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## MEMORANDUM

ATTENTION Senate  
FROM Wade Parkhouse, Chair  
Senate Committee on  
Undergraduate Studies  
RE: Program Changes

DATE September 14, 2018  
PAGES 1/2

**For information:**

Acting under delegated authority at its meeting of September 13, 2018 SCUS approved the following curriculum revisions effective Summer 2019.

**a. Faculty of Applied Sciences (SCUS 18-54)****1. The Sustainable Energy Engineering Program**

- (i) Admission requirements for post-secondary (external) and internal transfers (Fall 2019)

**b. Beedie School of Business (SCUS 18-55)**

- (i) Requirement changes to the Certificate in Innovation & Entrepreneurship
- (ii) Renaming and moving admission sections of the calendar
- (iii) Changes to course access for non-majors
- (iv) Changes to the Business – Major admission requirements

**c. Faculty of Communication, Art and Technology (SCUS 18-56)****1. School of Interactive Arts and Technology**

- (i) Upper division requirement changes to the BA, BA Honours, BSc and BSc Honours programs
- (ii) Lower division requirement changes to the BA Honours program and the BSc Honours program

### **c. Faculty of Health Sciences (SCUS 18-57)**

- (i) Upper division requirement changes to the Health Sciences Philosophy joint major
- (ii) Upper division requirement changes to the Health Sciences Major – Bachelor of Arts and the Health Sciences Honours – Bachelor of Arts programs
- (iii) Upper division requirement changes to the Health Sciences Major – Bachelor of Science – Life Sciences concentration and the Health Sciences Honours – Bachelor of Science – Life Sciences concentration programs
- (iv) Upper division requirement changes to the Health Sciences Major – Bachelor of Science – PQHS concentration and the Health Sciences Honours – Bachelor of Science – PQHS concentration programs

### **d. Faculty of Science (SCUS 18-58)**

#### **1. Department of Molecular Biology and Biochemistry**

- (i) Upper division requirement changes to the MBB Minor program
- (ii) Change format of upper division requirement course options for MBB Minor program (Fall 2019)
- (iii) Addition of MBB 498 to the list of Research and Directed Readings options for the MBB Honours and Majors programs
- (iv) Format changes to the list of Research and Directed Reading options for the MBB Honours and Majors programs (Fall 2019)

**Calendar Entry Change**

**Sustainable Energy Engineering (SEE) Major, Faculty of Applied Sciences**

<p>Rationale for change:</p> <p>Defining admission requirements for post-secondary (external) and internal transfers to the SEE program.</p>
<p>Effective term and year: Fall 2019</p>
<p>The following program(s) will be affected by these changes:</p> <p>SEE 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><b>Admission Requirements</b></p> <p>Admission is competitive. A supplemental application, along with related documentation, may be required for specific entry routes. For specific admission requirements, visit <a href="http://www.sfu.ca/students/admission-requirements.html">http://www.sfu.ca/students/admission-requirements.html</a>.</p> <p>For more information, contact an Applied Sciences Advisor.</p> <p><b><u>External Transfer from Another Post-Secondary Institution</u></b></p> <p><b>Admission is competitive and all SFU General Requirements apply.</b> (see: <a href="http://www.sfu.ca/students/admission/admission-requirements">http://www.sfu.ca/students/admission/admission-requirements</a>)</p> <p><b>In addition to the general requirements, the following are required:</b></p> <ul style="list-style-type: none"> <li>• <b>A minimum of 24 units of transferable coursework, including courses that are accepted by SFU as equivalents to the following:</b> <ul style="list-style-type: none"> <li>○ <b>One MATH course from: MATH 152, 232, or 240</b></li> <li>○ <b>One CMPT course from: CMPT 130, 128, 135 or (both CMPT 125 and 127)</b></li> <li>○ <b>One CHEM course from: CHEM 121, 120</b></li> <li>○ <b>One PHYS course from: PHYS 140, 141, 120, or 121</b></li> </ul> </li> <li>• <b>Meeting all SEE program high school admission requirements</b></li> </ul> <p><b>A supplemental application, along with related documentation, may be required.</b></p>
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**Internal Transfer from Another Simon Fraser University Program**

**Admission is competitive, with the following minimum requirements:**

- **Minimum CGPA of 2.67**
- **Registration in at least 12 units in the term prior to admission**
- **No more than 5 repeats**
- **Meeting all SEE program high school admission requirements**

**A supplemental application, along with related documentation, may be required.**



**Calendar Entry Change**  
**Beedie School of Business Undergraduate Program**

Rationale for change:

The course FPA 489 was added to the certificate, but then that course was replaced by CA 489, which should not be applicable to the certificate and should be removed from the list of options.

