

MEMORANDUM

**ATTENTION:** Senate

**FROM:** Elizabeth Elle, Vice-Chair, Senate Committee on Undergraduate Studies

**RE:** Course Changes (SCUS 23-15)

**DATE:** February 3, 2023

*Elizabeth Elle*

**For information:**

Acting under delegated authority at its meeting of February 2, 2023, SCUS approved the following curriculum revisions effective Fall 2023.

**a. Faculty of Applied Sciences**

1. School of Computing Science

- (i) Title and description change for CMPT 361
- (ii) Title, description and prerequisite change for CMPT 412
- (iii) Description, prerequisite and equivalent statement change for CMPT 461
- (iv) Deletion of CMPT 414

2. School of Engineering Science

- (i) Prerequisite change for ENSC 416

**b. Beedie School of Business**

- (i) Prerequisite and description change for BUS 100, 300 and 496
- (ii) Prerequisite change for BUS 201 and 202

**c. Faculty of Communication, Art and Technology**

1. School for the Contemporary Arts

- (i) Title, description and prerequisite change for CA 152 and 252
- (ii) Title, description and equivalent statement change for CA 257W
- (iii) Title, description, prerequisite and equivalent statement change for CA 251, 350, 354 and 357W
- (iv) Title, description, units and prerequisite change for CA 253 and 450
- (v) Title, description, units, prerequisite and equivalent statement change for CA 254, 255 and 355
- (vi) Prerequisite change for CA 271

**d. Faculty of Education (SCUS 22-66b)**

- (i) Description change for FAL X99

**e. Faculty of Environment**

**1. School of Resource and Environmental Management**

- (i) Title and description change for PLAN 300, 400 and 408
- (ii) Description change for PLAN 443 and 495
- (iii) Description and prerequisite change for PLAN 302 and 402
- (iv) Description change for REM 100, 200, 202W, 211, 225, 356W and 370
- (v) Units and description change for REM 221
- (vi) Title and description change for REM 311 and 355
- (vii) Deletion of REM 391
- (viii) Prerequisite change for REM 427 and 445
- (ix) Equivalent statement changes for SD 281 and 381
- (x) Title, description and equivalent statement changes for SD 481
- (xi) Prerequisite and equivalent statement changes for SD 491, 494 and 499

**f. Faculty of Health Sciences**

- (i) Prerequisite and equivalent statement change for HSCI 478

**g. Faculty of Science**

**1. Department of Earth Sciences**

- (i) Units, description and prerequisite change for EASC 206 (***SCUS 23-01e***)
- (ii) Description and prerequisite change for EASC 499

**2. Department of Mathematics**

- (i) Description and equivalent statement change for FAN X99
- (ii) Prerequisite change for MATH 380W and 381W

**3. Department of Molecular Biology and Biochemistry**

- (i) Title, description and prerequisite change for MBB 402

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at <https://docushare.sfu.ca/dsweb/View/Collection-12682>.

COURSE SUBJECT	CMPT	NUMBER	361	TITLE	Introduction to Computer Graphics
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
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Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Introduction to Computer Graphics Visual Computing

This course ~~p~~rovides a unified introduction to the fundamentals of computer graphics and computer vision (visual computing). Topics include ~~graphics display and interaction hardware pipelines, basic algorithms for 2D primitives, sampling and anti-aliasing, 2D and 3D geometrical transformations, 3D projections/viewing and camera models, Polygonal and hierarchical models meshing, texturing, hidden-surface removal, basic rendering techniques (color theory, image filtering and registration, shading and illumination, raytracing, rasterization, animation, optical flow, and game engines, radiosity)~~ and interaction techniques. Prerequisite: CMPT 225 and MATH 232 or 240, all with a minimum grade of C-.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

This proposal modernizes and standardizes CMPT 361 to serve as a unified prerequisite for all advanced VC courses and to reflect the needs of the quickly evolving field of Visual Computing (VC). The course still serves as a complete introduction to Computer Graphics (CG), as well as now supporting Computer Vision (CV) due to the large overlap between the mathematical foundations and fundamentals. The unified course is designed to boost the number of students taking the course as well as all follow-up 400-level VC courses. Rationales for the modifications, a suggested weekly schedule, and updated learning outcomes are in the following pages.

**CG and CV have many commonalities at the fundamental level**

CG and CV both work with images, and at a high level represent the inverse problem of each other - one is concerned with synthesis, while the other with analysis of images. Thus, much common knowledge is shared at the introductory level that this course covers. Common topics include (i) image filtering, (ii) sampling and aliasing, (iii) projection and camera models, (iv) color theory, (v) geometric transformations, (vi) texture analysis, (vii) shading and illumination, (viii) meshing. Similarly, the mathematical foundations have many commonalities, such as (i) geometry fundamentals, (ii) optimization, (iii) Fourier theory, (iv) statistical methods.

This course covers all the listed fundamentals, providing a solid introduction for both CG and CV. The indirectly CG-related material covered, such as feature invariance and matching, take around 2 weeks of the curriculum. The non-CV topics covered, such as animation, game engines, and ray tracing, take around 3 weeks of the curriculum.

This harmonized introduction to VC will serve the students as a solid fundamental knowledge base for specialization in any area of visual computing, without sacrificing from necessary fundamentals for either CV or CG. Due to this overlap and the small amount of CV-only topics covered in the class, the proposed class still serves as a complete Intro CG class.

**Convergence of modern CV and CG**

Visual computing has been in a great transformation in techniques and capabilities in the last decade, fueled by the rise of machine learning. This rise of capabilities made it possible for CV and CG techniques to be commonly used together to solve problems in both domains. Today, most CV methods make use of CG methods to generate training data for a wide variety of tasks. Similarly, many modern fields of CG such as VFX, Animation, and Computational Photography make use of CV techniques to generate realistic scenes. This co-operation between CV and CG is an important driver of diversifying novel methods in both CV and CG, and with further research, this interconnection will only increase.

As a result, we expect any Visual Computing professional, whether in industry or research, to have at least a fundamental understanding of both CV and CG. This unified Visual Computing course will prepare students for careers both in CV and CG.

**SFU CMPT has a unique strength in CV and CG, reflected in advanced curriculum**

This course is designed to be the fundamental entry point to our modern undergraduate Visual Computing curriculum, serving as the prerequisite for advanced courses in CV and CG. The unified VC class makes it possible for CMPT 361 to serve as an effective introduction for CMPT 412 - Computer Vision and CMPT 461 - Computational Photography, as well as CMPT 464 - Geometric Modeling and CMPT 466 - Animation. With our extending line of VC faculty, it will also serve new advanced VC courses in the future, such as interactive graphics and advanced rendering.

This unified curriculum gives students the perspectives of both CV and CG, allowing them to make informed decisions about their future specialization in VC. The proposed course also features a set of "Beyond 361" lectures where faculty teaching advanced VC courses join as guest lecturers at the end of the term, giving an overview of the advanced topics in which the students can choose to specialize.

The increasing overlap between CV and CG is also reflected in the major academic conferences in two domains, CVPR for CV and SIGGRAPH for CG. The overlap between these two conferences has similarly been increasing. The diverse make up of our research faculty in Visual Computing also shows this shift: most of our faculty now publish at both conferences, including R. Zhang, M. Savva, Y. Aksoy, A. Tagliasacchi, and J. Peng.

This unified course was designed in collaboration and under advisement of all our research faculty in VC who are actively teaching CG or CV courses. Following research in modern introductory classes in CV and CG, the course update is modeled after ETH Zurich's Visual Computing course. ETH Zurich features a world-class curriculum and VC faculty working in both CV and CG, similar to the VC faculty in our school. Another reference point to ensure introductory CG topic coverage at a world-class level is Stanford's CS 148 "Introduction to Computer Graphics and Imaging" course.

**EXAMPLE WEEKLY SCHEDULE**

The course serves as a unified introduction to Computer Graphics (CG) and Computer Vision (CV). Topics cover mathematical foundations, concepts, and algorithms required for all 400-level advanced courses in Visual Computing. Text with no markup indicates topics that are support both CV and CG. *Italics* indicates topics that focus more on CV, while underline indicates topics that focus on CG. *This is a suggested course schedule to facilitate standardization, while allowing for freedom in instructor pedagogical choice.*

<b>Week 0: Course introduction</b>		
<b>Week 1 &amp; 2: Image fundamentals</b>		
Images & Color	Image Filtering	Edge Detection
Signals & Images	Sampling & Aliasing	Deep Learning
<b>Week 3: Image registration</b>		
Transformations	<i>Harris Corner Detection</i>	<i>Feature Detection, Matching</i>
<b>Week 4: Further topics in CV</b>		
RANSAC	<i>Image Segmentation</i>	<i>Optical Flow</i>
<b>Week 5: Image formation</b>		
Cameras	Projection	Stereo
<b>Week 6: Midterm</b>		
Pre-midterm overview	Midterm	Midterm
<b>Week 7 &amp; 8: Rendering fundamentals</b>		
<u>Displays</u>	<u>Images Revisited</u>	<u>Rendering</u>
<u>Rasterization</u>	<u>Ray Tracing</u>	<u>Spatial Acceleration</u>
<b>Week 9 &amp; 10: Shading, modeling, texturing</b>		
Shading & Illumination	Geometric Modeling	Polygon Meshes
Scene Graphs	Texture Mapping	Environment & Shadow Mapping
<b>Week 11: Further topics in CG</b>		
<u>GPUs &amp; Graphics Pipelines</u>	<u>Animation</u>	<u>Game Engines</u>
<b>Week 12: "Beyond 361"</b>		
Guest lectures on Geometric Modeling, Computer Vision, Animation, Computational Photography, Advanced Rendering, Machine Learning, Natural Language Processing, ...		

