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MEMORANDUM

ATTENTION	Senate	DATE	February 5, 2021
FROM	Wade Parkhouse, Chair Senate Committee on Undergraduate Studies	PAGES	1/2
RE:	Program Changes		

For information:

Acting under delegated authority at its meeting of February 4, 2021, SCUS approved the following curriculum revisions effective Fall 2021.

a. Beedie School of Business (SCUS 21-08)

- (i) Changes to the practicum course requirements for the Business Co-Operative Education Program

b. Faculty of Communication, Art and Technology (SCUS 21-09)
1. School of Communication

- (i) Residency requirement and transfer credit changes to the Communication Minor and the Communication Extended Minor
- (ii) Upper division changes to the Dialogue Minor program

2. School of Contemporary Arts

- (i) Lower division requirement changes to the:
 - Art, Performance and Cinema Studies Major
 - Art, Performance and Cinema Studies Honours

c. Faculty of Environment (SCUS 21-12)
1. Department of Geography

- (i) Upper division requirement changes to the Physical Geography Major and the Physical Geography Honours

- (ii) Upper division requirement changes to the Human Geography Major and Human Geography Honours
- (iii) Upper division requirement changes to the Global Environmental Systems Major and the Global Environmental Systems Honours

2. School of Resource and Environmental Management

- (i) Description, admission requirements, upper and lower division requirement changes for the Development and Sustainability Minor

d. Faculty of Science (SCUS 21-14)

1. Department of Statistics and Actuarial Science

- (i) Admission requirement and upper and lower division requirement changes to the Actuarial Science Major, Bachelor of Science program.

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>.



Name of Program or Name of Faculty
Beedie School of Business Undergraduate Program
Rationale for change:
Correction of error
Effective term and year: Fall 2021
The following program(s) will be affected by these changes:
Business Co-operative Education

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>Business Co-operative Education Program</p> <p>Co-operative education formally integrates a student’s academic studies with relevant work experience. Employers from business, industry and government support and participate in the program. This ‘hands-on’ approach to education extends the learning process beyond the limits of the classroom and into the working world by alternating fulltime study terms with full-time paid work terms of career-related practical experience.</p> <p>For those seeking a professional accounting designation (CPA) work experience obtained during the program may be recognized toward the required practical experience.</p> <p>Admission Requirements</p> <p>Admission to the Beedie School of Business is required before admission to the cooperative education program is considered.</p> <p>A student must remain in good academic standing in the Beedie School of Business to continue in the program.</p> <p>Co-operative education programs are open to Canadian citizens, permanent residents, and visa students. Visit www.sfu.ca/bus-coop for complete program admission requirements.</p> <p>Application Process</p> <p>Co-operative education has an application process which includes completing the Bridging</p>
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Online (BOL) course. Visit www.sfu.ca/coop/bol.

Visit www.sfu.ca/coop/apply.html to apply.

Practicum Course Requirements

To qualify for the bachelor of business administration with a major in business administration and a co-operative education designation, students must complete three (3) work terms and meet University and Beedie School of Business graduation requirements.

During study terms a student must maintain full-time status. Complete information regarding participation within the business co-op education program and additional requirements may be found at www.sfu.ca/bus-coop.

Students complete the following co-op practicum courses.:

Required:

Three of:

BUS 225 - Co-op Practicum I (3)

BUS 325 - Co-op Practicum II (3)

BUS 326 - Co-op Practicum III (3)

~~BUS 328 - International Co-op Practicum (3)~~

Optional:

BUS 327 - Co-op Practicum IV (3)

BUS 425 - Co-op Practicum V (3)



Calendar Entry Change

Name of Program or Name of Faculty

Rationale for change:

Communication is in the process of standardizing the formatting and information included in each of its program pages to ensure consistency and clarity in all calendar entries.

The CMNS Minor and CMNS Extended Minor have updated the residency requirement to align with the university policy.

Effective term and year:

Fall 2021

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

CMNS Minor

CMNS 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**.

[...]

Residency Requirements and Transfer Credit for School of Communication

At least ~~two (2)~~ **three (3)** upper division CMNS courses (minimum ~~8~~ **12** units) must be taken at SFU.

[...]



Name of Program or Name of Faculty Dialogue Minor
Rationale for change: Add new course numbers to the program
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Dialogue 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**.

<p>[...]</p> <p>Upper Division Requirements</p> <p>Students complete a minimum of 18 upper division units.</p> <p>All students must complete</p> <p><u>DIAL 390W - Semester: Dialogue (5)</u> <u>DIAL 391W - Semester: Seminar (5)</u></p> <p>Or</p> <p>DIAL 393 – Semester In (Dialogue Component) (5) DIAL 394 – Semester In (Seminar Component) (5)</p> <p>In addition to the requirements listed above, students must also complete</p> <p>two of</p> <p><u>CMNS 332 - Communication and Rhetoric (4)</u> <u>CMNS 347 - Communication in Conflict and Intervention (4)</u> <u>CMNS 425 - Applied Communication for Social Issues (4)</u> <u>CMNS 432 - Political Communication, Public Opinion and Political Marketing (4)</u> <u>CMNS 437 - Media Democratization: From Critique to Transformation (4)</u> <u>CMNS 447 - Negotiation and Dialogue as Communication (4)</u></p>
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~~CMNS 460 - Seminar in Dialogue and Public Issues (4)
CMNS 461 - Field Placement in Dialogue (3)
DIAL 392W - Semester: Final Project (5) or DIAL 395 - Semester In (Final Project) (5)~~

~~[...]~~

~~Writing, Quantitative, and Breadth Requirements~~

~~Students admitted to Simon Fraser University beginning in the fall 2006 term must meet writing, quantitative and breadth requirements as part of any degree program they may undertake. See [Writing, Quantitative, and Breadth Requirements](#) for university wide information.~~

