


MEMORANDUM

ATTENTION:	Senate
FROM:	Elizabeth Elle, Vice-Chair, Senate Committee on Undergraduate Studies
RE:	Program Changes
DATE:	June 2, 2023


For information:

Acting under delegated authority at its meeting of June 1, 2023, SCUS approved the following curriculum revisions effective Spring 2024.

a. Faculty of Applied Sciences (SCUS 23-34)1. Faculty of Computing Science

- (i) Lower division requirement changes to the Software Systems Major (*Fall 2023*)

b. Faculty of Environment (SCUS 23-60)1. Department of Archaeology

- (i) Upper division requirement changes to the:

- Archaeology Major (*Fall 2024*)
- Archaeology Honours (*Fall 2024*)
- Anthropology and Archaeology Joint Major (*Fall 2024*)
- Archaeology Minor (*Fall 2024*)
- Archaeology Extended Minor (*Fall 2024*)

2. Dean of Environment Office

- (i) Upper division requirement changes to the Environmental Literacy Certificate (*Fall 2024*)

3. School of Environmental Science (Fall 2024)

- (i) Requirement changes to the:

- Environmental Science Major
- Environmental Science Honours

4. Department of Geography

(i) Lower division requirement changes to the:

- Global Environmental Systems Major (*Fall 2024*)
- Global Environmental Systems Honours (*Fall 2024*)
- Human Geography Major
- Human Geography Honours
- Physical Geography Major
- Physical Geography Honours

c. Faculty of Science (SCUS 23-61)

1. Department of Earth Sciences

(i) Requirement changes to the Earth Sciences Minor (*Fall 2024*)

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>.



<p>Name of Program or Name of Faculty</p> <p>School of Computing Science</p>
<p>Rationale for change:</p> <p>BUS 232 and STAT 270 will no longer be offered as an option to STAT 271 in this program's curriculum.</p> <p>CMPT 210 will completely replace MACM 201.</p>
<p>Effective term and year:</p> <p>Fall 2023</p>
<p>The following program(s) will be affected by these changes:</p> <p>Software Systems Major</p>

Calendar Change: "to" and "from" sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>Software Systems Major</p> <p>[...]</p> <p>Program Requirements</p> <p>[...]</p> <p>and all of</p> <p>CMPT 130 - Introduction to Computer Programming I (3) CMPT 135 - Introduction to Computer Programming II (3) CMPT 210 - Probability and Computing (3) CMPT 213 - Object Oriented Design in Java (3) CMPT 225 - Data Structures and Programming (3) CMPT 276 - Introduction to Software Engineering (3)</p>

CMPT 295 - Introduction to Computer Systems (3)

MACM 101 - Discrete Mathematics I (3)

MSE 110 - Mechatronics Design I (3)

STAT 271 - Probability and Statistics for Computing Science (3)

and one of

~~CMPT 210 - Probability and Computing (3)~~

~~MACM 201 - Discrete Mathematics II (3)~~

[...]

and one of

~~BUS 232 - Business Statistics (3)~~

~~STAT 270 - Introduction to Probability and Statistics (3)~~

~~STAT 271 - Probability and Statistics for Computing Science (3)~~

[...]



Name of Program or Name of Faculty Department of Archaeology
Rationale for change: Addition of ARCH 434 to Group I requirements as it falls under “Methods”
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Archaeology Major Archaeology Honours Anthropology and Archaeology Joint Major Archaeology Minor Archaeology Extended Minor

