction project documents. Learners analyze construction projects and prepare takeoffs for earthworks, concrete, formwork, structural steel, and lumber and prepare a complete bid document for the project tender package. The elements of the bid include a bill of materials, construction costs, general condition costs and scheduling costs. Learners are introduced to WinEst electronic takeoff and estimating software. (3,0,0)

Proposed:

Students will investigate complex project case studies. Students analyze architectural, structural engineering, and specialty documents to generate takeoffs for earthwork, concrete, wood, thermal and moisture protection, doors and windows, and finishes, with an emphasis on establishing a clear, task specific process. Students are introduced to Request for Proposals (RFP) and Request for Quotes (RFQ) procedures, as well as electronic takeoff and estimating software. (3,0,0)

Prerequisites:

Existing	Proposed
SCMT 113	SBT 113

Content:

This course is incorporating Request for Proposals (RFP) and Request for Quotes (RFQ) procedures.

Implementation date: September 2022

Cost: N/A

SCMT 223 – 3 – 3 **Sustainable Materials**

Course revision:

- **Course code –** new code **– SBT 223**
- **Calendar description**
- **Prerequisites**

Rationale:

This course is being revised to update the prerequisite only, from SCMT 144 to SBT 144.

Calendar description:

Existing:

Learners identify and select suitable materials and design methods to meet project sustainability goals including low emitting materials, use of renewable, recycled, regional materials, and cradle-to-cradle design. Learners review materials through lifecycle building assessment and environmental product declarations, and design high performance building envelope systems. Learners are also introduced to developing and presenting a business case for sustainable materials. (2,1,0)

Proposed:

Students are taught to identify and to select appropriate materials and design methods to meet the goals of an extensive range of sustainable construction projects. Topics will include low emitting materials, use of renewable, recycled, regional materials, cradle-to-cradle design. Students will review materials based on lifecycle building assessment and environmental & health product declarations. Lab sessions will involve design of high performance building envelope systems using a combination of renewable, regional, recycled and or environmentally benign materials with the goal of reducing or eliminating construction material waste, carbon emissions, and environmental degradation. Students will also become acquainted with making the economic case for sustainability and how to present it (2, 1, 0).

Prerequisites:

Existing	Proposed
SCMT 144	SBT 144

Implementation date: September 2022

Cost: N/A

SCMT 224 – 3 – 3 **Greening Existing Infrastructure**

Course revision:

- **Course code –** new code **– SBT 224**
- **Calendar description**
- **Prerequisites**

Rationale:

This course is being revised to update the prerequisite only, from SCMT 134 to SBT 134.

Calendar description:

Existing:

Learners examine the issues, techniques and processes that are involved in sustainably renewing the existing built environment. Topics include restorative design, building performance studies, building commissioning, improving energy and water efficiency, limiting (re)construction waste, improving indoor environmental quality supporting sustainable operations, passive survivability, consideration of renewable energy sources, and post-occupancy evaluations. (3,0,0)

Proposed:

Students will examine the issues, techniques and processes that are involved in turning the existing built environment into more sustainable and resilient infrastructure. Topics include assessing existing performance, LEED EBOM, instituting commissioning, improving energy and water efficiency, limiting (re)construction waste, improving indoor environmental quality supporting sustainable operations, passive survivability and consideration of renewable energy sources. (3,0,0)

Prerequisites:

Existing	Proposed
SCMT 134	SBT 134

Implementation date: September 2022

Cost: N/A

SCMT 226 – 3 – 3 **Leadership and Innovation**

Course revision:

- **Course code –** new code **– SBT 226**
- **Calendar description**
- **Prerequisites**

Rationale:

This course is being revised to update the prerequisite only, given the current prerequisite (SCMT 216 – Conflicts in Construction) is proposed to be deleted. No prerequisite will be needed to replace SCMT 216.