## LEARNING OUTCOMES

Refer to <https://www.cs.sfu.ca/~bbart/LO/pub/LOs.html> for the current CMPT 361 learning outcomes. Updates to the learning outcomes below are underlined.

**CMPT 361** — Introduction to Computer Graphics

**Pre-reqs:** CMPT 225, MATH 232 or MATH 240

### Incomes:

*Upon entry to CMPT 361, every student is expected to be able to ...*

- understand basic linear algebra concepts such as vectors and matrices.
- understand basic trigonometry.
- use data structures such as arrays, trees, and graphs.
- write basic algorithms such as depth-first tree traversal, recursive functions.

### Outcomes:

*At the end of CMPT 361, students will be able to ...*

- implement image processing operations such as frequency domain filtering, and edge or corner detection
- implement image registration using feature detection and matching
- carry out 3D geometric, viewing and projection transformations in homogeneous coordinates
- implement the Phong local illumination model and Phong shading method
- use basic modeling techniques such as meshing and subdivision
- use discrete techniques such as texture mapping and environment mapping
- describe most commonly used clipping, rasterization, and hidden surface removal algorithms
- explain sampling issues and basic antialiasing techniques
- construct and use hierarchical models such as Scene Graphs
- write OpenGL/WebGL code with vertex and fragment shaders for displaying and interacting with static and dynamic/animated scenes
- explain pipeline graphics, and its pros and cons wrt global rendering techniques such as ray tracing

### Program Level Educational Goals:

- Technical understanding of computer science (Intermediate-Advanced)
- Problem solving skills (Intermediate-Advanced)
- Mathematics: theory and practice (Advanced)
- Software development skills (Intermediate-Advanced)
- Awareness of the broad applicability of computing (Intermediate-Advanced)
- Commitment to life-long learning (Intermediate-Advanced)

COURSE SUBJECT	CMPT	NUMBER	412	TITLE	Computational Vision
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Computational Computer Vision CMPT 412 (3)

Computational approaches to image and video understanding ~~will be discussed~~ in relation to theories, ~~about~~ the operation of the human visual system, and ~~with respect to~~ practical applications areas such as ~~in~~ robotics. Topics ~~will~~ include ~~edge~~ image classification, ~~object~~ detection, image segmentation based mostly on ~~deep~~ neural networks and to some extent classical techniques, and 3D reconstruction. Also covers state-of-the-art deep neural architectures for computer vision applications, such as metric learning, generative adversarial networks, and recurrent neural networks. ~~shape from shading, stereopsis, optical flow, Fourier methods, gradient space, three-dimensional object representation and constraint satisfaction.~~ Prerequisite: CMPT 361 and MATH 152, both with a minimum grade of C-, and nine units in Computing upper division courses or permission of the instructor.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The purpose of this proposal is to modernize CMPT 412 to be a state-of-the-art advanced class in the quickly evolving field of Computer Vision (CV). The course focuses on current problems in CV including machine learning-based methods, providing necessary coverage for a computer vision professional in today's industry and research. Fundamental knowledge covered in the prior version of the course is covered by the newly added pre-requisite, CMPT 361 – Intro. Visual Computing, allowing this course to be an advanced offering in the 400 level. Note: The overall focus of the course (image/video understanding) remains the same, but deep learning techniques quickly advanced in the last decade, resulting in a necessary update to techniques and topics.

COURSE SUBJECT	CMPT	NUMBER	461	TITLE	Computational Photography and Image Manipulation
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

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Computational Photography and Image Manipulation CMPT 461 (3)

Computational Photography is concerned with overcoming the limitations of traditional photography with computation: in optics, sensors, and geometry; and even in composition, style, and human interfaces. The course covers computational techniques to improve the way we process, manipulate, and interact with visual media. The covered topics include ~~image-based lighting and rendering, intrinsic decomposition, monocular depth estimation, edit propagation~~, camera geometry and optics, computational apertures, advanced image filtering operations, high-dynamic range, image blending, texture synthesis and inpainting. Prerequisite: CMPT 361, ~~(MACM 201 or CMPT 210)~~, and ~~MACM 316~~, all with a minimum grade of C-. ~~Students with credit for CMPT 451 may not take this course for further credit~~.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

CMPT 361 – Intro. Visual Computing, in its new form, satisfies all pre-requisite requirements for this course, and is listed as the sole pre-requisite for this course. With fundamental image processing concepts, introductory camera geometry, and rendering covered in CMPT 361, this course also looks into modern research-level concepts such as intrinsic decomposition and monocular depth.

COURSE SUBJECT	CMPT	NUMBER	414	TITLE	Model-Based Computer Vision
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**RATIONALE** (must be included)

The course has only ever been offered by Ze-Nian Li, who is now retired.  
This course will no longer be offered. CMPT 412 Computer Vision will be regularly offered.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (enter in textbox)

Fall 2023

**PLEASE DO THE FOLLOWING:**

1. Attach a program impact list along with your course deletion form. Contact the Senate and Academic Services Office ([sfucal@sfu.ca](mailto:sfucal@sfu.ca)) for a program impact list.
2. Once you have the program impact list, please review how deleting this course affects each program's requirements.
3. If more substantial changes are required to programs as a result of this deletion, please also submit a program modification form.
4. If no further changes other than deletion is required in program requirements, please list those programs in the box below:

1. Cognitive Science Honours
2. Cognitive Science Major
3. Cognitive Science Minor
4. Computing Science Honours
5. Computing Science Major
6. Computing Science Minor
7. Computing Science and Linguistics Joint Major
8. Computing Science Dual Degree Program Major
9. Computing Science Second Degree Major
10. Certificate in Computing Studies
11. Information Systems in Business Administration and Computing Science Joint Major

5. Lastly, please conduct a course impact analysis, which reviews the effect of a course number change and/or course deletion on course prerequisites. For instructions on how to do a course impact analysis, please visit [our page](#) and click on "deleting a course" and review Step 2. Course Impact Analysis.

COURSE SUBJECT	ENSC	NUMBER	416	TITLE	Engineering Electromagnetics II Design ENSC 416 (4)
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Prerequisite: ~~ENSC 316 with a grade of at least C+~~ and MATH 254, both with a minimum grade of C-

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Keeping the pre-requisite consistent for all core courses needed for the engineering program.

COURSE SUBJECT	BUS	NUMBER	100	TITLE	Professional Development - Launch
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

An intensive program to introduce students to the mission and values of the Beedie School of Business through an immersive experiential learning experience. This program prepares students for success through the development and integration of academic skills and mindsets while building a network necessary for success in academic, social, and career related pursuits. Prerequisite: This course is only open to approved business administration majors admitted to the faculty through Admission to the BBA major – high school or transfer stream in Fall 2022 and onward. Corequisite: BUS 201 or BUS 202. Students must obtain a P grade to successfully complete this course.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

Placing controls on access to this course from Fall 2022 onwards.

Reversing corequisite due to system challenges that impact enrollment and manual audits to ensure students are in the correct courses – placing on BUS 201/202.

Reflect grading system.

COURSE SUBJECT	BUS	NUMBER	300	TITLE	Professional Development - Planning
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Students will develop an academic plan by expanding their understanding of the relationship between business courses and the themes of Social Responsibility, Innovation and Global Perspective. Recommendation to take with BUS 360W.  
Prerequisite: This course is only open to approved business administration majors admitted to the faculty in Fall 2022 and onward, BUS 100 with a P grade and, BUS 217W, both with a minimum grade of C-; 45 units. Students must obtain a P grade to successfully complete this course.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Placing controls on access to this course from Fall 2022 onwards.

BUS 360W is a corequisite and making it clear in this course description they should take this course with BUS 300.

Reflect grading system.

COURSE SUBJECT	BUS	NUMBER	496	TITLE	Professional Development - Summit
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Final professional development course within the bachelor of business administration enables students to think about what they have learned and experienced as part of their academic and learning journey. This course helps students to identify and explain their transformation as a learner and how that applies to their career journey and development. Prerequisite: This course is only open to approved business administration majors admitted to the faculty in Fall 2022 and onward, BUS 300 with a P grade and, BUS 360W, both with a minimum grade of C-; 95 units. Students must obtain a P grade to successfully complete this course.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Placing controls on access to this course from Fall 2022 onwards.