Effective term and year:

Summer 2019

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

Certificate in Innovation & Entrepreneurship

**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**.

**Program Requirements**

Students must complete the following, including foundational business courses, a capstone course, and additional coursework from a variety of disciplines.

Students will complete all of:

BUS 238 - Introduction to Entrepreneurship and Innovation (3)

BUS 314 - Resourcing New Ventures (3)

BUS 338 - Foundations of Innovation (3)

BUS 361 - Project Management (3)

And one of\*:

BUS 477 - Startup Experience (4)

~~CA 489 - Interdisciplinary Project in FPA (5)~~

ENV 495 - Environmental Capstone (4) \*\*

HSCI 495 - Applied Health Science Project (4)

IAT 430 - Business of Design III: Refinement and Production (3) ^ and BUS 476 - Business of Design IV - Promotion, Packaging and Launch - Launching a Design-Led Business (4) ^

IAT 499 - Graduation Project (6)

MSE 410 - Capstone Design Technical Project I (3) ^^ and MSE 411W - Capstone Design Technical Project II (3) ^^

Students# will complete two of\*:

BUS 339 - Business of Design II - Iteration and Prototyping (4)

BISC 373 - Brewing Science (2) or BISC 374 - Brewing Science with Lab (3)

BUS 406 - Startup Accelerator (3)



BUS 443 - New Product Development and Design (3)  
BUS 450 - Managing Emerging Opportunities (3)  
BUS 453 - Sustainable Innovation (3)  
BUS 490 - Selected Topics in Business Administration (3) \*\*\*  
BUS 491 - Selected Topics in Business Administration (3) \*\*\*  
BUS 492 - Selected Topics in Business Administration (3) \*\*\*  
BUS 493 - Selected Topics in Business Administration (3) \*\*\*  
BUS 494 - Selected Topics in Business Administration (3) \*\*\*  
BUS 495 - Selected Topics in Business Administration (3) \*\*\*  
BUS 496 - Selected Topics in Business Administration (5) \*\*\*  
CA 381 - Thriving as a Cultural Entrepreneur (3)  
CMNS 425 - Applied Communication for Social Issues (4)  
CMPT 120 - Introduction to Computing Science and Programming I (3)  
CMPT 320 - Social Implications - Computerized Society (3)  
HSCI 130 - Foundations of Health Science (4)  
HSCI 305 - The Canadian Health System (3)  
HSCI 312 - Health Promotion: Individuals and Communities (3)  
IAT 330 - Business of Design I: Introduction (3)  
IAT 333 - Interaction Design Methods (3)  
IAT 431 - Speculative Design (3)  
IAT 481 - Special Topics in Interactive Arts and Technology (Science) (3)  
MSE 110 - Mechatronics Design I (3) or MSE 111 - Mechatronics for non-Engineers (3)  
POL 150 - Science, Policy, and Innovation (3)  
POL 457W - Technology and Innovation Policy (4)  
PUB 101 - Publication of Self in Everyday Life (3)  
PUB 201 - The Publication of Professional Self (3)  
PUB 212 - Public Relations and Public Engagement (3)  
PUB 456 - Institutional and International Event Planning and Management (4)  
# Students completing a Bachelor of Business Administration may not use BUS 406, BUS 443, BUS 450, BUS 453, or BUS 49X to meet the requirements of this section.

\* Substitutions with appropriate course content may be possible with permission from the Beedie School of Business.

\*\* ENV 495 will only count toward this certificate when offered as part of Change Lab. Students are to consult with a Faculty of Environment advisor before enrolling in this course.

\*\*\* When offered as a selected topics course in Innovation and Entrepreneurship.