Calendar description:

Existing:

This course draws together the knowledge from other courses and asks the learner to consider the roles and responsibilities of team members throughout a typical construction project. Topics covered are transformational and value-based leadership, creating conditions open for innovative solutions by all team members. The course is taught partly through role-play in the context of real-life construction projects. (3,0,0)

Proposed:

Students are asked to draw together the knowledge from other courses and to consider the roles and responsibilities of team members throughout a typical construction project. Topics covered are transformational and value-based leadership, creating conditions open for innovative solutions by all team members. The course is taught partly through role-play in the context of real-life construction projects. (3,0,0)

Prerequisites:

Existing	Proposed
SCMT 216	-

Implementation date: September 2022

Cost: N/A

SCMT 228 – 3 – 3 **Renewable Energy Technologies**

Course revision:

- **Course code –** new code **– SBT 228**
- **Calendar description**
- **Prerequisites**

Rationale:

This course is being revised to update the prerequisite only, from SCMT 134 to SBT 134.

Calendar description:

Existing:

This course provides a comprehensive overview of alternative energy sources, applications, technologies and strategies. Topics cover the latest developments relating to wind power systems, solar thermal heating and photovoltaic generation, geothermal heating, and electrical production, bio-fuels, waste-to-energy systems, energy storage, fuel cells, and hydroelectric power among others. Economic issues along with financial methodologies and incentives will also be considered. (2,1,0)

Proposed:

Students are provided with a comprehensive overview of alternative energy sources, applications, technologies and strategies. Topics cover the latest developments relating to wind power systems, solar thermal heating and photovoltaic generation, geothermal heating, and electrical production, bio-fuels, waste-to-energy systems, energy storage, fuel cells, and hydroelectric power among others. Economic issues along with financial methodologies and incentives will also be considered. (2,1,0)

Prerequisites:

Existing	Proposed
SCMT 134	SBT 134

Implementation date: September 2022

Cost: N/A

SCMT 234 – 3 – 3 **Sustainable Design and Development**

Course revision:

- **Course code –** new code **– SBT 234**
- **Calendar description**
- **Prerequisites**

Rationale:

This course is being revised to update the prerequisite only, from SCMT 223 to SBT 223.

Calendar description:

Existing:

Learners perform an advanced investigation into how the design and development procedures of construction projects can be improved to meet Owner Project Requirements (OPRs) and sustainability goals. Learners, drawing experience from previous courses, develop their own sustainable design proposals and present these in a financial format suitable for consultant review and appropriate for developers/owners. (3,0,0)

Proposed:

Students perform an advanced investigation into how the design and development procedures of construction projects can be improved to meet Owner Project Requirements (OPRs) and sustainability goals. The students develop their own sustainable design proposals and present these in a format that is suitable for formal review by consultants. The students, drawing experience from pervious courses, also present their sustainable design proposals in a financial format appropriate for developers/owners. (3,0,0)

Prerequisites:

Existing	Proposed
SCMT 223	SBT 223

Implementation date: September 2022

Cost: N/A

SCMT 238 – 3 – 3 **Sustainable Business Case Drafting**
Course revision:

- **Course code –** new code **– SBT 238**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 223 to SBT 223.
Prerequisites:

Existing	Proposed
SCMT 223	SBT 223

Implementation date: September 2022
Cost: N/A

SCMT 244 – 3 – 3 **Regenerative Design**
Course revision:

- **Course code –** new code **– SBT 244**
- **Calendar description**
- **Prerequisites**

Rationale:
This course is being revised to update the prerequisite only, from SCMT 228 to SBT 228.
Calendar description:
Existing:
Learners explore the fundamentals of ecosystems which promote designs for regeneration. Learners are taught the fundamentals of regenerative approaches to sustainable development and design which include place and potential, regenerative capacity, partnering with place, and progressive harmonization. Underlying topics include biomimicry, biomimetic, restorative design, and regenerative design and development. (3,0,0)
Proposed:
Students explore the fundamentals of ecosystems which promote designs for regeneration. Students are taught the fundamentals of regenerative approaches to sustainable development and design which include place and potential, regenerative capacity, partnering with place, and progressive harmonization. Underlying topics include biomimicry, and biomimetic, restorative and regenerative design and development (3,0,0).
Prerequisites:

Existing	Proposed
SCMT 228	SBT 228

Implementation date: September 2022
Cost: N/A

SCMT 251 – 3 – 4 **Project Planning**
Course revision:

- **Title –** new title **– Capstone Project I**
- **Course code –** new code **– SBT 251**
- **Calendar description**
- **Prerequisites**
- **Contact hours**
- **Content**

Rationale:
We have moved away from rigid planning in fall term and delivery in the winter term, therefore, we are proposing to change the title. In addition, having capstone in the title makes the purpose of this course definitive.
Calendar description:
Existing:
This final-year project course provides learners with a challenging project requiring the demonstration of skills and knowledge gained throughout the program. This team-based project is selected based on potential to contribute to the economic, environmental, and social well-being of the community. Learners will prepare and present to members of the community a complete proposal outlining the project schedule, estimates, costs, and contribution to community sustainability. (1,3,0)
Proposed:
In this final-year project course, students work in small teams to solve challenging real-world problems proposed by community partners and college faculty. Students apply knowledge and skills learned throughout the program to

projects that contribute to the economic, environmental, and social well-being of the community. Upon project completion, the capstone project teams will prepare and present to members of the community and faculty an interim report outlining the project findings and its contribution to community sustainability. (0,4,0)

Prerequisites:

Existing	Proposed
SCMT 125	SBT 125

Contact hours:

	Existing	Proposed
Lecture	1	0
Lab	3	4

Content:

This course has been updated to allow students to pursue practicum placements with local employers to conduct research projects in addition to the option to construct a student project.

Implementation date: September 2022

Cost: N/A

SCMT 252 – 3 – 4 **Project Delivery**

Course revision:

- **Title –** new title **– Capstone Project II**
- **Course code –** new code **– SBT 252**
- **Calendar description**
- **Prerequisites**
- **Content**

Rationale:

We have moved away from rigid planning in fall term and delivery in the winter term, therefore, we are proposing to change the title. In addition, having capstone in the title makes the purpose of this course definitive.

Calendar description:

Existing:

This final-year project course is a continuation of the project proposed in SCMT 251. This team-based project is selected on its potential to contribute to the economic, environmental, and social well-being of the community. Learners will manage the construction of the proposed project and officially present the final constructed project to the members of the community. (0,4,0)

Proposed:

Students further their team efforts to solve the challenging real-world problem(s) chosen, with community partners and college faculty, in SBT 251. Students continue to apply knowledge and skills learned throughout the program to their sustainability projects. Upon project completion, the capstone project teams prepare and present to members of the community and faculty a final report outlining the project findings and its contribution to community sustainability. (0,4,0)

Prerequisites:

Existing	Proposed
SCMT 251	SBT 251

Content:

This course has been updated to allow students to pursue practicum placements with local employers to conduct research projects in addition to the option to construct a student project.

Implementation date: September 2022

Cost: N/A

SCMT 110 – 3 – 5 **Surveying in Construction**

Course deletion

Rationale:

This course plays a small or insignificant role in the practical placement of our students upon graduation. It also falls outside of our core discipline learning outcomes now that we are changing to building technologists instead of construction managers. However, there are a few key learning outcomes that are proposed to be merged into the Construction Methods I (proposed SBT 115) course.