Reflect grading system.

COURSE SUBJECT **BUS** NUMBER **201** TITLE **Introduction to Business****TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

For the Business Administration Major – High School Stream - orients students to the Beedie School of Business and the academic expectations of the program. As a broad introduction to the study of business, students are introduced to the different disciplines and how each relates to global perspective, innovation, and social responsibility. Students explore the integration of these disciplines through experiential learning projects by engaging with, and further developing, interpersonal and collaboration skills in culturally diverse team environments.

**Prerequisite:** This course is only open to approved business administration majors admitted to the faculty through the Business Foundation Program - High School Stream. Students with credit for BUS 130 or BUS 202 may not take this course for further credit. **Corequisite:** BUS 100, with a P grade. Students with more than 30 units may not take this course.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**Fall 2023****RATIONALE** (must be included)

Changing corequisite direction due to system changes in ensuring students enroll in both BUS 201/202 and 100.

COURSE SUBJECT **BUS** NUMBER **202** TITLE **Foundations of Business****TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Business Administration Major – Transfer Stream. Orients students to the Beedie School of Business and the academic expectations of the program. Students explore the different disciplines and specializations within business and tune their prior business knowledge within the context of a global perspective, social responsibility, and innovation. Students explore the integration of these disciplines through experiential learning projects by engaging with, and further developing interpersonal and collaboration skills in culturally diverse team environments.

Prerequisite: This course is only open to approved business administration majors, joint majors, or second degree students admitted to the faculty through the Business Foundation Program - Transfer Stream. Students with credit for BUS 130 or BUS 201 may not take this course for further credit. Corequisite: BUS 100, with a P grade.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**Fall 2023****RATIONALE** (must be included)

Changing corequisite direction due to system changes in ensuring students enroll in both BUS 201/202 and 100.

COURSE SUBJECT

CA

NUMBER

152

TITLE

Acting 1: Thinking as an Artist  
(3)**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course  
number

Units

Prerequisite

Title

Description

Equivalent

Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike-through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 152 Acting I: Thinking as an Artist Live Acts II (3)**

~~The first of six performance acting courses. The actor is trained as an individual artist within a collaborative ensemble, and within society. Emphasis is placed upon physical experience and imagination as sources for interpretation and original creation. Prerequisite: By audition.~~

The second of four performance studio courses in the Live Acts cluster. A continued exploration of the foundations of live performance making from a variety of perspectives. With rotating topics each semester, students develop the foundational skills for creating original, contemporary live art. Prerequisite: CA 151

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

While theatre techniques will still be taught, we aim to be more inclusive of contemporary practices in live art, including performance art, digital performance, social practice, site-specific practices, etc. Historically, the area offered a progression of courses following a loose, conservatory model of actor-training. Our new focus on performance making (i.e. devising performances from scratch and developing performance based techniques from other disciplines, including the visual arts), in line with the SCA's interdisciplinary mandate, requires us to offer a more integrative and versatile curriculum in our studios. The cluster of Live Acts studio courses (CA 151, 152, 251, 252) offers students a wide variety of topical and formally specific techniques and concepts rooted in 'liveness' as central to the medium of performance – rather than a narrower concept of 'acting'. This proposed name and description changes allow for students to imagine and develop an expansive set of tools for performance making as they progress from the lower to upper divisions, while providing faculty the flexibility to develop and introduce contemporary and experimental forms of performance pedagogy.

COURSE SUBJECT CA

NUMBER 252

TITLE Playmaking (3)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course  
number

Units

Prerequisite

Title

Description

Equivalent

Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 252 Playmaking Live Acts IV(3)**

The first of three playmaking courses that prepare students to make their own theatre. Develops composing skills by identifying the creative capacities of social relationships, objects and environments. The course may include mask, clown, self-scripting, site-specific and political theatre. May repeat for credit. Prerequisite: CA (or FPA) 150 or CA 152 or CA 153.

The fourth of four performance studio courses in the Live Acts cluster. A continued exploration of the foundations of live performance making from a variety of perspectives. With rotating topics, students develop the foundational skills for creating original, contemporary live art. Prerequisite: One of CA 123, 131, 146, 251, 161, 171.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

While theatre techniques will still be taught, we aim to be more inclusive of contemporary practices in live art, including performance art, digital performance, social practice, site-specific practices, etc. Historically, the area offered a progression of courses following a loose, conservatory model of actor-training. Our new focus on performance making (i.e. devising performances from scratch and developing performance based techniques from other disciplines, including the visual arts), in line with the SCA's interdisciplinary mandate, requires us to offer a more integrative and versatile curriculum in our studios. The cluster of Live Acts studio courses (CA 151, 152, 251, 252) offers students a wide variety of topical and formally specific techniques and concepts rooted in 'liveness' as central to the medium of performance – rather than a narrower concept of 'acting'. This proposed name and description changes allow for students to imagine and develop an expansive set of tools for performance making as they progress from the lower to upper divisions, while providing faculty the flexibility to develop and introduce contemporary and experimental forms of performance pedagogy. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 257 W TITLE Context of Theatre I (3)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 257 W Context of Theatre I (3)**

~~The detailed structural analysis of dramatic texts and/or performances, their historical context, their development and production histories. May be of interest to students in other departments. Students with credit for FPA 257W may not take this course for further credit.~~

The first of two courses in the Context cluster. With a grounding in performance studies, this course explores histories and theories of the avant-garde, live art, and theatre. With a rotating topic each semester, students develop the foundational skills for analyzing, researching, and writing about contemporary performance. Writing/Breadth-Humanities.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

While histories and theories of theatre will still be taught, we aim to be more inclusive of contemporary practices in live art, such as performance art, digital performance, social practice, site-specific practices, etc. Historically, these courses were organized around the canon of Western theatre with a focus on dramaturgy and the analysis of dramatic texts from antiquity to the present. The proposed reframing of these courses as Context helps us integrate the larger understanding of contemporary art, provides students with opportunities to explore their artistic practices through broader fields of knowledge, and allows us to potentially decolonize the discipline from within. With the writing designation, we aim to offer a mix of creative, critical, and professional approaches to develop stronger literacy within the area. The pairing of Context courses (CA 257W, 357W) offers students a variety of historical and theoretical topics related to the fields of theatre studies, performance studies, and contemporary art, with a specific focus on research-creation. These proposed modifications allow for students to develop a broader context for performance making as they progress from the lower to upper divisions, while providing faculty the flexibility to develop new, contemporary, and experimental forms of performance pedagogy.

COURSE SUBJECT CA NUMBER 251 TITLE Acting IV: Text as Action (3)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 251 Acting IV: Text as Action Live Acts III (3)**

The fourth Performance acting course. Work focuses on various forms of action developed through an expanded notion of text. Prerequisite: CA (or FPA) 250 and 254. Corequisite: CA (or FPA) 255. Students with credit for FPA 251 may not take this course for further credit.

The third of four performance studio courses in the Live Acts cluster. A continued exploration of the foundations of live performance making from a variety of perspectives. With rotating topics each semester, students develop the foundational skills for creating original, contemporary live art. Prerequisite: One of CA 123, 131, 146, 152, 161, 171.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

While theatre techniques will still be taught, we aim to be more inclusive of contemporary practices in live art, including performance art, digital performance, social practice, site-specific practices, etc. Historically, the area offered a progression of courses following a loose, conservatory model of actor-training. Our new focus on performance making (i.e. devising performances from scratch and developing performance based techniques from other disciplines, including the visual arts), in line with the SCA's interdisciplinary mandate, requires us to offer a more integrative and versatile curriculum in our studios. The cluster of Live Acts studio courses (CA 151, 152, 251, 252) offers students a wide variety of topical and formally specific techniques and concepts rooted in 'liveness' as central to the medium of performance – rather than a narrower concept of 'acting'. This proposed name and description changes allow for students to imagine and develop an expansive set of tools for performance making as they progress from the lower to upper divisions, while providing faculty the flexibility to develop and introduce contemporary and experimental forms of performance pedagogy.

By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 350 TITLE Acting V: Text in Dramatic Forms

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 350 Acting V: Text in Dramatic Forms Performance as Research I (3)**

~~The fifth Performance acting course. Work focuses on text from various sources in relation to established theatrical forms. Prerequisite: CA (or FPA) 149, 186, 251, 255 and 285. Corequisite: CA 354. Students with credit for FPA 350 may not take this course for further credit.~~

The first of two courses dedicated to the development of a new work of performance led by a faculty member or visiting artist. Introduces themes and concepts, develops process and materials for a presentation in the subsequent term. Integrates the techniques acquired in context and studio courses. May repeat for once credit. Prerequisite: CA 252 and declared status in the Theatre and Performance Major or Honours, or by prior approval.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

This name change from Text in Dramatic Forms to Performance as Research supports the full and diverse complement of the four faculty now leading the Theatre and Performance area. Similar to the previously titled Playmaking, Faculty Research is comprised of two courses led by the same faculty member or visiting artist over two successive semesters. The first, CA 350, will serve as a pure research and creation period, and the second, CA 450, will continue that research and culminate in a public facing performance and/or event. The title and description shift from Playmaking to Performance as Research makes space beyond the traditional notion of “play” as a text based work and acknowledges the interdisciplinary and breadth or practice of the new faculty.