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

GROUP I - METHOD & THEORY COURSES ARCH 348 - Archaeological Conservation (4) ARCH 349 - Management of Archaeological Collections (4) ARCH 374 - Research Design in Archaeology (4) ARCH 376 - Quantitative Methods in Archaeology (4) ARCH 377 - Historical Archaeology (4) ARCH 386 - Archaeological Resource Management (3) ARCH 434 - Archaeological Field Methods (3) ARCH 471W - Archaeological Theory (4) ARCH 485 - Lithic Technology (5)
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Name of Program or Name of Faculty Department of Archaeology
Rationale for change: Addition of ARCH 374 to Honours Program. This will allow honours students to take either ARCH 374 or ARCH 376 as an honours requirement.
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Archaeology Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>Program Requirements</p> <p>Honours students must successfully complete 132 units, of which 60 units must be at the upper division level and of these, a minimum of 50 units must be in upper division archaeology courses. Honours students must complete all course requirements for the major program as well as ARCH 376, 498, and 499. ARCH 374 or ARCH 376, and ARCH 498 and ARCH 499.</p> <p>...</p> <p>Upper Division Requirements</p> <p>Students complete at least 50 upper division archaeology units, which must include</p> <p>four three Group I courses (one of which must be ARCH 471W) at least three Group II courses at least two Group III courses at least one Group IV course</p> <p>and one of ARCH 374 - Research Design in Archaeology (4) ARCH 376 - Quantitative Methods in Archaeology (4)</p> <p>and both of ARCH 498 - Honours Reading (5) ARCH 499 - Honours Thesis (5)</p>
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Name of Program or Name of Faculty Faculty of Environment
Rationale for change: CMNS 311 is replacing CMNS 349
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Environmental Literacy Certificate

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>Elective Groups Students complete a minimum of 9 units from one of the groups of electives. SOCIAL AND HISTORICAL (GROUP A)</p> <p>ARCH 329 - Special Topics in Environmental Archaeology (3) ARCH 340 - Zooarchaeology (5) ARCH 365 - Archaeological Perspectives on Human Ecology (3) ARCH 386 - Archaeological Resource Management (3) ARCH 390 - Archaeobotany (4) CMNS 349 - Environment, Media and Communication (4) CMNS 311 - Topics in Communication and Social Justice (4)* GEOG 362 - Gentrification and Urban Change (4) [...] SA 371 - The Environment and Society (SA) (4)</p> <p>*When topic is offered as environmental communication.</p>
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Name of Program or Name of Faculty School of Environmental Science
Rationale for change: To more accurately reflect the way the curriculum requirements articulate together when considering how GEOG 215 may be applied only once to either the 'choose one of' BISC 204/GEOG 215 and 'choose two of' GEOG 213/214/215 requirements that are present in the Environmental Earth Systems stream. To add more options to existing requirements to reflect new course availability.
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Bachelor of Science, Major in Environmental Science

Calendar Change: "to" and "from" sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<h2>Environmental Science Major</h2> <p>Bachelor of Science</p> <p>This bachelor of science (BSc) degree offers students the option of completing either the general environmental science stream or one of five specialized streams that include applied biology, environmental archaeology, environmental earth systems, environmetrics, and water science. Students declare their stream by meeting with their academic advisor or submitting the online form.</p> <h3>Minimum Grades</h3> <p>The minimum cumulative grade point average (CGPA) for continuation and graduation is 2.00.</p> <h3>Program Requirements</h3>

Students complete 120 units including 44 units at the upper division. University and Faculty of Environment regulations also apply.

Internal Transfer Requirements

A CGPA of 2.0 or above is required to complete an internal transfer, as well as two of the science courses from the lower division requirements below completed with a final grade of C or above, in separate disciplines (BISC, CHEM, MATH, PHYS, or STAT).

Course Substitutions

Substitutions of program requirements, including courses deemed equivalent to these required courses, are not allowed without written permission obtained from the academic advisor. Such courses taken without approval will not be applied to graduation requirements. Students should consult their academic advisor for details on obtaining permission for substitutions. Students should contact their academic advisor to determine how special topics courses (EVSC 395 - Special Topics in Environmental Science (3) and EVSC 495 - Special Topics in Environmental Science (3)) can be substituted into their stream.

Upper Division Units

Additional upper division units may be required to reach the graduation requirement of 44 UD units. Recommended to select from BISC, CHEM, EASC, EVSC, GEOG, INDG, MATH, PHYS, REM, or STAT to further scientific and natural resources related knowledge

[...]