~~WQB Graduation Requirements~~

~~A GRADE OF C- OR BETTER IS REQUIRED TO EARN W, Q OR B CREDIT~~

Requirement	Units	Notes	
W—Writing	6	Must include at least one upper division course, taken at Simon Fraser University within the student’s major subject	
Q—Quantitative	6	Q courses may be lower or upper division	
B—Breadth	18	Designated Breadth	Must be outside the student’s major subject, and may be lower or upper division 6 units Social Sciences: B-Soc 6 units Humanities: B-Hum 6 units Sciences: B-Sci
	6	Additional Breadth	6 units outside the student’s major subject (may or may not be B-designated)



			<p>courses, and will likely help fulfil individual degree program requirements)</p> <p>Students choosing to complete a joint major, joint honours, double major, two extended minors, an extended minor and a minor, or two minors may satisfy the breadth requirements (designated or not designated) with courses completed in either one or both program areas.</p>	
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Name of Program or Name of Faculty Art, Performance and Cinema Studies, School of the Contemporary Arts, FCAT
Rationale for change: a) CA149 will be added to the list of courses that can be taken for the major and honours degrees. This course introduces students to the burgeoning field of sound studies, and will prepare for our new upper division course CA315: Sound (3). b) CA285 will be changed from an optional course to a required course. As a core studio course offered three times a year to all students at the SCA, this change will ensure that our students collaborate with students from all of the other areas of the School.
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Art, Performance and Cinema Studies Major Art, Performance and Cinema Studies 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**.

<h2>Art, Performance and Cinema Studies Major</h2> <p>...</p> <h3>Lower Division Requirements for Both Streams</h3> <p>Students in both streams complete a total of 27 units including all of:</p> <ul style="list-style-type: none">CA 118 - Contemporary Art History (3)CA 137 - The History and Aesthetics of Cinema II (3)CA 186 - Art and the Moving Image (3)CA 210W - Artworks, Theories, Contexts (3)<u>CA285 - Interdisciplinary Studio – Composition/Collaboration (3)</u> <h3>Art and Performance Studies Stream</h3>

Lower Division Requirements

In addition to the lower division courses required for both streams, students in the Art and Performance Studies stream must complete:

CA 117 - Modern Art History (3)

Plus six units from below:

CA 127 - History of Dance: From the 20th Century to the Present (3)

CA 136 - The History and Aesthetics of Cinema I (3)

CA 140 - Music after 1900 (3)

CA149 - Sound (3)

CA 217 - Introduction to Performance Studies (3)

CA 228W - Dance Aesthetics (3)

CA 235 - Experimental Film and Video (3)

CA 257W - Context of Theatre I (3)

HUM 211 - Art and Literature of the Italian Renaissance (3)

And six units from below:

CA 120 - Introduction to Dance Forms: Contemporary and Popular (3)

CA 129 - Movement Fundamentals (3)

CA 150 - Introduction to Acting (3)

CA 160 - Introductory Studio in Visual Art I (3)

CA 170 - Introduction to Production Technology (3)

CA 243 - Gamelan I (3)

~~CA 285 - Interdisciplinary Studio - Composition/Collaboration (3)~~

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Cinema Studies Stream

Lower Division Requirements

In addition to the lower division courses required for both streams, students in the Cinema Studies stream must complete:

CA 136 - The History and Aesthetics of Cinema I (3)

One of:

CA 216 - Selected Topics in Cinema Studies (3) ***



CA 235 - Experimental Film and Video (3) ***
CA 236 - Cinema in Canada (3)

And one of:

CA 117 - Modern Art History (3)
CA 127 - History of Dance: From the 20th Century to the Present (3)
CA 140 - Music after 1900 (3)
CA149 - Sound (3)
CA 217 - Introduction to Performance Studies (3)
CA 228W - Dance Aesthetics (3)
CA 257W - Context of Theatre I (3)
HUM 211 - Art and Literature of the Italian Renaissance (3)

Plus ~~six~~ three units from below:

CA 120 - Introduction to Dance Forms: Contemporary and Popular (3)
CA 129 - Movement Fundamentals (3)
CA 150 - Introduction to Acting (3)
CA 160 - Introductory Studio in Visual Art I (3)
CA 170 - Introduction to Production Technology (3)
CA 238W - Screenwriting I (3)
CA 243 - Gamelan I (3)
~~CA 285 - Interdisciplinary Studio - Composition/Collaboration (3)~~

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Art, Performance and Cinema Studies Honours

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Lower Division Requirements for Both Streams

Students in both streams complete a total of 27 units including all of:

CA 118 - Contemporary Art History (3)

CA 137 - The History and Aesthetics of Cinema II (3)

CA 186 - Art and the Moving Image (3)

CA 210W - Artworks, Theories, Contexts (3)

CA285 - Interdisciplinary Studio – Composition/Collaboration (3)

Art and Performance Studies Stream

Lower Division Requirements

In addition to the lower division courses required for both streams, students in the Art and Performance Studies stream must complete:

CA 117 - Modern Art History (3)

Plus six units from below:

CA 127 - History of Dance: From the 20th Century to the Present (3)

CA 136 - The History and Aesthetics of Cinema I (3)

CA 140 - Music after 1900 (3)

CA149 - Sound (3)

CA 217 - Introduction to Performance Studies (3)

CA 228W - Dance Aesthetics (3)

CA 235 - Experimental Film and Video (3)

CA 257W - Context of Theatre I (3)

HUM 211 - Art and Literature of the Italian Renaissance (3)

And six units from below:

CA 120 - Introduction to Dance Forms: Contemporary and Popular (3)

CA 129 - Movement Fundamentals (3)

CA 150 - Introduction to Acting (3)

CA 160 - Introductory Studio in Visual Art I (3)

CA 170 - Introduction to Production Technology (3)

CA 243 - Gamelan I (3)

~~CA 285 - Interdisciplinary Studio - Composition/Collaboration (3)~~

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Cinema Studies Stream

Lower Division Requirements

In addition to the lower division courses required for both streams, students in the Cinema Studies stream must complete:

CA 136 - The History and Aesthetics of Cinema I (3)

One of:

CA 216 - Selected Topics in Cinema Studies (3) ***

CA 235 - Experimental Film and Video (3) ***

CA 236 - Cinema in Canada (3)

And one of:

CA 117 - Modern Art History (3)