Implementation date: June 2021

Cost: N/A

SCMT 148 – 3 – 4 **Statics and Strength of Materials I**
Course deletion
Rationale:
This is a silo course (predating all SCMT faculty) which overall plays a small or insignificant role in the practical placement of our students upon graduation. It also falls outside of our core discipline learning outcomes now that we are changing to building technologists instead of construction managers. It is also not a prerequisite for another course (aside from Construction Law which we are proposing to delete). Deleting this course will make a spot available for a new course, proposed to be Biophilic Design (new SBT 214).
Implementation date: June 2022
Cost: N/A

SCMT 206 – 3 – 3 **Lean Construction**
Course deletion
Rationale:
The content from this course is being merged into the proposed revised SBT 120 Project Delivery course. The original Lean Construction and Procurement courses are currently stretched out, and the concepts are rather abstract as they relate to senior roles in organizations (project managers, construction managers, project coordinators, management in general, professional like architects and engineers). Merging these two courses will create a spot in the program for a new course, proposed to be Building Systems and Energy Management (new SBT 218).
Implementation date: June 2022
Cost: N/A

SCMT 216 – 3 – 3 **Conflicts in Construction**
Course deletion
Rationale:
This course will be deleted to create a new blended course called Construction Conflicts and Law (new SBT 230). The content in SCMT 216 Conflicts in Construction that is relevant to the new SBT program can be covered in half of the current contact hours. Faculty that have delivered this course are recommending to cover conflicts during the first half of a term in a combined course with relevant content from current SCMT 248 Construction Law course. Also, deleting this course makes room for new proposed course SBT 212 (Construction Drafting and BIM II).
Implementation date: June 2022
Cost: N/A

SCMT 248 – 3 – 5 **Construction Law**
Course deletion
Rationale:
These two courses are deleted to create a new blended course called Construction Conflicts and Law (new SBT 230). The content in SCMT 248 Construction Law that is relevant to the new SBT program can be covered in half of the current contact hours. Faculty that have delivered this course are recommending to cover conflicts during the second half of a term in a combined course with relevant content from current SCMT 216 Construction Conflicts course. Furthermore, there is content from current course SCMT 248 that is already covered in other courses. Also, deleting SCMT 248 makes room for new proposed course SBT 212 (Construction Drafting and BIM II).
Implementation date: June 2022
Cost: N/A

Sustainable Construction Management Technology
Program revision:

- **Program name –** new name **– Sustainable Building Technology**
- **Program description**
- **Addition of courses**
- **Revision of courses**
- **Deletion of courses**
- **Program outline/ resequencing of courses**

Rationale:
Since the SCMT program first launched in 2014 the building industry has experienced several significant changes like the adoption of performance based energy codes, and the increased demand for building professionals that understand building science, integrated project delivery, and the tools used to measure and delivery high performance buildings. Our graduates are uniquely positioned to meet this demand as well as be drivers of change in the industry. Due to the evolving nature of our program and the continuous aim to meet the needs of our changing industry, both present and future, the current program name of Sustainable Construction Management Technology is no longer best suited to describe the changes proposed within the program. The new program title of Sustainable Building Technology will therefore help the program to be better identified within the realm of sustainability and building professionals. Additionally, we believe the new program title to be more accurate and inclusive to various demographics, skill levels and career paths that graduates are filling and feel it will broaden the appeal of the program.
It is also the program's intent to be accredited through CTAC's Architectural, Building and Construction - Technologist (ARCTY) designation. Because of alignment with this accreditation along with changes occurring in the industry and recommendations from the program PAC, we have revised our program streams, identified the overlaps and gaps of the program though curriculum mapping, and as a result incorporated the needed changes in terms of new courses, revised courses, and deleted courses.
Program description:
Existing:
The Sustainable Construction Management Technology (SCMT) program is a two-year diploma program, based at the Centre of Excellence at Okanagan College's Penticton campus. SCMT is a forward-thinking program designed to enable, empower and inspire the emerging generation of construction managers and technologists to deliver true sustainable development. The graduating students will play a leading role in the construction industry - both in Canada and internationally - to deliver projects that achieve high sustainability performance and contribute to the economic, environmental, and social well-being of communities.
The program will provide learners with the technical, business and interpersonal skills required to effectively manage construction projects of varying size and complexity, emphasizing sustainable design principles. Students will develop the technical knowledge and skills required to construct all scales of infrastructure projects - from planning through to completion. Students will also learn to estimate material requirements, costs, schedule and manage construction projects.
In consultation with industry-experienced practitioners, both internal and external, the SCMT program has been designed with five major themes which address the important aspects of the built environment. The five themes are as follows:
Building Studies;
Commercial Studies;
Sustainability Studies;
Core Studies; and
Projects.
The first two themes address the core study areas of construction management from commercial and building aspects. These include quantity surveying, estimating, procurement, planning, processes and construction. The core studies theme includes courses on business management, math, communications, law, civil engineering and human resources. The first and second year projects consist of practical laboratories that may take place in the college or elsewhere in the local community or further afield. With the exception of the three Business Administration courses, all courses within these streams require face-to-face delivery.
The sustainability theme provides the needed foundation and a life cycle thinking approach to green building principles, existing infrastructure, and renewable energy technologies. This stream (11 courses) is delivered through blended learning, which includes face-to-face and online delivery. The face-to-face component consists of an intensive 2-3 day delivery during the first week. After the intensive hours are completed in the first week, these courses will be delivered online over the remaining twelve weeks of each term.
The program follows the Problem-Based Learning (PBL) approach to influence, shape and guide the emerging generation of construction professionals. The learning outcomes of the program will follow a problem-based