COURSE SUBJECT CA NUMBER 354 TITLE Voice/Movement III (2)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**CA 354 Voice/Movement III Social I (2)**

The third Performance research course in voice and movement. Corequisite: CA 350. Students with credit for FPA 354 may not take this course for further credit.

The first of two courses in the Social Studio stream. Students will be introduced to contemporary practices, methodologies and ethical considerations at play at the intersection of performance and social practice. Prerequisite: One of CA 221, 231, 246, 252, 261, 271, 285.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Historically, CA 354 and 355 have continued CA 254 and 255's focus on physical and vocal training and biased a more traditional 'actor on stage' approach to theatre making. The proposed Social studios, comprised of two successive courses taken over one year, will provide upper level students with an introduction to a spectrum of creative strategies and practices that engage a wider public and consider political and social issues. This shift acknowledges a similar trajectory in international contemporary performance practice and feels of particular importance to the SCA, co-located in a building with SFU's Vancity Office of Community Engagement and positioned at the centre of Vancouver's urban core. Areas of study can include creative practices focused on justice, equity and inclusion, activist driven interventions, expanded qualitative research, creative community collaborations and any ethical considerations particular to work that extends beyond a traditional studio based practice. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 357 W TITLE Context of Theatre II (3)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 357 W Context of Theatre II (3)**

~~The detailed structural analysis of dramatic texts and/or performances, their historical context, their development and production histories. May be of interest to students in other departments. Students with credit for FPA 357W may not take this course for further credit.~~  
The second of two courses in the Context cluster. Work will include reading, writing and experiments in live performance creation. With a grounding in performance studies, this course offers a variety of frameworks and approaches to the histories and theories of the avant-garde, live art, and theatre. With a new topic each semester, students develop skills for analyzing, researching, and writing about contemporary performance. Prerequisite: CA 257W. Writing/Breadth-Humanities.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

While histories and theories of theatre will still be taught, we aim to be more inclusive of contemporary practices in live art, such as performance art, digital performance, social practice, site-specific practices, etc. Historically, these courses were organized around the canon of Western theatre with a focus on dramaturgy and the analysis of dramatic texts from antiquity to the present. The proposed reframing of these courses as Context helps us integrate the larger understanding of contemporary art, provides students with opportunities to explore their artistic practices through broader fields of knowledge, and allows us to potentially decolonize the discipline from within. With the writing designation, we aim to offer a mix of creative, critical, and professional approaches to develop stronger literacy within the area. The pairing of Context courses (CA 257W, 357W) offers students a variety of historical and theoretical topics related to the fields of theatre studies, performance studies, and contemporary art, with a specific focus on research-creation. These proposed modifications allow for students to develop a broader context for performance making as they progress from the lower to upper divisions, while providing faculty the flexibility to develop new, contemporary, and experimental forms of performance pedagogy.

COURSE SUBJECT CA NUMBER 253 TITLE BlackBox Playmaking (3)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course number  Units  Prerequisite Title  Description  Equivalent Statement **WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 253 BlackBox Playmaking (3) Co-Lab (4)**

The second playmaking course emphasizes composing skills and theatrical structure. Provides the basis for the BlackBox ensemble creation process in the subsequent term. May repeat for credit. Prerequisite: CA (or FPA) 150 or CA 152 or CA 153.

Emphasizes compositional skills and the rigorous exploration of movement, text, and design. Co-Lab provides directors, performers, writers, sound artists, designers, filmmakers, and choreographers opportunities to devise, rehearse, and perform new public facing performances or events to audiences over the semester. Prerequisite: One of CA 123, 131, 146, 152, 161, 171. May repeat once for credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

We are changing the name from Black Box to Co-Lab to reflect our commitment to interdisciplinary collaboration within the School for Contemporary Arts and to remove the predetermination of a black box studio as a performance venue. Similar to the previously named Black Box, Co-lab provides opportunities for lower and upper level students to collaborate and explore methods of devising performance within an ensemble and then present that work to a live audience. We are increasing the credit allocation from three to four to acknowledge the substantial outside of class work time needed to complete the work shown to the public. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 450 TITLE Mainstage Performance (4)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 450-Mainstage Performance Performance as Research II (4) (5)**

A course culminating in a public Mainstage performance. Integrates and implements the techniques acquired in studio courses. May repeat for credit. Prerequisite: Prior approval by audition.

Building on research completed in CA 350, CA 450 is a course culminating in a public facing performance or event led by a faculty member or visiting artist. Integrates and implements the techniques acquired in studio courses. May repeat once for credit. Prerequisite: CA 350 or prior approval.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

This name change supports the full and diverse complement of the four faculty now leading the Theatre and Performance area. Similar to the previously titled Playmaking, Performance as Research is comprised of two courses led by the same faculty member or visiting artists over two successive semesters. The first, CA 350, will serve as a pure research and creation period, and the second, CA 450, will continue that research and culminate in a public facing performance and/or event. The shift in title and description from Playmaking to Performance as Research makes space beyond the traditional notion of “play” as a text based work and acknowledges the interdisciplinary and breadth or practice of the new faculty.

COURSE SUBJECT CA NUMBER 254 TITLE Voice/Movement 1 (4)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**CA 254 Voice/Movement I (4) Body I (2)**

~~The first performance research course in voice and movement. Corequisite: CA 250. Students with credit for FPA 254 may not take this course for further credit.~~

Body I introduces 'the body' as a primary material of performance. With rotating topics, students develop the foundational skills for creating original, contemporary live art  
Prerequisite: One of CA 123, 131, 146, 152, 161, 171.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Historically, these courses were intended to 'warm-up' and prepare students for their acting-studio courses through exercises drawn from Pilates, Yoga, Fitzmaurice Voicework. They would be held four days a week in advance of studio classes which determined the four credit allocation. Our reframing of these courses provides a more focused approach to embodied practice as related to creation of contemporary performance. In this reframing, our proposed pair of Body courses, offered in the Fall and Winter of the second year of study, provide students with specific techniques and concepts drawn from a much wider field of corporeal art, such as Butoh, contemporary dance, Body Art, durational performance, and more. Across these courses, the 'body' is examined and deployed as a primary material for devising contemporary performance. The classes will be held twice a week for two hours each as opposed to four times and now be worth two credits each. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 255 TITLE Voice/Movement II (4)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**CA 255 Voice/Movement Body II (4) (2)**

~~The second Performance research course in voice and movement. Corequisite: CA 251. Students with credit for EPA 255 may not take this course for further credit.~~

Further explores 'the body' as a primary material of performance using a variety of perspectives on embodied practice as aesthetic experience. With rotating topics each semester, students develop the foundational skills for creating original, contemporary live art.  
Prerequisite: One of CA 123, 131, 146, 152, 161, 171.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Historically, these courses were intended to 'warm-up' and prepare students for their acting-studio courses through exercises drawn from Pilates, Yoga, Fitzmaurice Voicework. They would be held four days a week in advance of studio classes which determined the four credit allocation. Our reframing of these courses provides a more focused approach to embodied practice as related to creation of contemporary performance. In this reframing, our proposed pair of Body courses, offered in the Fall and Winter of the second year of study, provide students with specific techniques and concepts drawn from a much wider field of corporeal art, such as Butoh, contemporary dance, Body Art, durational performance, and more. Across these courses, the 'body' is examined and deployed as a primary material for devising contemporary performance. The classes will be held twice a week for two hours each as opposed to four times and now be worth two credits each. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 355 TITLE Voice/Movement IV (2)

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).**CA 355 Voice/Movement IV Social II (2) (3)**

~~The fourth and final Performance research course in voice and movement. Corequisite:~~

~~CA 351. Students with credit for FPA 355 may not take this course for further credit.~~

The second of two courses in the Social Studio stream. Building on CA 354, students will continue research and experiment with contemporary methodologies at the intersection of performance and social practice. Prerequisite: CA 354.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Historically, CA 354 and 355 have continued CA 254 and 255's focus on physical and vocal training and biased a more traditional 'actor on stage' approach to theatre making. The proposed Social studios, comprised of two successive courses taken over one year, will provide upper level students with an introduction to a spectrum of creative strategies and practices that engage a wider public and consider political and social issues. This shift acknowledges a similar trajectory in international contemporary performance practice and feels of particular importance to the SCA, co-located in a building with SFU's Vancity Office of Community Engagement and positioned at the centre of Vancouver's urban core. The shift here from two to three credits attends to the shift from a twice a week, two hour class to a twice a week, three hour class and increase expectation in research and reading outside of class time. Areas of study can include creative practices focused on justice, equity and inclusion, activist driven interventions, expanded qualitative research, creative community collaborations and any ethical considerations particular to work that extends beyond a traditional studio based practice. By expanding the available prerequisites to other disciplines, we intend to encourage interdisciplinary collaboration across the school and increase enrollment in our Theatre and Performance courses.