CA 127 - History of Dance: From the 20th Century to the Present (3)

CA 140 - Music after 1900 (3)

CA149 - Sound (3)

CA 217 - Introduction to Performance Studies (3)

CA 228W - Dance Aesthetics (3)

CA 257W - Context of Theatre I (3)

HUM 211 - Art and Literature of the Italian Renaissance (3)

Plus ~~six~~ three units from below:

CA 120 - Introduction to Dance Forms: Contemporary and Popular (3)

CA 129 - Movement Fundamentals (3)

CA 150 - Introduction to Acting (3)

CA 160 - Introductory Studio in Visual Art I (3)

CA 170 - Introduction to Production Technology (3)

CA 238W - Screenwriting I (3)

CA 243 - Gamelan I (3)

~~CA 285 - Interdisciplinary Studio - Composition/Collaboration (3)~~

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Name of Program or Name of Faculty Physical Geography Major Program
Rationale for change: Replace GEOG 455 with GEOG 455W which was not included in the initial program listing
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Physical Geography Major Program

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>⋮ Upper Division Requirements</p> <p>BIOGEOPHYSICAL SCIENCE STREAM Students who choose this stream will complete a minimum total of 36 units, including all of GEOG 311 - Hydrology (4) GEOG 317 - Soil Science (4)</p> <p>and one of GEOG 312 - Geography of Natural Hazards (4) GEOG 385 - Food and the City (4) GEOG 428 - World Forests (4) REM 321 - Ecological Economics (4) REM 445 - Environmental Risk Assessment (4)</p> <p>and four of the following (at least one of which must be at the 400 division) GEOG 310 - Physical Geography Field Course (4) GEOG 313 - River Geomorphology (4) GEOG 314 - The Climate System (4) GEOG 315 - World Ecosystems (4) GEOG 316 - Global Biogeochemical and Water Cycles (4) GEOG 411 - Advanced Hydrology (4) GEOG 412W - Glacial Processes and Environments (4) GEOG 414 - Climate Change (4)</p>
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GEOG 417W - Advanced Soil Science (4)

GEOG 418 - Ecohydrology (4)

and two of

GEOG 351 - Multimedia Cartography (4)

GEOG 352 - Spatial Analysis (4)

GEOG 353 - Advanced Remote Sensing (4)

GEOG 355 - Geographical Information Science II (4)

and a minimum of 8 additional upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses. At least four of these must be GEOG units.

GEOSCIENCE STREAM

Students who choose this stream must complete a minimum of 40 units including all of

GEOG 310 - Physical Geography Field Course (4)

GEOG 311 - Hydrology (4)

GEOG 312 - Geography of Natural Hazards (4)

GEOG 313 - River Geomorphology (4)

GEOG 316 - Global Biogeochemical and Water Cycles (4)

GEOG 317 - Soil Science (4)

GEOG 412W - Glacial Processes and Environments (4)

and three (12 units) of the following, including at least one (4 units) from Physical Geography (GEOG 31X or 41X courses) and at least one (4 units) from GIScience (GEOG 35X or 45X courses)

GEOG 314 - The Climate System (4)

GEOG 351 - Multimedia Cartography (4)

GEOG 352 - Spatial Analysis (4)

GEOG 353 - Advanced Remote Sensing (4)

GEOG 355 - Geographical Information Science II (4)

GEOG 356 - 3D GIScience (4)

GEOG 411 - Advanced Hydrology (4)

GEOG 414 - Climate Change (4)

GEOG 417W - Advanced Soil Science (4)

GEOG 418 - Ecohydrology (4)

GEOG 451 - Spatial Modeling (4)

GEOG 453 - Theoretical and Applied Remote Sensing (4)

~~GEOG 455 - Theoretical and Applied GIS (4)~~

GEOG 455W - Theoretical and Applied GIS (4)

GEOG 457 - Geovisualization Interfaces (4)

and a minimum of 4 additional upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses.

GEOSYSTEMS AND GISCIENCE STREAM

Students who choose this stream will complete a minimum total of 24 units, including three (12 units) of the following

- GEOG 310 - Physical Geography Field Course (4)
- GEOG 311 - Hydrology (4)
- GEOG 313 - River Geomorphology (4)
- GEOG 314 - The Climate System (4)
- GEOG 315 - World Ecosystems (4)
- GEOG 316 - Global Biogeochemical and Water Cycles (4)
- GEOG 317 - Soil Science (4)
- GEOG 411 - Advanced Hydrology (4)
- GEOG 412W - Glacial Processes and Environments (4)
- GEOG 414 - Climate Change (4)
- GEOG 417W - Advanced Soil Science (4)
- GEOG 418 - Ecohydrology (4)

and three (12 units) of the following

- GEOG 351 - Multimedia Cartography (4)
- GEOG 352 - Spatial Analysis (4)
- GEOG 353 - Advanced Remote Sensing (4)
- GEOG 355 - Geographical Information Science II (4)
- GEOG 356 - 3D GIScience (4)
- GEOG 451 - Spatial Modeling (4)
- GEOG 453 - Theoretical and Applied Remote Sensing (4)
- ~~GEOG 455 - Theoretical and Applied GIS (4)~~
- GEOG 455W - Theoretical and Applied GIS (4)**
- GEOG 457 - Geovisualization Interfaces (4)

and a minimum of 20 additional upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses. At least 12 of these must be GEOG units.