approach, so that students can influence the resiliency of projects in the industry in which many graduates will find themselves working. Students will have an opportunity to gain work experience by participating in paid co-op work with a construction-related company. Such experience increases students' employment opportunities and their value to their employers upon graduation.
On graduation, there will be a wide choice of career opportunities as a site superintendent, general contractor, subcontractor, material supplier, field coordinator, quantity surveyor, estimator, inspector, project manager, scheduler or contract manager. The business elements of the program may also offer opportunities to establish a new construction company - one which specializes in sustainable development and construction.
The College intends to obtain certification with the Applied Science Technologist and Technicians of British Columbia (ASTTBC) and the Canadian Technology Accreditation Board (CTAB) for the program.
The SCMT 101 Co-op Work Term option is available between year 1 and year 2 of the program.

Proposed:
The Sustainable Building Technology two-year curriculum provides students with the foundation needed to prepare, inspire, and mobilize the next generation of building technologists. This program covers the principles, concepts, and practices of project design to completion through whole systems thinking and multidisciplinary approaches which collectively enables the students to deliver sustainable built environments that enhance human well-being.

The program is organized through five core streams which were developed by the Sustainable Building Technology faculty and through consultation with industry representatives. These allow for specialized education within the field of sustainability and the built environment and include the Sustainability, Building Design, Building Science and Systems, Construction Management, and Service Course streams. Together, these courses provide our graduating students with the ability to pursue careers in the (re)design, management, and execution of existing and new building projects. Specifically, the program learning outcomes include:

1. Communicate a fundamental understanding of construction concepts, practices and regulations for new and existing structures;
2. Measure and assess the sustainability performance of construction projects including embodied and operational carbon, energy savings, and overall human experience;
3. Perform effective communication with clients, contractors, building professionals, and municipal authorities through Integrated Project Delivery practices;
4. Define, describe, and discuss major theories and concepts within the field of building science;
5. Illustrate how to work independently and interdependently as part of multidisciplinary project teams;
6. Apply a whole systems thinking approach to design and construction activities to enable greater project potential; and
7. Effectively realize design intent in executing construction, through a proficient understanding of constructability and hands-on construction experience.