COURSE SUBJECT CA NUMBER 271 TITLE Production Ensemble II

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
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Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Students having a basic familiarity with elements of production and design participate in an in-depth theoretical and practical exploration of stage and production management for theatre, dance and music production. Students in this class will develop skills necessary to provide technical support for the School's productions. Assignments will be conducted in class and through practicum work on productions. Maybe of particular interest to students in other departments.  
Prerequisite: CA (or FPA) 171 170. Quantitative

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

CA171 is no longer a required class and will not be offered on a regular basis.

COURSE SUBJECT	FAL	NUMBER	X99	TITLE	Foundations of Academic Literacy
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

#### EFFECTIVE TERM AND YEAR FOR CHANGES

An introduction to the kinds of reading and writing students will encounter in lower-division courses across the university disciplines. Important aspects of the writing process are discussed and illustrated in class, and students receive individual feedback on their academic writing. **Students who take this class will be graded using a Competency Based grading system (Pass/Fail).** Students who wish to use the course to meet the language proficiency prerequisite of a writing-intensive course must obtain a ~~C or better~~ P (equivalent to a C or better). Enrolment priority is given to undergraduate students who have not yet met the language proficiency prerequisite of a writing-intensive course. Students who receive ~~an less than a C~~ F grade on their first attempt at the course may re-enroll. No student may attempt the course more than twice. Units from this course ~~do not~~ count toward the units required for an SFU degree; however, the course grade is included in calculation of the student's cumulative GPA.

**The offering of this course is for credit.**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Equity complaints about the additive nature of credit in FAL and FAN precipitated a discussion among members of the Undergraduate Program Committee who unanimously voted in favour of a motion to make FAL an integral credit course. Students have complained that they feel penalized for having to take FAL or FAN even though they have been accepted to SFU. Many of the students taking FAL are International Students who are paying a higher tuition than domestic students (in their undergraduate degree) and the course does not count for credit. Our program discussed the merits of having FAL for credit and saw the potential to attract students who may not be required to take FAL (have met minimum requirements) but would benefit from it. In this context we also discussed changing FAL from a graded to a competency based (PASS/FAIL) grading system to eliminate the concern around students taking the course to enhance their gpa (as opposed to better learning the material).

COURSE SUBJECT	PLAN	NUMBER	300	TITLE	Methods for Planning Analysis
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
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Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**PLAN 300 - Methods for Planning Methods and Analysis (4)**

Explores the qualitative and quantitative ~~research~~ methods used by planners in both urban and regional settings. Students ~~will~~ gain a basic understanding of ~~planning relevant data and approaches to used for collecting, analyzing and communicating planning relevant data between and within different communities. Introduces the The~~ roles of planners, and other participants/actors, in ~~research related to urban and regional planning processes will be introduced. Processes and techniques associated with conducting ethical planning research will also be covered. Reviews issues in current professional planning practice and requirements for professional planning accreditation, including planners' professional ethics and responsibility to the public interest.~~

Prerequisite: PLAN 100 or PLAN 200.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The course description was written before the course was ever taught. Now that the planning program has been running for a couple of years, it is time to update the course title and description to better reflect what is taught in the course. Minor editorial changes to improve consistency in PLAN course descriptions.

COURSE SUBJECT PLAN

400

TITLE Planning Theory and Policy Analysis

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course number  Units  Prerequisite Title  Description  Equivalent Statement **WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).PLAN 400 - Planning Theory and Policy Analysis for Social and Environmental Change (4)

Provides an advanced evaluation of planning theory, public policy, and policy analysis, and policy change, focusing on problems in urban and regional planning and resource and environmental management.

Prerequisite: PLAN 100 or PLAN 200; and 60 units.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Course title is PLAN, so removed planning from course description. Policy change is now emphasized as a core component of the course. Policy theory remains in the course content, but is captured in the course description with the general mention of public policy.

## COURSE SUBJECT

PLAN

408

## TITLE

Environmental Planning for  
Sustainable Communities

## TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course  
number

Units

Prerequisite

Title

Description

Equivalent

Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

## PLAN 408 - Environmental Planning for Sustainable Communities (4)

~~Examines frameworks, policies and planning approaches to position communities for a sustainable future. Sustainable communities connect citizens, private sector and government to collaborate in balancing human well-being with ecosystem health. Environmental planners need to know how to engage community level stakeholders to prevent deforestation, reduce carbon emissions, and protect biodiversity while also fostering community health, social equity, and quality of life.~~

Examines the interaction of human settlements and the natural environment in both urban and regional settings. Students gain an understanding of the decisions, policies, and plans that have profound impacts on the health and integrity of social and ecological systems.  
Topics may include planning for nature-based solutions, environmental justice, and resilience.

Prerequisite: PLAN 100 or PLAN 200; and 60 units.

## EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

This course has not yet been offered and the course description was written by another instructor. The course will be offered for the first time in Sept 2023 and the revised description was written by the instructor who will teach the course.

## COURSE SUBJECT

PLAN

443

## TITLE

Public Engagement, Mediation  
and Conflict Resolution in  
Planning

## TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course  
number

Units

Prerequisite

Title

Description

Equivalent

Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

## PLAN 443 - Public Engagement, Mediation and Conflict Resolution in Planning (4)

Introduces students to the theory and techniques of public engagement, negotiation and mediation processes in planning. ~~Begins with a review of Reviews~~ existing planning and negotiation theory and this is followed by a review of techniques for the design and operation of ~~as well as alternative methods for~~ public engagement in planning. Case studies and negotiation simulation sessions ~~will be are~~ used to illustrate key concepts: ~~based on We use the theories and approaches taught at the Harvard Negotiation Program, including Harvard Negotiation Program simulation exercises for environmental dispute resolution.~~ Students acquire the skills to design, manage, and facilitate public engagement processes in planning, engage in stakeholder negotiation, and resolve public disputes in planning and public policy.

Prerequisite: PLAN 100 or PLAN 200; and 60 units.

## EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Minor edits are made to the course description to reduce its length, improve readability, and increase consistency in description of PLAN courses

COURSE SUBJECT

PLAN

495

TITLE

Professional Planning Capstone

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
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Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**PLAN 495 - Professional Planning Capstone (4)**

Reviews issues in current professional planning practice and requirements for professional planning accreditation. We cover planners' professional ethics, responsibility to the public interest, and, responsibility to clients, employers, and colleagues. Includes case studies of current practice in urban, regional, and environmental planning led by leading practicing professional planners. Students will interact with practicing professional planners through a combination of field trips and workshop presentations on the nature of the planning practice.

Provides students with an opportunity to integrate the knowledge that they have gained through their undergraduate degree by working through the inception, development, and communication of a planning capstone project. Students will work collaboratively in class-based "consulting firms" to evaluate a planning issue and develop solutions.

Prerequisite: PLAN 300, PLAN 302 or ENV 302, and 75 units; or with instructor permission. Students must be enrolled in the Bachelor of Environment in Resource and Environmental (Planning) program.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Text changed to reflect professional practice approach in the course. Minor editorial changes to improve consistency in PLAN course descriptions.

COURSE SUBJECT	PLAN	NUMBER	302	TITLE	Planning Internship I
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

PLAN 302 - Planning Internship I (1)

~~Provides students with practical professional planning experience through an internship with an outside agency or through a planning project supervised by the course instructor. Internships will consist of a minimum of 80 hours of practical work time. Students will be required to prepare a log book documenting the work activities. Log books will be signed by the student intern's supervisor. Students will prepare a final report to submit to the course instructor describing the nature of the work performed and lessons they learned from the work experience. For students enrolled in the REM planning concentration who are not in the co-op program. Pass/Fail.~~

Provides practical professional planning experience through an internship for students enrolled in the REM planning concentration who are not in the co-op program. It is the student's responsibility to organize an internship with an outside agency or through a planning project supervised by a planning faculty member. Internships will consist of a minimum of 80 hours of practical work time. Students are required to prepare a final report to submit to the department describing the nature of the work performed and personal lessons learned. Pass/Fail.

Prerequisite: PLAN 100 or PLAN 200; one of PLAN 300 or PLAN 319, or REM 319; and permission of the department. Student must be enrolled in the Bachelor of Environment in Resource and Environmental Management Planning Stream.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The revised course description explains the intent of the course and the required student initiative more accurately and more prominently. Wording is consistent with course description of PLAN 402.