^ Business of Design

^^ Technology Entrepreneurship @ SFU



**Calendar Entry Change**  
**Beedie School of Business Undergraduate Program**

Rationale for change:

Renaming this section of the calendar will make the information easier for students to locate in the calendar. This new title better reflects the contents of this section.

Effective term and year:

Summer 2019

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

<http://www.sfu.ca/students/calendar/2018/fall/areas-of-study/business.html>

This change would also see the Admissions information moved into its own section/page in the calendar, while the course access and other information remains where it is.

**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**.

Business

Business faculty members

~~Admission requirements for Beedie and other important faculty notes~~

**Beedie undergraduate program admission information**

**Course access information, grade requirements, and other important notes**



**Calendar Entry Change**

**Name of Program or Name of Faculty**

<p>Rationale for change:</p> <p>Renaming &amp; moving the admissions section of the calendar will make the information easier for students to locate in the calendar.</p> <p>Admission requirements tend to be for prospective students, whereas the other information is more focused at current students, so separating them seems logical.</p>
<p>Effective term and year: Summer 2019</p>
<p>The following program(s) will be affected by these changes:</p> <p><a href="http://www.sfu.ca/students/calendar/2018/fall/faculties-research/faculty-business.html">http://www.sfu.ca/students/calendar/2018/fall/faculties-research/faculty-business.html</a></p> <p>We would like to move the following sections into a unique Beedie Undergraduate Admissions page (see Part 1 of this same change for more information).</p> <p>Major admission requirements Joint major admission requirements Minor admission requirements Double degree admission requirements</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>Departments &amp; Programs Offered</p> <p><u><b>Beedie School of Business</b></u></p> <hr/> <p><b>Undergraduate Programs</b> <del>Major Admission Requirements</del> <del>Joint Major Admission Requirements</del> <del>Minor Admission Requirements</del></p>
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~~Double Degree Admission Requirements~~

~~Non-Majors' Information About~~ Access to Business Courses

Grade Requirements

## Student Responsibility

It is the responsibility of each student to be aware of faculty regulations as stated in this Calendar. Departmental and faculty advisors and staff are available for advice and guidance. However, the ultimate responsibility for completeness and correctness of course selection, for compliance with and completion of program and degree requirements and for observance of regulations and deadlines rests with the student.

**Calendar Entry Change**  
**Beedie School of Business Undergraduate Program**

Rationale for change:

This language makes our course access policies clearer for students. These course access items have been used in practice, and are coded and listed in SIMS and are now being reflected in the Calendar for more clarity to students.

Effective term and year:  
Summer 2019

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

<http://www.sfu.ca/students/calendar/2018/fall/faculties-research/faculty-business.html>

**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**.

~~Non-Majors'~~ **Information About** Access to Business Courses

**200 DIVISION BUSINESS COURSE ENROLLMENT RESTRICTIONS**

**Students other than those accepted into a program in business may enroll in 200 division business courses, except for the following courses, which are reserved for students in a business program and do not open up at any time: BUS 201, 202, 217W.**

**300 AND 400 DIVISION BUSINESS COURSE ENROLLMENT RESTRICTIONS**

Students other than those accepted into a program in business ~~administration~~ may enroll in selected 300 and 400 division business ~~administration~~ courses from the day before the term begins until the end of the first week of classes, contingent upon:

- space available in the course during the period indicated
- meeting all prerequisites for the ~~requested~~ course
- ~~required minimum overall SFU Business course GPA of 2.30~~

Registration in BUS **320 & 360W** is limited to students who are ~~approved~~ in a business major, joint major, honours, or joint honours program, or as indicated below.

**ACCOUNTING STUDENTS**



Only business students admitted to the Accounting concentration will be permitted to enroll in upper division (300- and 400-level) accounting courses ~~required for this concentration~~ (with the exception of BUS 320).

#### **BUSINESS MINOR STUDENTS**

Only students admitted to the Business minor will be permitted to enroll in upper division Business minor courses (BUS 311, 340, 341, and 401).