Name of Program or Name of Faculty
Physical Geography Honours Programs
Rationale for change: Replace GEOG 455 with GEOG 455W which was not included in the initial program listing
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Physical Geography Honours Programs

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><u>Upper Division Requirements</u></p> <p>BIOGEOPHYSICAL SCIENCE STREAM</p> <p><u>Students who choose this stream will complete a minimum total of 40 units, including all of</u></p> <p><u>GEOG 311 - Hydrology (4)</u></p> <p><u>GEOG 317 - Soil Science (4)</u></p> <p><u>and one of</u></p> <p><u>GEOG 312 - Geography of Natural Hazards (4)</u></p> <p><u>GEOG 385 - Food and the City (4)</u></p> <p><u>GEOG 428 - World Forests (4)</u></p> <p><u>REM 321 - Ecological Economics (4)</u></p> <p><u>REM 445 - Environmental Risk Assessment (4)</u></p> <p><u>and four of the following (at least one of which must be at the 400 division)</u></p> <p><u>GEOG 310 - Physical Geography Field Course (4)</u></p> <p><u>GEOG 313 - River Geomorphology (4)</u></p> <p><u>GEOG 314 - The Climate System (4)</u></p> <p><u>GEOG 315 - World Ecosystems (4)</u></p> <p><u>GEOG 316 - Global Biogeochemical and Water Cycles (4)</u></p> <p><u>GEOG 411 - Advanced Hydrology (4)</u></p> <p><u>GEOG 412W - Glacial Processes and Environments (4)</u></p> <p><u>GEOG 414 - Climate Change (4)</u></p>
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GEOG 417W - Advanced Soil Science (4)

GEOG 418 - Ecohydrology (4)

and two of

GEOG 351 - Multimedia Cartography (4)

GEOG 352 - Spatial Analysis (4)

GEOG 353 - Advanced Remote Sensing (4)

GEOG 355 - Geographical Information Science II (4)

and

GEOG 491 - Honours Essay (4)

and a minimum of 20 upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses. At least 12 of these must be GEOG courses.

GEOSCIENCE STREAM

Students must complete a minimum of 44 units including all of

GEOG 310 - Physical Geography Field Course (4)

GEOG 311 - Hydrology (4)

GEOG 312 - Geography of Natural Hazards (4)

GEOG 313 - River Geomorphology (4)

GEOG 316 - Global Biogeochemical and Water Cycles (4)

GEOG 317 - Soil Science (4)

GEOG 412W - Glacial Processes and Environments (4)

and three (12 units) of the following, including at least one (4 units) from Physical Geography (GEOG 31X or 41X courses) and including at least one (4 units) from GIScience (GEOG 35X or 45X courses)

GEOG 314 - The Climate System (4)

GEOG 351 - Multimedia Cartography (4)

GEOG 352 - Spatial Analysis (4)

GEOG 353 - Advanced Remote Sensing (4)

GEOG 355 - Geographical Information Science II (4)

GEOG 356 - 3D GIScience (4)

GEOG 411 - Advanced Hydrology (4)

GEOG 414 - Climate Change (4)

GEOG 417W - Advanced Soil Science (4)

GEOG 418 - Ecohydrology (4)

GEOG 451 - Spatial Modeling (4)

GEOG 453 - Theoretical and Applied Remote Sensing (4)

GEOG 455 - Theoretical and Applied GIS (4)

GEOG 455W - Theoretical and Applied GIS (4)

GEOG 457 - Geovisualization Interfaces (4)

and

GEOG 491 - Honours Essay (4)

and a minimum of 16 upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses. At least eight of these must be GEOG courses.

GEOSYSTEMS AND GISCIENCE STREAM

Students who choose this stream will complete a minimum total of 28 units, including three (12 units) of the following (at least one of which must be at the 400 division)

GEOG 310 - Physical Geography Field Course (4)

GEOG 311 - Hydrology (4)

GEOG 313 - River Geomorphology (4)

GEOG 314 - The Climate System (4)

GEOG 315 - World Ecosystems (4)

GEOG 316 - Global Biogeochemical and Water Cycles (4)

GEOG 317 - Soil Science (4)

GEOG 411 - Advanced Hydrology (4)

GEOG 412W - Glacial Processes and Environments (4)

GEOG 414 - Climate Change (4)

GEOG 417W - Advanced Soil Science (4)

GEOG 418 - Ecohydrology (4)

and three (12 units) of

GEOG 351 - Multimedia Cartography (4)

GEOG 352 - Spatial Analysis (4)

GEOG 353 - Advanced Remote Sensing (4)

GEOG 355 - Geographical Information Science II (4)

GEOG 356 - 3D GIScience (4)

GEOG 451 - Spatial Modeling (4)

GEOG 453 - Theoretical and Applied Remote Sensing (4)

GEOG 455—Theoretical and Applied GIS (4)

GEOG 455W - Theoretical and Applied GIS (4)

GEOG 457 - Geovisualization Interfaces (4)

and

GEOG 491 - Honours Essay (4)

and a minimum of 32 additional upper division units from BISC, CHEM, CMPT, EASC, EVSC, GEOG, MACM, MASC, MATH, MBB, PHYS or STAT courses. At least 20 of these must be GEOG units



Name of Program or Name of Faculty
BA Human Geography Major
Rationale for change: GEOG 340 - Queer Geographies is a newly created course in the department. This change is intended to allow for the course’s articulation within the Human Geography major and honours programs.
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: BA Human Geography Major

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>Society & Space (choose 3)</p> <p><u>GEOG 312 - Geography of Natural Hazards (4)</u></p> <p><u>GEOG 325 - Geographies of Consumption (4)</u></p> <p><u>GEOG 327 - Geography of Tourism (4)</u></p> <p><u>GEOG 340 – Queer Geographies (4)</u></p> <p><u>GEOG 365 - Race, Resistance and Urban Space (4)</u></p> <p><u>GEOG 377 - Environmental History (4)</u></p> <p><u>GEOG 382 - World on the Move (4)</u></p> <p><u>GEOG 386 - Health Geography (4)</u></p> <p><u>GEOG 387 - Geography and Gender (4)</u></p> <p><u>GEOG 432 - Problems in Environmental History (4)</u></p> <p><u>GEOG 486 - Health Care Geographies (4)</u></p> <p>...</p>
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Name of Program or Name of Faculty
BA Human Geography Honours Program
Rationale for change: GEOG 340 - Queer Geographies is a newly created course in the department. This change is intended to allow for the course's articulation within the Human Geography major and honours programs.
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: BA Human Geography Honours Program

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**.