COURSE SUBJECT

PLAN

402

TITLE

Planning Internship II

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
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Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**PLAN 402 - Planning Internship II (1)**

~~Provides students with practical professional planning experience through an internship with an outside agency or through a planning project supervised by the course instructor. Internships will consist of a minimum of 80 hours of practical work time. Students will be required to prepare a log book documenting the work activities. Log books will be signed by the student intern's supervisor. Students will prepare a final report to submit to the course instructor describing the nature of the work performed and lessons they learned from the work experience. For students registered in the REM planning concentration who are not in the co-op program. Pass/Fail.~~

Provides practical professional planning experience through an internship for students enrolled in the REM planning concentration who are not in the co-op program. It is the student's responsibility to organize an internship with an outside agency or through a planning project supervised by a planning faculty member. Internships will consist of a minimum of 80 hours of practical work time. Students are required to prepare a final report to submit to the department describing the nature of the work performed and personal lessons learned. Pass/Fail.

Prerequisite: PLAN 302 and permission of the department. Student must be enrolled in the Bachelor of Environment in Resource and Environmental Management Planning Stream.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The revised course description explains the intent of the course and the required student initiative more accurately and more prominently. Wording is consistent with course description of PLAN 302.

COURSE SUBJECT

REM

NUMBER

100

TITLE

Global Change

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
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Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 100 - Global Change (3)

~~This course provides students with an overview of global environmental change and its causes from a social science perspective, historically and at the present time. Population growth, an increasing ecological footprint and changes in ideology, social organization, economy and technology will be critically reviewed. New ways of thinking in natural and social science will be considered in relation to specific issues such as land, soil and food; energy, raw materials and solid waste; air pollution and transportation; water, oceans and fisheries; climate change; forestry and biodiversity; urbanization, and alternative futures.~~

The Earth is experiencing the most dramatic environmental changes it has for thousands of years. How did we end up here? Provides an interdisciplinary perspective on the forces behind our ever-increasing environmental footprint. Highlights how ideologies and societal structures have shaped how we interact with the environment and explores the necessary changes for a more sustainable future.

Breadth-Social Sciences.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The course description has not been updated for years. While the objective of the course has remained the same, the content has continuously been updated. The revised course description aims to increase the attractiveness of the course by being more accessible and describing the main objective of the course more accurately.

COURSE SUBJECT	REM	NUMBER	200	TITLE	Introduction to Resource and Environmental Management in Canada
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**REM 200 - Introduction to Resource and Environmental Management in Canada (3)**

Explores the natural and social science foundations of resource and environmental management and demonstrates how that knowledge can be used in environmental decision-making in Canada. Provides a basic understanding of the nature and management of natural resources, strategic thinking for environmental planning-including Indigenous resource management issues in a Canadian context. Consideration is given to strategic thinking for environmental planning, socio-economic and biophysical trade-offs in natural resource decision-making and approaches for addressing uncertain knowledge.

Prerequisite: One of REM 100, GEOG 100, GEOG 111, or EVSC 100.

Breadth-Social Sci/Science.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Description needed to be updated since this hasn't been done for some time and it was no longer accurate. Minor editorial changes to improve consistency in REM course descriptions.

COURSE SUBJECT	REM	NUMBER	202W	TITLE	Technical Communication for Environmental Professionals and Planners (3)
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 202W - Technical Communication for Environmental Professionals and Planners (3)

~~REM 202W will teach~~ Teaches students to communicate technical information clearly and concisely. ~~Reviews the fundamentals of writing and progress to the creation and presentation of professional documents.~~ Students will improve their skills through writing-intensive assignments related to the fields of resource management and planning. ~~REM 202W will review the fundamentals of writing and progress to the creation and presentation of professional documents including journal manuscripts, technical reports, briefing notes, and emails.~~ Students should familiarize themselves with a reference-management software; the course will references the free, online program, Zotero.

Prerequisite: One of REM 100, GEOG 100, GEOG 111, or EVSC 100.

Writing.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Removed text is unnecessary.

COURSE SUBJECT	REM	NUMBER	211	TITLE	Introduction to Applied Ecology
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 211 - Introduction to Applied Ecology (3)

Balancing the needs of people and other components of nature is among the foremost challenges of our time. Understanding key processes that structure nature across space and through time can help inform this challenge. Introduces students to the foundational concepts of applied ecology motivated by real-world management and conservation problems. Motivated by real-world management and conservation problems, this course will introduce students to the foundational concepts of applied ecology.

Breadth-Science.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

This edit better reflects contemporary understanding of human nature relationships. Minor editorial changes to improve consistency in REM course descriptions.

COURSE SUBJECT	REM	NUMBER	225	TITLE	Quantitative Toolkit for Social-Ecological Systems
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 225 - Quantitative Toolkit for Social-Ecological Systems (3)

Develops a basic understanding of the breadth and role of quantitative models in social-ecological systems. Introduces skills, methods, and software typically used in data analysis, quantitative modelling, and research for environmental professionals. Provides important baseline education and essential skills for students needing to apply quantitative skills in future courses, and establishes a common understanding in Excel and R.

Prerequisite: 18 units.

Quantitative.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

It is important to emphasize the key role REM 225 plays within the REM curriculum. Providing a common quantitative and programming framework from which future courses can build makes upper-level courses easier to teach and removes barriers for students who may not otherwise have experience with analysis or modelling software (e.g., Microsoft Excel and the R statistical environment).

COURSE SUBJECT REM NUMBER 356W TITLE Environmental Policy

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 356W - Environmental Policy (3)

~~Provides an overview of policy and governance approaches used to manage the natural environment at the international, national, provincial, regional, and local levels. Presents a basic set of evaluative questions that can be used to determine the effectiveness and efficiency of different approaches to regulate and manage the environment.~~

Provides an overview of policy and governance approaches used to manage the natural environment from international to local levels. The history, basic concepts, and key strategies of modern environmental policy are presented and discussed. Students then analyze and critique environmental policy across scales regarding climate, forests, oceans, and urban landscapes focusing on determining the effectiveness and efficiency of different approaches to regulate and manage the environment.

Prerequisite: One of REM 100, GEOG 100, GEOG 111, or EVSC 100; and 45 units.

Students with credit for REM 356 may not take this course for further credit.

Writing.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The changes from the previous version are minor, but the new description of the course is more specific regarding its themes and scope. Minor editorial changes to improve consistency in REM course descriptions.

COURSE SUBJECT	REM	NUMBER	370	TITLE	Global Resource Issues in Oceanography
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 370 - Global Resource Issues in Oceanography (4)

Uses the lens of ocean resource management to ~~introduces principles of oceanography, including ocean circulation, ocean carbon cycling, nutrients and biological productivity, oceans and the climate system, and global fisheries. ocean resource contributions to global food supply. Provides basic understanding of ocean resource management through case studies such as plastic pollution, ocean acidification, Arctic Ocean change, and global fisheries management. including transportation, recreation, fisheries, and mining.~~

Prerequisite: EVSC 100, or GEOG 111, or REM 100, and 45 units.

Students with credit for MASC 435 may not take this course for further credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The changes above better reflect the case study topics covered in the course, and better describes the means by which the course content is delivered (through the lens of resource management).

COURSE SUBJECT	REM	NUMBER	221	TITLE	Systems Thinking and the Environment
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**REM 221 - Systems Thinking and the Environment (4) (3)**

Introduces systems thinking in the context of environmental and sustainability challenges using system archetypes and system dynamics theory. Analytical and modeling techniques are applied to understand and project systems complexity. Emphasis is placed on using systems thinking concepts to finding solutions in a complex world.

Prerequisite: One of REM 100, GEOG 100, GEOG 111, or EVSC 100. Students with credit for ENV 221 may not take this course for further credit.

Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

This course was changed from 3 to 4 credits in 2021 to accommodate longer tutorial sessions. However, the total workload for students has not changed; consistent with the new rules of FENV, we would like to change the course back to 3 credits to more accurately reflect student workload.

Additionally, extra text has been included in the description to point out the interest in not just recognizing, but also solving systems problems, as all parts of the course point to this. The last two weeks of the course are entirely devoted to working with diverse groups to affect systems change.

COURSE SUBJECT	REM	NUMBER	311	TITLE	Applied Ecology
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 311 - Applied Population Ecology (3)

Builds on foundational ecological concepts to study the ecological processes that govern the dynamics of populations. Students ~~will use~~ Uses quantitative models to examine the role of data, variability, uncertainty, and assumptions in science and decision making. Students ~~will~~ learn how to improve the sustainable use of natural capital by applying scientific data, ecological theory, ecological models, critical thinking, and Adaptive Management to societal decisions. Uses R to code, run, and interpret ecological population models.

Prerequisite: REM 100 or EVSC 100; BISC 204 or GEOG 215 or REM 211; STAT 201 or STAT 203 or STAT 205 or GEOG 251 or equivalent. Recommended: REM 225.

Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Changed title and added text provides more insight into course content. Minor editorial changes to improve consistency in REM course descriptions.