#### **ACTUARIAL SCIENCE STUDENTS**

**Actuarial Science majors and honours students have access to BUS 312, 315, 316, 360W, 410, 413 & 419.**

#### **DATA SCIENCE STUDENTS**

**Data Science majors and honours students have access to BUS 217W, 343, 360W, 439, & 445.**

#### **MANAGEMENT SYSTEMS SCIENCE STUDENTS**

**Management Systems Science majors and honours students have access to BUS 343, 360W, 361, 440 & 473.**

#### **CERTIFICATE IN CORPORATE ENVIRONMENTAL AND SOCIAL SUSTAINABILITY**

**Students in the Certificate in Corporate Environmental and Social Sustainability program have access to BUS 303, 393, 449, 453, 475 & 489.**

#### **CERTIFICATE IN INNOVATION & ENTREPRENEURSHIP**

**Students in the Certificate in Innovation & Entrepreneurship program have access to BUS 314, 338, 339, 361, 406, 443, 450, 453 & 477.**

**Calendar Entry Change  
Beedie School of Business Undergraduate Program**

<p>Rationale for change:</p> <p>This language is being updated to better reflect the application requirements and to be clearer for students applying to the Beedie School of Business.</p>
<p>Effective term and year: Summer 2019</p>
<p>The following program(s) will be affected by these changes:</p> <p>Business – Major Admission Requirements</p> <p><a href="http://www.sfu.ca/students/calendar/2018/fall/faculties-research/faculty-business.html">http://www.sfu.ca/students/calendar/2018/fall/faculties-research/faculty-business.html</a></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>Major Admission Requirements</p> <p>For admission to the major program within the Beedie School of Business, students will be competitively selected from one of the following four streams.</p> <p><b>DIRECT FROM SECONDARY SCHOOL (CATEGORY 1)</b></p> <p>Secondary school graduates, or students with <del>less</del> <b>fewer</b> than 24 units of transferable coursework from another post-secondary institution, will be competitively selected for admission in the fall and spring terms (only), based on the general Simon Fraser University admission requirements, faculty specific admission requirements, and a supplemental application. The supplemental application may include:</p> <p>An explanation of extra-curricular experience (i.e. in the areas of: athletics, arts, community leadership/involvement, work experience, and/or entrepreneurship)  Short answer questions  Online video interview  Reference, with at least one being academic in nature</p> <p><b>EXTERNAL TRANSFER – DIRECT FROM A RECOGNIZED POST-SECONDARY INSTITUTION (CATEGORY 2)</b></p>
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A portion of the annual admission will be competitively selected from students transferring from a recognized post-secondary institutions who **meet the university admission requirements and** have completed all of the eight ~~required~~ lower division courses **required for admission.\*\*** ~~(except BUS 207, BUS 217W and BUS 254 which may be completed after faculty admission)~~ and submitted a supplemental application form. **Students may also be required to submit a supplemental application for consideration.** Of the required courses, a maximum of 2 of the 8 courses may be repeated one time each for admission.

The supplemental application may include:

An explanation of extra-curricular experience (i.e. in the areas of: athletics, arts, community leadership/involvement, work experience, and/or entrepreneurship)

Short answer questions

Online video interview

References, with at least one being academic in nature

**INTERNAL TRANSFER – ALL COURSES AT SIMON FRASER UNIVERSITY OR A COMBINATION OF SIMON FRASER UNIVERSITY AND OTHER POST-SECONDARY COURSES (CATEGORY 3)**

A portion of the annual admission will be competitively selected from students who have completed all of their courses at Simon Fraser University, including the ~~required~~ eight lower division courses **required for admission.\*\*** ~~(except BUS 201/202, 207, 217W and 254 which may be completed after faculty admission)~~, and submitted a supplemental application form. **Students may also be required to submit a supplemental application for consideration.** Of the required courses, a maximum of 2 of the 8 courses may be repeated **one time each** for admission.

*[blank line added here]*

The supplemental application may include:

An explanation of extra-curricular experience (i.e. in the areas of: athletics, arts, community leadership/involvement, work experience, and/or entrepreneurship)

Short answer questions

Online video interview

References, with at least one being academic in nature

Please note that students must meet minimum GPA requirements in order to be considered for admission to the Beedie School of Business. These requirements are listed on the internal transfer website. Prospective students should also review and meet the Beedie School of Business grade requirements, which are listed at the bottom of this page.