...
Society & Space (choose 3)
<u>GEOG 312 - Geography of Natural Hazards (4)</u>
<u>GEOG 325 - Geographies of Consumption (4)</u>
<u>GEOG 327 - Geography of Tourism (4)</u>
<u>GEOG 340 - Queer Geographies (4)</u>
<u>GEOG 365 - Race, Resistance and Urban Space (4)</u>
<u>GEOG 377 - Environmental History (4)</u>
<u>GEOG 382 - World on the Move (4)</u>
<u>GEOG 386 - Health Geography (4)</u>
<u>GEOG 387 - Geography and Gender (4)</u>
<u>GEOG 432 - Problems in Environmental History (4)</u>
<u>GEOG 486 - Health Care Geographies (4)</u>
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Name of Program or Name of Faculty Benv Global Environmental Systems Major
Rationale for change: GEOG 340 - Queer Geographies is a newly created course in the department. This change is intended to allow for the course's articulation within the Global Environmental Systems major and honours programs.
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Global Environmental Systems Major

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**.

...
Socio-economic and Political Systems (choose one)
<u>ARCH 389 - Ethnoecology (3)</u>
<u>GEOG 321 - Geographies of Global Capitalism (4)</u>
<u>GEOG 322W - World Resources (4)</u>
<u>GEOG 325 - Geographies of Consumption (4)</u>
<u>GEOG 327 - Geography of Tourism (4)</u>
<u>GEOG 340 - Queer Geographies (4)</u>
<u>GEOG 362W - Geography of Urban Built Environments (4)</u>
<u>GEOG 363 - Urban Planning and Policy (4)</u>
<u>GEOG 365 - Race, Resistance and Urban Space (4)</u>
<u>GEOG 377 - Environmental History (4)</u>
<u>GEOG 381W - Territory, Power, State (4)</u>
<u>GEOG 382 - World on the Move (4)</u>
<u>GEOG 386 - Health Geography (4)</u>
<u>GEOG 387 - Geography and Gender (4)</u>
<u>GEOG 423 - Capitalist Natures (4)</u>
<u>GEOG 432 - Problems in Environmental History (4)</u>
<u>GEOG 449 - City and Environment (4)</u>
<u>GSWS 314 - Race, Class and Gender (4)</u>
<u>REM 319 - Environmental and Planning Law (3)</u>
<u>REM 321 - Ecological Economics (4)</u>



REM 350 - Sustainable Energy and Materials Management (4)

REM 356W - Environmental Policy (3)

REM 454 - Water Security (4)

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<p>Name of Program or Name of Faculty Benv Global Environmental Systems Honours</p>
<p>Rationale for change: GEOG 340 - Queer Geographies is a newly created course in the department. This change is intended to allow for the course's articulation within the Global Environmental Systems major and honours programs.</p>
<p>Effective term and year: Fall 2021</p>
<p>The following program(s) will be affected by these changes: Global Environmental Systems Honours programs</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>Socio-economic and Political Systems (choose one)</p> <p><u>ARCH 389 - Ethnoecology (3)</u> <u>GEOG 321 - Geographies of Global Capitalism (4)</u> <u>GEOG 322W - World Resources (4)</u> <u>GEOG 325 - Geographies of Consumption (4)</u> <u>GEOG 327 - Geography of Tourism (4)</u> <u>GEOG 340 - Queer Geographies (4)</u> <u>GEOG 362W - Geography of Urban Built Environments (4)</u> <u>GEOG 363 - Urban Planning and Policy (4)</u> <u>GEOG 365 - Race, Resistance and Urban Space (4)</u> <u>GEOG 377 - Environmental History (4)</u> <u>GEOG 381W - Territory, Power, State (4)</u> <u>GEOG 382 - World on the Move (4)</u> <u>GEOG 386 - Health Geography (4)</u> <u>GEOG 387 - Geography and Gender (4)</u> <u>GEOG 423 - Capitalist Natures (4)</u> <u>GEOG 432 - Problems in Environmental History (4)</u> <u>GEOG 449 - City and Environment (4)</u> <u>GSWS 314 - Race, Class and Gender (4)</u> <u>REM 319 - Environmental and Planning Law (3)</u> <u>REM 321 - Ecological Economics (4)</u></p>
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REM 350 - Sustainable Energy and Materials Management (4)

REM 356W - Environmental Policy (3)

REM 454 - Water Security (4)

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Name of Program or Name of Faculty
Bachelor of Environment – Global Environmental Systems (GES) Major
Rationale for change: Addition of new course, GEOG 418 – Ecohydrology, to the list of Capstone Experience options for the GES Major
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: GES Major

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**.

...
Capstone Experience (choose one)
GEOG 411 - Advanced Hydrology (4)
GEOG 412W - Glacial Processes and Environments (4)
GEOG 414 - Climate Change (4)
GEOG 417W - Advanced Soil Science (4)
GEOG 418 - Ecohydrology
GEOG 421 - Geographical Political Economy (4)
GEOG 423 - Capitalist Natures (4)
GEOG 432 - Problems in Environmental History (4)
GEOG 440 - Property, Land, Society (4)
GEOG 442 - A World of Cities (4)
GEOG 449 - City and Environment (4)
GEOG 451 - Spatial Modeling (4)
GEOG 453 - Theoretical and Applied Remote Sensing (4)
GEOG 455 - Theoretical and Applied GIS (4)
GEOG 457 - Geovisualization Interfaces (4)
GEOG 497 - International Field Study (5)



Name of Program or Name of Faculty
Bachelor of Environment – Global Environmental Systems (GES) Honours
Rationale for change: Addition of new course, GEOG 418 – Ecohydrology, to list of Capstone Experience options for the GES Honours
Effective term and year: Fall 2021
The following program(s) will be affected by these changes:
GES 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**.