Practical learning experiences are incorporated throughout the program through site visits, real project case studies, hands-on building opportunities, and capstone projects. These experiences enrich the program and bridge the gap between the academic courses and the practical skills required by the students upon graduation. During the summer term break between years 1 and 2, the students also have the opportunity to further their practical experience through participating in a paid co-op program.
In addition, the students benefit from a blended learning format where courses are delivered face-to-face and through an online platform. This allows the students to actively participate in courses on the Okanagan College, Penticton Campus, and conveniently from home. Specifically, one day a week is devoted to online classes, three days a week are spent on campus, and the fifth day is set aside as a student group work and study day (with the exception of Term 1).
The College intends to obtain certification with the Canadian Technology Accreditation Criteria (CTAC) for Architectural, Building and Construction Technologist.

Admission Requirements:
- BC secondary school graduation, or 19 years of age and out of secondary school for one year as of the first day of classes.
- English 12 with minimum 60% or alternatives.
- Math requirement:

A minimum of 60% in any of:
Pre-calculus Grade 12
Foundations of Mathematics Grade 12

Principles of Mathematics 12
Applications of Mathematics 12
Adult Basic Education MATH 012
Okanagan College MATH 120

Or a minimum of 67% in any of:
Pre-calculus Grade 11
Principles of Mathematics 11
Adult Basic Education MATH 011

Or a minimum of 70% in an Okanagan College Mathematics 11 Proficiency Test

One of the Grade 12 mathematics courses is recommended. The mathematics requirement must be successfully completed no more than seven years prior to enrolment in the program

Addition of courses:
SBT 102, SBT 212, SBT 214, SBT 218, SBT 230

Revision of courses:
SCMT 112 (SBT 112), SCMT 113 (SBT 113), SCMT 114 (SBT 114), SCMT 115 (SBT 115), SCMT 116 (SBT 116), SCMT 120 (SBT 120), SCMT 124 (SBT 124), SCMT 125 (SBT 125), SCMT 132 (SBT 132), SCMT 134 (SBT 134), SCMT 144 (SBT 144), SCMT 212 (SBT 213), SCMT 223 (SBT 223), SCMT 224 (SBT 224), SCMT 226 (SBT 226), SCMT 228 (SBT 228), SCMT 234 (SBT 234), SCMT 238 (SBT 238), SCMT 244 (SBT 244), SCMT 251 (SBT 251), SCMT 252 (SBT 252)

Deletion of courses:
SCMT 110, SCMT 206, SCMT 216, SCMT 148, SCMT 248

Program outline/ resequencing of courses:
Existing:

Term 1

Course	Course Title	Lec.	Lab.	Cre.
SCMT 110	Surveying for Construction	2	3	3
SCMT 112	Construction Measurements and	3	0	3
SCMT 115	Construction Methods I	3	3	4
SCMT 114	Sustainability and Ethics in	3	0	3
SCMT 124	Sustainability and the Built	3	0	3
BUAD 128	Computer Applications I	2	2	3
CMNS 133	Technical Writing and Communications	3	0	3
MATH 134	Mathematics for SCMT	4	0	3

Term 2

Course	Course Title	Lec.	Lab.	Cre.
SCMT 113	Quantity Surveying and Estimating I	3	0	3
SCMT 116	Scheduling and Cost Control	1	1	2
SCMT 120	Procurement Process	3	0	3
SCMT 125	Construction Methods II	3	3	4
SCMT 132	Intro. to Sustainability Assessments	3	0	3
SCMT 134	Green Building Principles	3	0	3
SCMT 144	Sustainable Methods and	3	0	3
BUAD 123	Management Principles	3	0	3

Term 3

Course	Course Title	Lec.	Lab.	Cre.
SCMT 206	Lean Construction	3	0	3
SCMT 212	Quantity Surveying and Estimating II	3	0	3
SCMT 216	Conflicts in Construction	2	1	3
SCMT 223	Sustainable Materials	2	1	3
SCMT 224	Greening Existing Infrastructure	3	0	3
SCMT 228	Renewable Energy Technologies	2	1	3
SCMT 251	Project Planning	1	3	3
SCMT 148	Statics and Strength of Materials I	2	2	3