~~INTERNAL TRANSFER – SOME SIMON FRASER UNIVERSITY AND OTHER POST-SECONDARY COURSES (CATEGORY 4)~~



A portion of the annual admission will be competitively selected from students who have completed some courses at Simon Fraser University and some courses at another post-secondary institution(s), including the required eight lower division courses\*\* (except BUS 201/202, 207, 217W and 254 which may be completed after faculty admission) and submitted a supplemental application form. Of the required courses, a maximum of 2 of the 8 courses may be repeated for admission. The supplemental application may include:

An explanation of extra-curricular experience (i.e. in areas of: athletics, arts, community leadership/involvement, work experience, and/or entrepreneurship)

Short answer questions

Online video interview

References, with at least one being academic in nature

Please note that students must meet minimum GPA requirements in order to be considered for admission to the Beedie School of Business. These requirements are listed on the internal transfer website. Prospective students should also review the Beedie School of Business grade requirements, which are listed at the bottom of this page.

\*\*The eight required lower division courses **required for admission** are as follows:

BUS 237-3 Introduction to Business Technology Management

BUS 251-3 Financial Accounting I

BUS 272-3 Behaviour in Organizations

ECON 103-4 Principles of Microeconomics

ECON 105-4 Principles of Macroeconomics

and one of:

BUEC 232-4 Data and Decisions I

STAT 270-3 Introduction to Probability and Statistics

and one of:

MATH 150-4 Calculus I with Review

MATH 151-3 Calculus I

MATH 154-3 Calculus I for the Biological Sciences

MATH 157-3 Calculus I for the Social Sciences

and one of ^:

ENGL 111W-3 Literary Classics in English

ENGL 112W-3 Literature Now

ENGL 113W-3 Literature and Performance

ENGL 114W-3 Language and Purpose



ENGL 115W-3 Literature and Culture  
ENGL 199W-3 Introduction to University Writing  
PHIL 100W-3 Knowledge and Reality  
PHIL 105-3 Critical Thinking  
PHIL 120W-3 Moral Problems  
WL 101W-3 Writing About Literature  
WL 103W-3 Pre-Modern World Literature  
WL 104W-3 Modern World Literature

^ any one of these courses may be replaced by any three unspecified transfer units in English or in ENGL-Writing at the 100- or 200-level.

#### APPLICATION PROCEDURES

Students applying directly from a secondary school (~~Category 1~~) or an external post-secondary institution (~~Category 2~~) should apply to the faculty at the same time that they apply for admission to the University. ~~The supplemental application can be found on Beedie's website.~~

Internal transfer (~~Category 3 or 4~~) applicants should apply to the faculty during the term in which the admission requirements are completed.

~~The supplemental application can be found on Beedie's website.~~

Students not accepted upon initial application may reapply. Unsuccessful applicants **are permitted to** ~~may appeal through the faculty admissions appeals committee.~~

#### APPLICATION DEADLINES

Visit <http://beedie.sfu.ca/bba/apply> for application deadlines.

**Calendar Entry Change****Name of Program or Name of Faculty**

Rationale for change:

IAT 330 and 430 are new courses in the School of Interactive Arts and Technology and contain valuable content for the BA requirements in the program.

Effective term and year: Summer 2019

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

BA

<http://www.sfu.ca/students/calendar/2018/summer/programs/interactive-arts-and-technology/major/bachelor-of-arts.html>

**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**.

**Upper Division Requirements**

A major in Interactive Arts in Technology requires 30 upper division IAT units. Of these, students must take

IAT 309W - Writing Methods for Research (3)

and at least two 400-level courses of at least 3 units each, excluding directed studies.

Of the total of 44 upper division units required to their degree, students must complete a total of 24 units chosen from the following arts courses to satisfy the BA requirements:

IAT 312 - Foundations of Game Design (3)

IAT 313 - Narrative and New Media (3)

IAT 320 - Body Interface (3)

**IAT 330 – Business of Design I (3)**

IAT 334 - Interface Design (3)

IAT 343 - Animation (3)

IAT 344 - Moving Images (3)

IAT 380 - Special Topics in Interactive Arts and Technology (Arts) (3)

**IAT 430 – Business of Design III (3)**

IAT 431 - Speculative Design (3)

IAT 438 - Interactive Objects and Environments (3)





IAT 443 - Interactive Video (3)  
IAT 445 - Immersive Environments (3)  
IAT 480 - Special Topics in Interactive Arts and Technology (Arts) (3)  
IAT 499 - Graduation Project (6)