...
Capstone Experience (choose one)
GEOG 411 - Advanced Hydrology (4)
GEOG 412W - Glacial Processes and Environments (4)
GEOG 414 - Climate Change (4)
GEOG 417W - Advanced Soil Science (4)
GEOG 418 - Ecohydrology
GEOG 421 - Geographical Political Economy (4)
GEOG 423 - Capitalist Natures (4)
GEOG 432 - Problems in Environmental History (4)
GEOG 440 - Property, Land, Society (4)
GEOG 442 - A World of Cities (4)
GEOG 449 - City and Environment (4)
GEOG 451 - Spatial Modeling (4)
GEOG 453 - Theoretical and Applied Remote Sensing (4)
GEOG 455 - Theoretical and Applied GIS (4)
GEOG 457 - Geovisualization Interfaces (4)
GEOG 497 - International Field Study (5)
and
GEOG 491 - Honours Essay (4)



Name of Program or Name of Faculty
Development and Sustainability Minor (FENV)
Sustainable Development Program (School of Resource and Environmental Management)

Rationale for change:

Responsibility for the SD Program and for all SD courses has been shifted to REM and this provides an opportunity to rethink and update the SD courses and credentials to better reflect current thinking about sustainability. Our initial step is to revise the core SD courses and the Development and Sustainability Minor. The existing requirements for the Minor distinguish local from global sustainability issues and organize the pathway through the Minor accordingly. In this revision, we integrate across these distinctions to create a single pathway through the core requirements, in keeping with newer thinking about sustainability. However, the Minor maintains an awareness of scale as an important perspective. We have also modified the Minor’s program requirements in several other ways. We have added a requirement for several more courses to complete the Minor to provide more consistency with the REM Minor. Finally, we have substantially reduced and consolidated the list of electives to update it (it was created over a decade ago), and to include only courses that focus on environmental change and sustainability. Elective courses have been selected from most of SFU’s social science and humanities departments and these have been reorganized so that students select separately from 300 and 400 level courses (again, for consistency with the REM Minor).

Effective term and year:

Fall, 2021

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

Development and Sustainability 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**.

Development and Sustainability Minor

~~This minor program explores various aspects of global sustainability that arise from the complex relationship between development and the environment, including discussion of practice and policy issues in relation to problem solving and examination of thematic areas at various scales (local to global) that enhance the quality of life. Themes may include: Global South–Global North relations; environmental justice; biodiversity; food security; sustainable economic development; and the Sustainable Development Goals (SDGs). More information available at www.sfu.ca/susdevprogram.html.~~

Admission Requirements

Interested students must be in good academic standing and receive approval from the REM Academic Advisor to be enrolled in this Minor.

~~Interested students may declare this Minor through the Sustainable Development Program Advisor in the Faculty of Environment. Program entry requires completion of 30 lower division units. Students must also be in good standing in their major program's home department.~~

Note: Students enrolled in the REM Major may enroll in the Sustainable Development Minor.

Program Requirements

Lower Division Requirements

~~Students complete~~ **Complete one of**

REM 100 – Global Change
PLAN 100 – Introduction to Planning

Complete

~~SD 281 – Sustainable Communities, Sustainable World~~ **Introduction to Sustainability (3)**

Upper Division Requirements

~~Students complete~~ **Complete all of**

~~SD 301 – Building a Sustainable World: Concepts and Cases (4)~~

~~SD 381 - Building Sustainable Communities: Concepts and Cases (4)~~

~~SD 481 - Sustainable Communities Leadership Lab~~ **Sustainability Governance and Leadership (4)**

and

~~SD 401 - Sustainable Development Goals Studio (4)~~

(Students may elect to fulfill the following electives portion of the SD Minor by enrolling in one of several alternative semester length programs, but the program must address aspects of sustainability and lead to at least 9 units (e.g. Civic Innovation Change Lab, Semester in Dialogue, etc.). Students opting for this pathway for their electives should contact the REM Advisor for more information and must obtain approval from the REM Undergraduate Chair before proceeding.*

~~and 8 units chosen from the following list of electives:~~ **Complete two of ***

~~ARCH 365 - Archaeological Perspectives on Human Ecology (3)~~

~~ARCH 377 – Historical Archaeology (5)~~

~~ARCH 385 – Paleoanthropology (5)~~

~~ARCH 386 – Archaeological Resource Management (3)~~

ARCH 389 - Ethnoecology (3)

~~CMNS 342— Science and Public Policy: Risk Communication (4)~~

~~CMNS 346 - Development Communication (4)~~

~~CMNS 347— Communication in Conflict and Intervention (4)~~

CMNS 349 - Environment, Media and Communication (4)

~~CMNS 356— Communication to Mitigate Disasters (4)~~

~~CMNS 388— Special Topics in Communication (4)~~

~~ECON 355W— Economic Development (4)~~

~~EDUC 311— Foundations in Aboriginal Education, Language, and Culture (3)~~

~~EDUC 370— International and Intercultural Education (4)~~

~~FNST 332— Ethnobotany of British Columbia First Nations (3)~~

~~FNST 383— Indigenous Technology: Art and Sustainability (4)~~

~~GEOG 321 - Geographies of Global Capitalism (4)~~

~~GEOG 327 - Geography of Tourism (4)~~

GEOG 363 - Urban Planning and Policy (4)

GEOG 364 - Cities and Crisis (4)

GEOG 377 - Environmental History (4) or HIST 377 - Environmental History (4)

~~GEOG 389W - Nature and Society (4)~~

~~GEOG 322— World Resources (4)~~

~~GEOG 324— Geography of Transportation (4)~~

~~GEOG 325— Geographies of Consumption (4)~~

~~GEOG 383— Regional Development and Planning (4)~~

~~HIST 322— Atlantic and Pacific Migration (4)~~

~~HIST 377— Environmental History (4)~~

~~HSCI 308 - Sickness and Wealth: Health in Global Perspective (3)~~

~~HSCI 340 - Social Determinants of Health (3)~~

~~HSCI 406— Global Perspectives in Indigenous Health (3)~~

~~HSCI 412— Health Communication (3)~~

~~HSCI 431— The Global HIV/AIDS Epidemic (3)~~

~~HUM 325 - The Humanities and the Natural World (4)~~

IS 307 - International Ethics: Poverty, Environmental Change, & War (4)

~~IS 358 - Development, Aid and Difference in Historical Perspective (4)~~

IS 373 - Global Environmental Politics (4)

~~IS 303— Ethnic Minorities, Identity Politics, and Conflict in Southeast Asia (4)~~