Upper Division Requirements

Students complete all of

EVSC 300 - Seminar in Environmental Science (3)

EVSC 305 - Methods in Environmental Science (4)

EVSC 400 - Environmental Science Capstone (4)

and two of

REM 319 - Environmental and Planning Law (3)

REM 320W - Ethics and the Environment (3)

REM 321 - Ecological Economics (4)

REM 356W - Environmental Policy (3)

REM 407 - Indigenous Governance and Resource Relationships

CMNS 311 - Topics in Communication and Social Justice (4)*

***When topic is offered as environmental communication.**

[...]

Environmental Earth Systems Stream

This stream is for students interested in an integrative understanding of environmental processes and earth systems. Students develop technical skills in quantitative research and use technology to analyze spatial data.

Lower Division Requirements

Students who choose this stream must complete

GEOG 111 - Earth Systems (3)

GEOG 213 - Introduction to Geomorphology (3)

GEOG 214 - Weather and Climate (3)

and one of

EASC 101 - Dynamic Earth (3)

REM 100 - Global Change (3)

~~and two of~~

~~GEOG 213 - Introduction to Geomorphology (3)~~

~~GEOG 214 - Weather and Climate (3)~~

~~GEOG 215 - The Biosphere (3)~~

and one of

GEOG 253 - Introduction to Remote Sensing (3)

GEOG 255 - Geographical Information Science I (3)

[...]



Name of Program or Name of Faculty School of Environmental Science
Rationale for change: To more accurately reflect the way the curriculum requirements articulate together when considering how GEOG 215 may be applied only once to either the 'choose one of' BISC 204/GEOG 215 and 'choose two of' GEOG 213/214/215 requirements that are present in the Environmental Earth Systems stream. To add more options to existing requirements to reflect new course availability.
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Bachelor of Science, Honours in Environmental Science

Calendar Change: "to" and "from" sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<h2>Environmental Science Honours</h2> <p>Bachelor of Science</p> <p>This bachelor of science (BSc) degree offers students the option of completing either the general environmental science stream or one of five specialized streams that include applied biology, environmental archaeology, environmental earth systems, environmetrics, and water science. Students declare their stream by meeting with their academic advisor or submitting the online form.</p> <h3>Minimum Grades</h3> <p>The minimum cumulative grade point average (CGPA) for continuation and graduation is 3.00.</p> <h3>Program Requirements</h3>

Students complete 120 units including at least 60 units at the upper division. University and Faculty of Environment regulations also apply.

Internal Transfer Requirements

A CGPA of 3.0 or above is required to complete an internal transfer, as well as two of the science courses from the lower division requirements below completed with a final grade of C or above, in separate disciplines (BISC, CHEM, MATH, PHYS, or STAT).

Course Substitutions

Substitutions of program requirements, including courses deemed equivalent to these required courses, are not allowed without written permission obtained from the academic advisor. Such courses taken without approval will not be applied to graduation requirements. Students should consult their academic advisor for details on obtaining permission for substitutions. Students should contact their academic advisor to determine how special topics courses (EVSC 395 - Special Topics in Environmental Science (3) and EVSC 495 - Special Topics in Environmental Science (3)) can be substituted into their stream.

Upper Division Units

Additional upper division units may be required to reach the graduation requirement of 60 UD units. Recommended to select from BISC, CHEM, EASC, EVSC, GEOG, INDG, MATH, PHYS, REM, or STAT to further scientific and natural resources related knowledge.

[...]

Upper Division Requirements

[...]

and two of

REM 319 - Environmental and Planning Law (3)

REM 320W - Ethics and the Environment (3)

REM 321 - Ecological Economics (4)

REM 356W - Environmental Policy (3)

REM 407 – Indigenous Governance and Resource Relationships

CMNS 311 - Topics in Communication and Social Justice (4)*

***When topic is offered as environmental communication.**

[...]

Environmental Earth Systems Stream

This stream is for students interested in an integrative understanding of environmental processes and earth systems. Students develop technical skills in quantitative research and use technology to analyze spatial data.