COURSE SUBJECT	REM	NUMBER	355	TITLE	Sustainable Transportation Management
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

REM 355 - Sustainable Transportation for a Zero-Emissions World Management-(3)

~~Explores trends in the transportation sector according to a resource and environmental management perspective, including air quality and greenhouse gas impacts. The perspective is interdisciplinary, organized around transitions to alternative fuels, efficiency and reduced vehicle use. Skills to be developed include sustainability management, lifecycle analysis and policy analysis.~~

Explores the transportation system and how to achieve net-zero greenhouse gas emissions as well as other sustainability goals. Topics include zero-emissions vehicles, low-carbon fuels, shared mobility, vehicle automation, and reduced vehicle use. An interdisciplinary approach is followed, including analyses of environmental and resource impacts, consumer behaviour, systems, technology change, and climate policy.

Prerequisite: 45 units or permission of instructor.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Edits to the title and description more accurately represent the course, which focuses more on deep greenhouse gas mitigation goals. Some existing and past students explained that the original title and description did not fully explain the course.

## MEMORANDUM

ATTENTION      Senate Committee on Undergraduate Studies      DATE      November 29, 2022

FROM      Pascal Haegeli,  
Chair, REM Undergraduate Program Committee      PAGES      1

RE:      Deletion of REM 391 – *Directed Studies*

Dear SCUS,

On behalf of the REM Undergraduate Program Committee, I request REM 391 - *Directed Studies* to be deleted.

REM 391 is one of two UG directed studies courses in REM, with REM 491 being the other one. While it made sense to have two directed studies courses in our UG programs earlier when we only had very few REM UG courses, our programs and course offerings have matured substantially and we do not need this course anymore. In addition, it is difficult to properly distinguish the requirements between 391 and 491, and we have not had any students in 391 in the last two years. And finally, we actually do not have the capacity to offer a lot of directed studies within our programs. Hence, only having a single directed studies course at the 400-level will fully satisfy student needs and reduce administrative challenges.

No current students, faculty or staff would be negatively affected by the deletion of REM 391. There are no resources to be reallocated after the deletion of this course, and the deletion would have no impact on other departments or faculties.

If you have any questions, or require further information, please contact me.

Thank you,



Pascal Haegeli  
Chair, REM Undergraduate Program Committee

Faculty Approval

Faculty Undergraduate Studies Committee	Signature	Date
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Senate Committee on Undergraduate Studies Approval

Senate Committee on Undergraduate Studies	Signature	Date
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COURSE SUBJECT

REM

NUMBER

391

TITLE

Directed Studies

**RATIONALE** (must be included)

REM 391 is one of two UG directed studies course in REM, with REM 491 being the other one. While it made sense to have two directed studies courses in our UG programs earlier when we only had very few REM UG courses, our programs and course offerings have matured substantially and we do not need this course anymore. In addition, it is difficult to properly distinguish the requirements between 391 and 491, we have not had any students in 391 in the last two years, and we actually do not have the capacity to offer a lot of directed studies within our programs. Hence, only having a single directed studies course at the 400-level will fully satisfy student needs and reduce administrative challenges.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (enter in textbox)

Fall 2023

**PLEASE DO THE FOLLOWING:**

1. Attach a program impact list along with your course deletion form. Contact the Senate and Academic Services Office ([sfucal@sfu.ca](mailto:sfucal@sfu.ca)) for a program impact list.
2. Once you have the program impact list, please review how deleting this course affects each program's requirements.
3. If more substantial changes are required to programs as a result of this deletion, please also submit a program modification form.
4. If no further changes other than deletion is required in program requirements, please list those programs in the box below:

There is no program impact list for REM 391 (see attached email from Annie Young)

The only programs affected by the deletion of REM 391 are the REM Major and REM Major Honors. However, the course is not explicitly listed in the program requirements as it only enters the program as a upper division elective that includes all 300 and 400 level REM courses. Hence, the program requirements do not need to be changed.

5. Lastly, please conduct a course impact analysis, which reviews the effect of a course number change and/or course deletion on course prerequisites. For instructions on how to do a course impact analysis, please visit [our page](#) and click on "deleting a course" and review Step 2. Course Impact Analysis.

COURSE SUBJECT REM NUMBER 427 TITLE Avalanche Risk Management

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**REM 427 - Avalanche Risk Management (4)**

Interdisciplinary introduction to snow avalanches and the management of the associated risks. Embedded in an overall risk management framework, the course discusses the physics of avalanche formation, identification and characterization of avalanche terrain, the fundamentals of hazard assessment, and mitigation approaches in different contexts with practical examples from in Canada.

Prerequisite: ~~MATH 150 or 151 or 154 or 157 and one of STAT 201 or 203 or 205 or GEOG 251 or equivalent, and 60 units; or permission of the instructor.~~ Recommended: REM 225.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The MATH prerequisite is not required for how the course is taught and unnecessarily restricts access. The instructor has frequently waived this prerequisite, and students without the MATH background have successfully completed the course without any issues. REM 225 was added as a recommended course because it provides foundations skills in Excel and R that are required in REM 427.

COURSE SUBJECT	REM	NUMBER	445	TITLE	Environmental Risk Assessment
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

#### REM 445 - Environmental Risk Assessment (4)

Students receive theory and practical experience in the control and management of hazardous substances in the environment. This includes the application of techniques used to assess toxicological, ecological and human health risks of contaminants within the current regulatory framework.

Prerequisite: MATH 151 or 154 or 157; STAT 201 or 203 or 205 or GEOG 251 or equivalent; and 60 units. Recommended: REM 225.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

REM 225 was added as a recommended course because it provides foundations skills in Excel and R that are required in REM 445.

COURSE SUBJECT	SD	NUMBER	281	TITLE	Introduction to Sustainability
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Introduction to Sustainability SD 281 (3)

Introduces the challenges and opportunities for developing sustainable communities and a sustainable world, through the framework of the Sustainable Development Goals (SDGs) and alternative perspectives around sustainability (e.g. Indigenous, just sustainabilities etc.). Students will also learn from the practical experience of diverse experts and sustainability professionals. Conventional approaches to sustainable development will be critiqued to ensure considerations for equity and social justice. Highlights will be showcased from the Global North and Global South.

Students with credit for ~~SCD 201 or REM 201 or~~ REM 281 may not complete this course for further credit.

Breadth-Social Sciences.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Course equivalencies were outdated since SCD 201 and REM 201 have not been taught for many years (and do not exist anymore), and the content of SD 281 has evolved considerably since these courses were taught the last time. The equivalency with REM 281 is still meaningful since that course was last offered in the spring of 2021.

COURSE SUBJECT	SD	NUMBER	381	TITLE	Building Sustainable Communities
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Building Sustainable Communities SD 381 (4)

Engages students in understanding how to plan and cultivate sustainability at the community and city level, taking into consideration the environmental, economic, and social aspects of development. Explores and analyzes policy instruments, planning tools, and strategies from around the world for engaging people and institutions in building sustainable communities.

Prerequisite: One of PLAN 100, PLAN 200, REM 100, or SD 281; and 45 units.

Students with credit for ~~SCD 301 or REM 301 or~~ REM 381 may not complete this course for further credit.

Breadth-Social Sciences.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

Course equivalencies were outdated since SCD 301 and REM 301 have not been taught for many years (and do not exist anymore), and the content of SD 381 has evolved considerably since these courses were taught the last time. The equivalency with REM 381 is still meaningful since that course was last offered in the spring of 2021.

COURSE SUBJECT

SD

481

TITLE

Sustainability Governance and Leadership

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course  
number

Units

Prerequisite

Title

Description

Equivalent

Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).SD 481 – Sustainability Governance and Leadership (4)SD 481 – Global Sustainability Governance and Action (4)

~~Engages students in understanding critical concepts and issues of sustainability at different scales and how they related to policy, management, leadership, and governance in a range of context and across different sectors (thinking about how local movements can come to influence national and international governance). Explores and analyzes the history of sustainability action, how change happens, the role of different levels of governance, current sustainability initiatives, and prospects for how to create change in the future.~~

From sustainability debates to policy windows and strategic goals (e.g., UN Sustainable Development Goals), students engage with tools and concepts to enable equitable change across contexts and sectors. This includes how policy is created, who the main players are in effecting change, and how we track and adapt to outcomes.

Prerequisite: One of PLAN 100, PLAN 200, REM 100, or SD 281; and 60 units. Students with credit for SCD 401 or REM 401 or REM 481 may not complete this course for further credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The new description and title better reflect updates to the course during the last year, particularly regarding its alignment with related courses (SD 281, SD 381). This new description is more specific regarding the focus on global-to-local scale sustainable development, the use of current goals (e.g., UN SDGs) as case examples, and the emphasis on implementation strategies for sustainability goals.

Course equivalencies were outdated since SCD 401 and REM 401 have not been taught for many years (and do not exist anymore), and the content of SD 481 has evolved considerably since these courses were taught the last time. The equivalency with REM 481 is still meaningful since that course was last offered in the spring of 2021.

COURSE SUBJECT	SD	NUMBER	491	TITLE	Directed Studies in Sustainable Development
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

SD 491 - Directed Studies in Sustainable Development (3)

Permits SD students to expand their knowledge base and apply their critical thinking within the field of sustainable development in an area not examined in depth in regular courses. Enrollment is limited. Variable units: 1, 2, 3, 4.