**Calendar Entry Change**

**Name of Program or Name of Faculty**

<p>Rationale for change:</p> <p>IAT 330 and 430 are new courses in the School of Interactive Arts and Technology and contain valuable content for the BA Honours requirements in the program.</p>
<p>Effective term and year: Summer 2019</p>
<p>The following program(s) will be affected by these changes:</p> <p>BA Honours  <a href="http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/honours/bachelor-of-arts.html">http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/honours/bachelor-of-arts.html</a></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><b>Upper Division Requirements</b></p> <p>An Honours, Bachelor of Arts in Interactive Arts and Technology requires 48 upper division IAT units. Of these, students must take</p> <p>IAT 309W - Writing Methods for Research (3) and at least two 400-level IAT courses of at least 3 units each, excluding directed studies</p> <p>and</p> <p>six (6) IAT units selected from Designated Honours courses from Route 1 OR Route 2:</p> <p>Route 1</p> <p>One of</p> <p>IAT 801 - Qualitative Research Methods and Design (3)  IAT 802 - Quantitative Research Methods and Design (3)  IAT 806 - Interdisciplinary Design Approaches to Computing (3)</p> <p>One of</p> <p>IAT 490 - Honours Project I (3)</p>
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IAT 491 - Honours Project II (3)

OR

Route 2

IAT 490 - Honours Project I (3)

IAT 491 - Honours Project II (3)

To satisfy the BA requirements of this program students complete a total of 24 units chosen from the following arts courses:

IAT 312 - Foundations of Game Design (3)

IAT 313 - Narrative and New Media (3)

IAT 320 - Body Interface (3)

**IAT 330 – Business of Design I (3)**

IAT 334 - Interface Design (3)

IAT 340 - Sound Design (3)

IAT 343 - Animation (3)

IAT 344 - Moving Images (3)

IAT 380 - Special Topics in Interactive Arts and Technology (Arts) (3)

**IAT 430 – Business of Design III (3)**

IAT 431 - Speculative Design (3)

IAT 438 - Interactive Objects and Environments (3)

IAT 443 - Interactive Video (3)

IAT 445 - Immersive Environments (3)

IAT 480 - Special Topics in Interactive Arts and Technology (Arts) (3)



**Calendar Entry Change**

**Name of Program or Name of Faculty**

Rationale for change:  IAT 330 and 430 are new courses in the School of Interactive Arts and Technology and contain valuable content for the BSc requirements in the program.
Effective term and year: Summer 2019
The following program(s) will be affected by these changes:  BSc <a href="http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html">http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html</a>

**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><b>Upper Division Requirements</b></p> <p>A major in Interactive Arts and Technology requires 30 upper division IAT units. Of these, students must take</p> <p>IAT 309W - Writing Methods for Research (3)</p> <p>and at least two 400-level courses of at least 3 units each, excluding directed studies.</p> <p>Of the total of 44 upper division units required to their degree, students must complete a total of 24 units chosen from the following science courses to satisfy the BSc requirements:</p> <p><b><u>IAT 330 – Business of Design I (3)</u></b>  IAT 333 - Interaction Design Methods (3)  IAT 336 - Materials in Design (3)  IAT 351 - Advanced Human-Computer Interaction (3)  IAT 352 - Internet Computing Technologies (3)  IAT 355 - Introduction to Visual Analytics (3)  IAT 381 - Special Topics in Interactive Arts and Technology (Science) (3)  IAT 410 - Advanced Game Design (3)  <b><u>IAT 430 – Business of Design III (3)</u></b>  IAT 432 - Design Evaluation (3)  IAT 437 - Representation and Fabrication (3)</p>
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IAT 452 - Developing Design Tools (3)  
IAT 455 - Computational Media (3)  
IAT 481 - Special Topics in Interactive Arts and Technology (Science) (3)  
IAT 499 - Graduation Project (6)



**Calendar Entry Change**

**Name of Program or Name of Faculty**

Rationale for change:  IAT 330 and 430 are new courses in the School of Interactive Arts and Technology and contain valuable content for the BSc Honours requirements in the program.
Effective term and year: <i>Summer 2019</i>
The following program(s) will be affected by these changes:  BSc Honours <a href="http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html">http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html</a>