Lower Division Requirements

Students who choose this stream must complete

GEOG 111 - Earth Systems (3)

GEOG 213 - Introduction to Geomorphology (3)

GEOG 214 - Weather and Climate (3)

and one of

EASC 101 - Dynamic Earth (3)

REM 100 - Global Change (3)

and two of

~~GEOG 213 - Introduction to Geomorphology (3)~~

~~GEOG 214 - Weather and Climate (3)~~

~~GEOG 215 - The Biosphere (3)~~

[...]



Calendar Entry Change

Name of Program or Name of Faculty – Department of Geography / Faculty of Environment

Rationale for change:

Course scheduling constraints can make it challenging for students to complete the lower division requirements of the Global Environmental Systems Major and Honours degrees in a timely fashion. To facilitate course scheduling, this degree offers students a choice of lower division courses that provide indigenous content in their degrees, while maintaining the integrity of the program. We propose to replace the course ARCH 286 with ARCH 273 because it contains more extensive content of readings from indigenous scholars, and thus represents a better overall offering of indigenous content for students.

Effective term and year: Fall 2024

The following program(s) will be affected by these changes:

- BEnv Global Environmental Systems Major
- BEnv Global Environmental Systems Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

[...]
Lower Division Requirements

[...]
and one of
~~ARCH 286 – Cultural Heritage Management (3)~~
ARCH 273 - Archaeology of the New World (3)
INDG 101 - Introduction to Indigenous Studies (3)
INDG 286 - Indigenous Peoples and British Columbia: An Introduction (3)
REM 207 - Indigenous People and Resource Management (3)

[...]
Upper Division Requirements

[...]
Communication (choose one)
CMNS 311 - Topics in Communication and Social Justice (4) *
GEOG 351 - Multimedia Cartography (4)
GEOG 356 - 3D GIScience (4)
SA 315 - New Information Technology and Society (SA) (4)
***When topic is offered as environmental communication.**



Calendar Entry Change

Name of Program or Name of Faculty – Department of Geography / Faculty of Environment

<p>Rationale for change:</p> <p>Course scheduling constraints can make it challenging for students to complete the lower division requirements of the Human Geography Major and Honours degrees in a timely fashion. The proposed course addition provides more flexibility in the choice of lower division courses that provide indigenous content in the degrees, while maintaining the integrity of the program.</p> <p>The course instructor for ARCH 273 has agreed to change the prerequisites for this course to allow entry for students who have taken GEOG 100 or EVSC 100.</p>
<p>Effective term and year: Spring 2024</p>
<p>The following program(s) will be affected by these changes:</p> <p>BA Human Geography Major BA Human Geography Honours</p>

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>...</p> <p>Lower Division Requirements</p> <p>Students complete all of</p> <p>GEOG 111 - Earth Systems (3)</p> <p>GEOG 221 - Economic Worlds (3)</p> <p>GEOG 241 - People, Place, Society (3)</p> <p>GEOG 261 - Encountering the City (3)</p> <p>GEOG 266W - Geography in Practice (3)</p> <p>and one of</p> <p>GEOG 100 - Our World: Introducing Human Geography (3)</p> <p>GEOG 161 - Urban Change: An Introduction to Dynamic Places (3)</p> <p>and one of</p> <p>GEOG 213 - Introduction to Geomorphology (3)</p> <p>GEOG 214 - Weather and Climate (3)</p>
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GEOG 215 - The Biosphere (3)

and both of

GEOG 251 - Quantitative Geography (3)

GEOG 255 - Geographical Information Science I (3)

and one of

ARCH 273 - Archaeology of the New World (3)

INDG 101 - Introduction to Indigenous Studies (3)

INDG 286 - Indigenous Peoples and British Columbia: An Introduction (3)

REM 207 - Indigenous People and Resource Management (3)



Calendar Entry Change

Name of Program or Name of Faculty – Department of Geography / Faculty of Environment