Prerequisite: 60 units and permission of the department program director.

~~Students with credit for DEVS 403 or SCD 412 may not take this course for further credit.~~

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The wording for the prerequisites was changed to reflect that there is no Director for the Sustainable Development Program anymore since the program was transferred to REM. The new language is consistent with the permission statements in other PLAN/REM courses.

Course equivalencies were outdated since DEVS 403 and SCD 404 have not been taught for many years (and do not exist anymore). Furthermore, the field of sustainability has evolved considerably since these courses were taught the last time. Hence, the studies conducted in SD 491 provide students with considerably different experiences from what students in DEVS 403 and SCD 404 had learned.

COURSE SUBJECT	SD	NUMBER	494	TITLE	Project in Sustainable Development
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

SD 494 - Project in Sustainable Development (4)

Provides students an opportunity to apply ideas and models acquired in the program to a practical problem in sustainable development. Required for SCD PBD students. Certificate students must apply for special permission to take this course. Enrollment is limited.

Prerequisite: Permission of the department, Director of the Sustainable Development Program.

~~Students with credit for SCD 404 may not take this course for further credit.~~

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

The wording for the prerequisites was changed to reflect that there is no Director for the Sustainable Development Program anymore since the program was transferred to REM. The new language is consistent with the permission statements in other PLAN/REM courses.

Course equivalencies were outdated since SCD 404 has not been taught for many years (and do not exist anymore). Furthermore, the field of sustainability has evolved considerably since these courses were taught the last time. Hence, the projects conducted in SD 494 provide students with considerably different experiences from what students in SCD 404 had learned.

COURSE SUBJECT	SD	NUMBER	499	TITLE	Special Topics in Sustainable Development
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

#### EFFECTIVE TERM AND YEAR FOR CHANGES

SD 499 - Special Topics in Sustainable Development (4)

A specific topic within the field of sustainable development, not covered by regularly scheduled, required courses in the program. The subject matter may vary from term to term.

Prerequisite: 60 units ~~or admission to the Post Baccalaureate Diploma in Sustainable Development.~~

~~Students with credit for DEVS 402 or SCD 410 with the same topic may not take this course for further credit.~~

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

#### RATIONALE (must be included)

The wording for the prerequisites was changed to reflect that the Post Baccalaureate Diploma in Sustainable Development has been discontinued and no new students are accepted into the program.

Course equivalencies were outdated since DEVS 402 and SCD 410 have not been taught for many years (and do not exist anymore). Furthermore, the field of sustainability has evolved considerably since these courses were taught the last time. Hence, the topics covered in SD 499 provide students with considerably different experiences from what students in DEVS 402 and SCD 410 had learned.

COURSE SUBJECT	HSCI	NUMBER	478	TITLE	Seminar in Molecular Epidemiology of Infectious Diseases
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Prerequisite: HSCI 230 (or 330) and MBB 331 or HSCI 326 or MBB 326, with a minimum grade of C, or HSCI 338 with a minimum grade of C-. as prerequisites or corequisites. Students with credit for HSCI 432 in 2010 may not complete HSCI 478 for further credit. Students with credit for MBB 478 may not take this course for further credit.

#### EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

We are removing HSCI 230 as this is a required course for all HSCI students. It is not necessary to include this as all students will have taken HSCI 230 early in their degree programs. Additionally, this course (HSCI 478) will be slashed with MBB 478 (new course they are creating) and we would like to allow MBB students to enroll (who may not have taken HSCI 230). We are maintaining the pre-requisite of MBB 331 and adding HSCI/MBB 326 or HSCI 338 to provide a laddering sequence through our courses and to ensure all students will still have the necessary background knowledge to do well in the course.

COURSE  
SUBJECT

EASC

NUMBER

206

TITLE

Field Geology I

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
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Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>
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**EASC 206-~~2~~ 3 Field Geology I**

~~Methods of field navigation, geological mapping and the interpretation of geological field data including cross-sections, the geological time scale, and stratigraphic sections and columns. Includes two weekend field trips. Field locations may vary from year to year. All lectures and field trips are mandatory.~~

An introduction to field methods and technological applications used to navigate, systematically observe, characterize, record, and interpret geologic features and events. Includes one or two mandatory weekend field trips as well as several local field trips.

Prerequisite: EASC 101 with a grade of C- or better. and prerequisite/eCorequisite: EASC 210. All with a grade of C- or better.

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall, 2023

**RATIONALE** (must be included)

It is increasingly clear that students entering upper division field schools (EASC 306 and EASC 308) have nominal field skills at best. The increase in units from 2 to 3, and the redesign of the EASC 206 course to include 13 weeks of lectures spread throughout a semester on best practices in the collection and analysis of field data, coupled with hands-on practice in the lab and the field will permit the students to excel in the upper division field schools and develop a better understanding of content presented in a number of other lower division courses. Course content remains unchanged, but is delivered multiple times across a full semester of teaching rather than in two field excursions.

COURSE  
SUBJECT

EASC

NUMBER 499

TITLE Honours Thesis

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):Course number  Units  Prerequisite Title  Description  Equivalent Statement 

~~Will include~~ Experimental and/or theoretical research in Earth Sciences ~~or a related discipline~~, and the preparation of a thesis (~~research report~~). Selection of a research topic and preparation of ~~the~~ a thesis will be done in consultation with a faculty member in Earth Sciences. A research seminar will be delivered at the end of the semester.

Prerequisite: ~~105 units, EASC 498 with a grade of B or better, admittance to the honours program, and consent of a thesis supervisor~~ permission of the department.

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall, 2023

**RATIONALE** (must be included)

The proposed change recognizes a 3-unit initial research semester (EASC 498-3 Undergraduate Research 1) as a prerequisite to the undertaking of an Honours Thesis. Description change clears up the wording.

COURSE SUBJECT	FAN	NUMBER	X99	TITLE	Foundations of Analytical and Quantitative Reasoning
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Designed for students who need to upgrade their mathematical background in preparation for SFU Q courses. Also recommended for students who wish to refresh skills after several years away from mathematics. An in-depth look at what mathematics is; mathematical reasoning, problem solving and math study skills. Review of fundamental topics and concepts of mathematics and their real-world applications. This course aims to develop students' math study skills, confidence in their quantitative abilities, and to learn how understanding mathematics is both one of the keys to mastering other disciplines, and useful in everyday situations. ~~Units from this course do not count towards the 120 units required for an SFU degree; however, the course grade is included in the calculation of the student's cumulative GPA.~~ Students who have taken, have received transfer credit for, or are currently taking ~~MATH 150, 151, 154 or 157 or FAN X92 or any MATH class numbered 100 or higher~~ may not take FAN X99 for credit without the permission from the Department of Mathematics. ~~Students who receive a grade less C on their first attempt may re-enroll. The offering of this course is for credit.~~

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Equity complaints about the additive nature of credit in FAL and FAN precipitated a discussion among units across campus. The Math department is strongly opposed to charging tuition fees to students but not awarding them credits for their achievements. FAN is especially important for returning students or those who did not have opportunities to learn this material elsewhere. Instructors for this class are working with our departmental advisor to ensure that those who need this class are admitted regardless of statements on their transcript but that students are unable to take it when they do not.

COURSE SUBJECT	MATH	NUMBER	380W	TITLE	History of Mathematics
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Prerequisite: MATH 152, MATH 155 or MATH 158, with a minimum grade of C- and at least six units from MATH at the 200-division or above (includes STAT 270).

Six units of mathematics at the 300-division or higher, or permission of the instructor. Students are strongly advised to have completed both MATH 242 and MATH 251 or equivalent.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023



Page 2 of 2

**RATIONALE** (must be included)

To ensure students have sufficient mathematical background to be successful in  
MATH 380W.

COURSE SUBJECT	MATH	NUMBER	381W	TITLE	Mathematics Undergraduate Seminar
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Prerequisite: Six units of mathematics at the 200-300-division or higher, or permission of the instructor. Students are strongly advised to have completed both MATH 242 and MATH 251 or equivalent.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

To ensure students have sufficient mathematical background to be successful in MATH 381W.

COURSE SUBJECT	MBB	NUMBER	402	TITLE	Developmental Biology of Cell Signalling
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**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite

Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Developmental Biology of Cell Signalling Cell Signalling in Development and Disease

~~Aspects of developmental biology in the context of signal transduction pathways. The diverse mechanisms used in cell signalling and how the various approaches to the study of signal transduction in organismal development complement each other will be examined with an emphasis on current literature. A mechanistic study of signal transduction pathways, their roles in development and disease with an emphasis on current literature.~~

Prerequisite: MBB 331 MBB 322 or BISC 302W or BISC 333 with a minimum grade of C.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2023

**RATIONALE** (must be included)

The title and course descriptions have been updated. The content of the course has not changed. MBB 322 will be a more effective pre-requisite to the course contents than MBB331. BISC 333 (Developmental Biology) provides appropriate background and will make the course accessible to biology students.