~~IS 313W— Nationalism, Democracy and Development in Modern India (4)~~

~~IS 314— National, Regional, and International Politics in Southeast Asia (4)~~

~~IS 322— Central Asia: Democracy, Development and Conflicts (4)~~

LBST 311 - Labour and the Environment (3)

PLAN 300 - Methods for Planning Analysis (4)

~~POL 342 - Developing Countries in Global Politics (4)~~

~~POL 346 - International Organization (4)~~

~~POL 343— Global Political Economy (4)~~

~~POL 373— Human Security (4)~~

~~POL 374— Africa in the Global Political Economy (4)~~

PSYC 366 - Psychology and Environmental Sustainability (3)

REM 311 – Applied Ecology (3)
 REM 350 - Energy Management for Climate and Society Sustainability (4)
REM 355 - Sustainable Transportation Management (3)
REM 356W – Environmental Policy (3)
~~REM 356 – Institutional Arrangements for Sustainable Environmental Management (3)~~
REM 357 - Planning for Sustainable Food Systems (3)
~~REM 370 – Global Resource Issues in Oceanography (4)~~
 SA 302W - Global Problems and the Culture of Capitalism (SA) (4)
 SA 326 - Food, Ecology and Social Thought (S) (4)
 SA 328 - States, Cultures and Global Transitions (SA) (4)
 SA 371 - The Environment and Society (SA) (4)
~~SA 316 – Tourism and Social Policy (S) (4)~~
~~SA 329 – Sex, Work, and International Capital (SA) (4)~~
~~SA 363 – Process of Development and Underdevelopment (S) (4)~~
~~SA 396 – Selected Regional Areas (SA) (4)~~
~~SA 418 – Global Health: Humanitarian Encounters (A) (4)~~

Complete one of*

BUS 453 - Sustainable Innovation (3)
BUS 475 - Sustainable Operations (3)
BUS 489 - Management Practices for Sustainability (3)
~~CMNS 425 – Applied Communication for Social Issues (4)~~
~~CMNS 426 – Video Design for Social Communication (4)~~
~~CMNS 444 – Political Economy of International Communication (4)~~
~~CMNS 446 – Communication, Science and Technology (4)~~
~~CMNS 447 – Negotiation and Dialogue as Communication (4)~~
ECON 460 - Seminar in Environmental Economics (3)
~~EDUC 452 – Environmental Education (8)~~
~~EDUC 435 – Infusing Global Perspectives into Curriculum (4)~~
~~EDUC 441 – Multicultural and Anti-racist Education (4)~~
ENSC 412 - Technologies, Cultures and a Sustainable World (3)
~~FNST 403 – Indigenous Knowledge in the Modern World (3)~~
GEOG 424 - Cities, Transportation, Infrastructure (4)
GEOG 449 - City and Environment (4)
~~HIST 427 – Topics in Indigenous Histories (4)~~
 HIST 432 - Problems in Environmental History (4)
~~HIST 458W – Problems in Latin American Regional History (4)~~
~~HIST 459W – Problems in the Political and Social History of Latin America (4)~~
HSCI 403 - Health and the Built Environment (3)
HSCI 483 - Senior Seminar in Environmental Health (3)
 INDG 401 - Aboriginal Peoples and Public Policy (3)
 INDG 433 - Indigenous Environmental Justice and Activism (4)
 IS 410 - Politics, Institutions and Development (4)
 IS 421 - The Economics of International Organizations and Development (4)



~~IS 409 - Special Topics I (4)~~
~~IS 419 - Special Topics II (4)~~
~~IS 429 - Special Topics III (4)~~
~~IS 435 - Special Topics in Latin American Studies (4)~~
PLAN 400 - Planning Theory and Policy Analysis (4)
PLAN 406 - Rural Planning and Development (4)
**PLAN 407 - Indigenous Governance and Resource Relationships (4) or REM 407
Indigenous Governance and Resource Relationships (4)**
PLAN 408 - Environmental Planning for Sustainable Communities (4)
POL 452W - Energy Policy (4)
~~POL 446W - International Relations in East Asia (4)~~
~~POL 447 - Theories of Global Political Economy (4)~~
REM 452 - Environmental Education (8) or EDUC 452 - Environmental Education (8)
REM 454 - Water Security (4)
~~REM 445 - Environmental Risk Assessment (4)~~
SD 491 - Directed Studies in Sustainable Development (variable units)
SD 494 - Project in Sustainable Development (4)
SD 499 - Special Topics in Sustainable Development (4)
~~SD 381 - Building Sustainable Communities: Concepts and Cases (4)~~
~~SD 481 - Sustainable Communities Leadership Lab (4)~~



Name of Program or Name of Faculty Actuarial Science
Rationale for change: <ul style="list-style-type: none"> • ACMA 210 is changing to ACMA 201. The old number appears as text in the program admission requirements and must be updated separately. • We are removing the reference to ACMA 101 in the sentence about the semester in which students normally apply to the program. ACMA 101 and 201 are offered in the same semester and students take 101 either before or concurrently with 201, so the reference to 201 is sufficient. • We are also removing references to the size of cohorts being admitted and the competitive nature of the admission, as these may be discouraging students from applying. • In addition, we are making all three of ACMA 401, 440 and 455 required, compared to the previous requirement of “2 out of 3”. These courses are the second in their respective sequences (corresponding to 301, 340 and 355) covering three core professional actuarial exams (LTAM, IFM and STAM). Switching from 5 units in ACMA 320 to 3 units in ACMA 301 allows us to add the entire 401/440/455 block to the program requirements while only increasing the overall number of required units by 1.
Effective term and year: Fall 2021
The following program(s) will be affected by these changes: Actuarial Science Major (BSc)

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>Actuarial Science Major Bachelor of Science</p> <p>The Department of Statistics and Actuarial Science offers a bachelor of science (BSc) program in actuarial science within the Faculty of Science.</p> <p>The program maintains a committee of advisors whose office hours are available at the general office and at www.stat.sfu.ca. Students should seek advice early in their academic careers about program planning from the department's advisors.</p>
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Admission Requirements

~~The program admits approximately 25-30 students each year. Students will be selected competitively.~~

For admission, students normally complete each lower division required course in mathematics and statistics, or its equivalent, with a minimum C+ grade. Students are also normally required to have completed ACMA 101 and ACMA ~~210~~ **201** with a minimum grade of C+ and have a cumulative grade point average (CGPA) of at least 3.0.