Rationale for change: Course scheduling constraints can make it challenging for students to complete the lower division common requirements of the Physical Geography Major and Honours degrees in a timely fashion. To facilitate course scheduling, this degree offers students a choice of lower division courses that provide indigenous content in their degrees, while maintaining the integrity of the program. We propose to replace the course ARCH 286 with ARCH 273 because it contains more extensive content of readings from indigenous scholars, and thus represents a better overall offering of indigenous content for students.
Effective term and year: Spring 2024
The following program(s) will be affected by these changes: BSc Physical Geography Major BSc Physical Geography Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>...</p> <p>Lower Division Requirements</p> <p>COMMON REQUIREMENTS</p> <p>All students, regardless of the stream they choose, will complete a total of 31-34 units, including all of</p> <p>CHEM 121 - General Chemistry and Laboratory I (4)</p> <p>EASC 101 - Dynamic Earth (3)</p> <p>GEOG 100 - Our World: Introducing Human Geography (3)</p> <p>GEOG 111 - Earth Systems (3)</p> <p>GEOG 266W - Geography in Practice (3)</p> <p>and one of</p> <p>MATH 150 - Calculus I with Review (4) *</p> <p>MATH 151 - Calculus I (3) *</p> <p>MATH 154 - Mathematics for the Life Sciences I (3)</p> <p>and one of</p>
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MATH 152 - Calculus II (3) *

MATH 155 - Mathematics for the Life Sciences II (3)

and one of

PHYS 101 - Physics for the Life Sciences I (3)

PHYS 120 - Mechanics and Modern Physics (3)

PHYS 125 - Mechanics and Special Relativity (3)

PHYS 140 - Studio Physics - Mechanics and Modern Physics (4)

and one of

GEOG 251 - Quantitative Geography (3) **

STAT 201 - Statistics for the Life Sciences (3)

STAT 270 - Introduction to Probability and Statistics (3)

and one of

~~ARCH 286 - Cultural Heritage Management (3)~~

ARCH 273 - Archaeology of the New World (3)

INDG 101 - Introduction to Indigenous Studies (3)

INDG 286 - Indigenous Peoples and British Columbia: An Introduction (3)

REM 207 - Indigenous People and Resource Management (3)

*Students in the geoscience stream must take MATH 150 or 151; and 152.

**Students pursuing the GIScience certificate are required to take GEOG 251.



<p>Name of Program or Name of Faculty</p> <p>Department of Earth Sciences</p>
<p>Rationale for change:</p> <p>Currently, there is little uptake in the minor program, owing to a lack of clarity as to how to effectively select lower division courses that meet upper division course prerequisites. The list of lower division courses encompasses those that serve as prerequisites for the upper division courses. Additionally, there is an explicit statement that selection of the lower division courses should be done in consultation with an advisor to optimize student progression.</p> <p>Expansion of the text outlining program requirements provides better clarity for students.</p>
<p>Effective term and year: Fall 2024</p>
<p>The following program(s) will be affected by these changes:</p> <p>Earth Sciences Minor Program</p>

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<p>Earth Sciences Minor</p> <p>Minimum Grade Requirement</p> <p>Students wishing to enroll in Earth Sciences courses must obtain a C- grade or better in prerequisite courses.</p> <p>Program Requirements</p> <p>Students are subject to the general regulations of the faculty in which they are enrolled. and will complete a minimum of 15 upper division units in 300 and 400 division EASC courses, together with all prerequisites. Students must obtain a C- grade or better in all EASC and prerequisite courses. In addition, a program GPA of 2.0 must be obtained on the overall course work (CGPA) as well as on the upper division subset of that work (UDGPA) in the program area.</p> <p>Students will complete:</p> <p>EASC 101 EASC 210</p>



and at least 3 of:

**EASC 201
EASC 202
EASC 204
EASC 205
EASC 206
EASC 207
EASC 208
EASC 209W**

and a minimum of 15 units in 300 and 400-level EASC courses, together with all prerequisites, excluding EASC 491, EASC 492, EASC 493, and EASC 498.

Students can select EASC courses focused in areas of Environmental Geoscience or Geology. Students are encouraged to select their lower division courses in consultation with an advisor in order to ensure that prerequisite requirements for desired upper division courses are met.