Term 4

Course	Course Title	Lec.	Lab.	Cre.
SCMT 226	Leadership and Innovation	3	0	3
SCMT 234	Sustainable Design and Development	3	0	3
SCMT 238	Sustainable Business Case	3	0	3
SCMT 244	Regenerative Design	3	0	3
SCMT 252	Project: Delivery	0	4	3
BUAD 269	Human Resources Management	3	0	3
CIEN 248	Construction Law	3	2	3
CMNS 143	Technical Writing and Communications	3	0	3

Proposed:

Term 1

Course	Course Title	Lec.	Lab.	Cre.
SBT 102	Introduction to Design	3	0	3
SBT 112	Construction Drafting and BIM I	3	0	3
SBT 114	Sustainability and Ethics in	3	0	3
SBT 115	Construction Methods I	3	3	4
SBT 124	Sustainability and the Built	3	0	3
BUAD 128	Computer Applications I	2	2	3
CMNS 143	Technical Writing and Communications	3	0	3
MATH 134	Mathematics for SCMT	4	0	3

Term 2

Course	Course Title	Lec.	Lab.	Cre.
SBT 113	Quantity Surveying and Estimating I	3	1	3
SBT 116	Scheduling and Cost Control	1	1	2
SBT 120	Project Delivery	3	0	3
SBT 125	Construction Methods II	3	3	4
SBT 132	Intro. to Sustainability Assessments	3	0	3
SBT 134	Green Building Principles	3	0	3
SBT 144	Sustainable Methods and	3	0	3
BUAD 123	Management Principles	3	0	3

Term 3

Course	Course Title	Lec.	Lab.	Cre.
SBT 212	Construction Drafting and BIM II	3	0	3
SBT 213	Quantity Surveying and Estimating II	3	0	3
SBT 214	Biophilic Design	3	0	3
SBT 218	Building Systems and Energy	3	0	3
SBT 223	Sustainable Materials	2	1	3
SBT 224	Greening Existing Infrastructure	3	0	3
SBT 228	Renewable Energy Technologies	2	1	3
SBT 251	Capstone Project I	1	3	3

Term 4

Course	Course Title	Lec.	Lab.	Cre.
SBT 226	Leadership and Innovation	3	0	3
SBT 230	Construction Conflicts and Law	3	0	3
SBT 234	Sustainable Design and Development	3	0	3
SBT 238	Sustainable Business Case	3	0	3
SBT 244	Regenerative Design	3	0	3
SBT 252	Capstone Project II	0	4	3
CMNS 133	Technical Writing and Communications	3	0	3

Implementation date: September 2021
Cost: N/A

Sustainable Studies Post –Diploma Certificate
Program deletion
Rationale:
This online certificate is currently offered to post-diploma students. The original intention for establishing this certificate was to provide a sustainability specialization to those students having already completed a degree or diploma in construction management or relevant field. Therefore, this certificate is comprised of the current 11 sustainability focused courses which are offered online in the SCMT diploma. These courses were placed online to allow both the diploma and certificate students to concurrently take these courses without the need of additional faculty to teach the certificate. That is, the certificate students would join the diploma students on the online platform for only these 11 specific courses. Now that we are proposing changes to the SCMT program which include a name change, program description and outcome revisions, deleted courses, revised courses, as well as the addition of new courses, the certificate no longer aligns with the diploma. In addition, the delivery format of all SCMT courses have been reviewed by the department to determine whether these would be best delivered face-to-face or in person. Almost all sustainability courses are now being proposed to be delivered face-to-face which no longer works with our original goal of providing an online certificate. This certificate is therefore recommended to be deleted given the proposed changes to SCMT. In addition, there are currently no students in this certificate, therefore, the deletion of this certificate will not impact any current students.
Implementation date: April 2021
Cost: N/A