Achieving the minimum grade requirements will not guarantee program admission.

Students normally apply for admission in the term in which they complete ACMA ~~210~~ **201** ~~and ACMA 101~~ or have completed ACMA 101.

Courses for Further Credit

No student may complete, for further credit, any course offered by the Department of Statistics and Actuarial Science which is a prerequisite for a course the student has already completed with a grade of C- or higher without permission of the department.

Computing Recommendation

Some experience with a high level programming language is recommended by the beginning of the second year.

Prerequisite Grade Requirement

Students must have a grade of C- or better in prerequisites for STAT courses. Students must have a grade of C or better in prerequisites for ACMA courses.

GPA Required for Continuation

To continue in the program, students must maintain at least a 2.25 grade point average in MATH, STAT, MACM or ACMA courses.

Graduation Requirement

Students are required to complete a minimum of 44 upper division units including a minimum of 28 units in the major subject or field, and achieve a CGPA of 2.50 or better to graduate.



Program Requirements

Students complete 120 units, as specified below.

Graduation Grade Point Averages

Lower Division Requirements

Students complete all of

ACMA 101 - Introduction to Insurance (3)

ACMA ~~210~~ **201** - ~~Mathematics of Compound Interest~~ **Theory and Applications** (3)

BUS 251 - Financial Accounting I (3)

BUS 254 - Managerial Accounting I (3)

ECON 103 - Principles of Microeconomics (4)

ECON 105 - Principles of Macroeconomics (4)

MATH 152 - Calculus II (3)

MATH 251 - Calculus III (3)

STAT 270 - Introduction to Probability and Statistics (3)

STAT 285 - Intermediate Probability and Statistics (3)

and one of

MATH 150 - Calculus I with Review (4)

MATH 151 - Calculus I (3) *

and one of

MATH 232 - Applied Linear Algebra (3)

MATH 240 - Algebra I: Linear Algebra (3) *

and one of

CMPT 110 - Programming in Visual Basic (3)

CMPT 125 - Introduction to Computing Science and Programming II (3)

CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)

CMPT 129 - Introduction to Computing Science and Programming for Mathematics and Statistics (3) *

CMPT 130 - Introduction to Computer Programming I (3)

and two ENGL or PHIL courses.

* Recommended

Upper Division Requirements

Students complete the following courses:

all of

ACMA ~~320~~ **301 - Long-Term Actuarial Mathematics I** (~~5~~) **(3)**

ACMA 340 - Financial Economics for Actuaries (3)

ACMA 355 - Loss Models I (3)

STAT 330 - Introduction to Mathematical Statistics (3)

and two of

ACMA ~~425~~ **401 – Long-Term Actuarial Mathematics II** (3)

ACMA 440 - Models for Financial Economics (3)

ACMA 455 - Loss Models II (3)

and one of

ACMA 395 - Special Topics in Actuarial Science (3)

ACMA 465 - Demography and Mortality Models (3)

ACMA 470 - Property and Casualty Insurance (3)

ACMA 475 - Theory of Pension (3)

ACMA 490 - Selected Topics in Actuarial Science (3)

and four of

ACMA 360W - Actuarial Communication (3)

BUS 312 - Introduction to Finance (4)

BUS 315 - Investments (4)

ECON 302 - Microeconomic Theory II: Strategic Behavior (4)

ECON 305 - Intermediate Macroeconomic Theory (4)

MACM 316 - Numerical Analysis I (3)

MATH 309 - Continuous Optimization (3)

STAT 341 - Introduction to Statistical Computing and Exploratory Data Analysis - R (2)

STAT 342 - Introduction to Statistical Computing and Exploratory Data Analysis - SAS (2)

STAT 350 - Linear Models in Applied Statistics (3)

STAT 380 - Introduction to Stochastic Processes (3)

STAT 440 - Learning from Big Data (3)

STAT 445 - Applied Multivariate Analysis (3)

STAT 450 - Statistical Theory (3)
 STAT 452 - Statistical Learning and Prediction (3)
 STAT 460 - Bayesian Statistics (3)
 STAT 475 - Applied Discrete Data Analysis (3)
 STAT 485 - Applied Time Series Analysis (3)

Certain elective courses are pre-approved courses for Valuation by Educational Experience (VEE) units from the Society of Actuaries. Information is available at www.soa.org

University Degree Requirements

Students must also satisfy University degree requirements for degree completion.

Writing, Quantitative, and Breadth Requirements

Students admitted to Simon Fraser University beginning in the fall 2006 term must meet writing, quantitative and breadth requirements as part of any degree program they may undertake. See Writing, Quantitative, and Breadth Requirements for university-wide information.

WQB Graduation Requirements

A grade of C- or better is required to earn W, Q or B credit

Requirement	Units	Notes
W - Writing	6	Must include at least one upper division course, taken at Simon Fraser University within the student's major subject
Q - Quantitative	6	Q courses may be lower or upper division
B - Breadth	18	Designated Breadth Must be outside the student's major subject, and may be lower or upper division 6 units Social Sciences: B-Soc 6 units Humanities: B-Hum 6 units Sciences: B-Sci
	6	Additional Breadth 6 units outside the student's major subject (may or may not be B-designated courses, and will likely help fulfil individual degree program requirements) Students choosing to complete a joint major, joint honours, double major, two extended minors, an extended minor and



			a minor, or two minors may satisfy the breadth requirements (designated or not designated) with courses completed in either one or both program areas.
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Residency Requirements and Transfer Credit

- At least half of the program's total units must be earned through Simon Fraser University study.
- At least two thirds of the program's total upper division units must be earned through Simon Fraser University study.

Elective Courses

In addition to the courses listed above, students should consult an academic advisor to plan the remaining required elective courses.