**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><b>Upper Division Requirements</b></p> <p>An Honours, Bachelor of Science in Interactive Arts and Technology requires 48 upper division IAT units. Of these, students must take</p> <p>IAT 309W - Writing Methods for Research (3) and at least two 400-level IAT courses of at least 3 units each, excluding directed studies</p> <p>and</p> <p>six (6) IAT units selected from Designated Honours courses from Route 1 OR Route 2:</p> <p>Route 1</p> <p>One of</p> <p>IAT 801 - Qualitative Research Methods and Design (3) IAT 802 - Quantitative Research Methods and Design (3) IAT 806 - Interdisciplinary Design Approaches to Computing (3)</p> <p>One of</p> <p>IAT 490 - Honours Project I (3)</p>
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IAT 491 - Honours Project II (3)

OR

Route 2

IAT 490 - Honours Project I (3)

IAT 491 - Honours Project II (3)

To satisfy the BSc requirements of this program students will complete a total of 24 units chosen from the following science courses:

**IAT 330 – Business of Design I (3)**

IAT 333 - Interaction Design Methods (3)

IAT 336 - Materials in Design (3)

IAT 351 - Advanced Human-Computer Interaction (3)

IAT 352 - Internet Computing Technologies (3)

IAT 355 - Introduction to Visual Analytics (3)

IAT 359 - Mobile Computing (3)

IAT 381 - Special Topics in Interactive Arts and Technology (Science) (3)

IAT 410 - Advanced Game Design (3)

**IAT 430 – Business of Design III (3)**

IAT 432 - Design Evaluation (3)

IAT 437 - Representation and Fabrication (3)

IAT 452 - Developing Design Tools (3)

IAT 455 - Computational Media (3)

IAT 481 - Special Topics in Interactive Arts and Technology (Science) (3)

**Calendar Entry Change**

**Name of Program or Name of Faculty**

Rationale for change:  CMPT 102 and CMPT 130 fulfill Lower Division Requirements for the IAT BA and BSc already and should similarly fulfill Lower Division Requirements for the IAT BA and BSc Honours.
Effective term and year: Summer 2019
The following program(s) will be affected by these changes:  BA Honours <a href="http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/honours/bachelor-of-arts.html">http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/honours/bachelor-of-arts.html</a>

**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**.

<b>Lower Division Requirements</b>  CMPT 166 - An Animated Introduction to Programming (3) or an equivalent introductory programming course (CMPT <del>102</del> , 120, 125, 126, <del>or</del> 128, <b>or</b> <u>130</u> )
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**Calendar Entry Change**  
**Name of Program or Name of Faculty**

Rationale for change:  CMPT 102 and CMPT 130 fulfill Lower Division Requirements for the IAT BA and BSc already and should similarly fulfill Lower Division Requirements for the IAT BA and BSc Honours.
Effective term and year: <i>Summer 2019</i>
The following program(s) will be affected by these changes:  BSc Honours <a href="http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html">http://www.sfu.ca/students/calendar/2018/fall/programs/interactive-arts-and-technology/major/bachelor-of-science.html</a>

**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**.

<b>Lower Division Requirements</b>  CMPT 166 - An Animated Introduction to Programming (3) or an equivalent introductory programming course (CMPT <b>102</b> , 120, 125, 126, <del>or</del> 128, <b>or</b> <b>130</b> )
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**Calendar Entry Change**  
**Joint Major: Health Sciences & Philosophy**

Rationale for change: **Health Sciences Philosophy joint major – Bachelor of Arts**

**The Council for Education in Public Health, the accrediting body for our undergraduate programs requires a “a cumulative, integrative and scholarly or applied experience or inquiry project that serves as a capstone to the education experience”, which we are meeting by requiring a Directed Studies course, HSCI 488, for the joint majors in Health Sciences and Philosophy.**

**We are also including STAT 302 or STAT 305 in the required upper division course list since it a pre-requisite for HSCI 330 and this makes the requirements to complete the joint major more transparent.**

Effective term and year: *Summer 2019*

The following program(s) will be affected by these changes:  
**Health Sciences Philosophy joint 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**.

**Upper Division Health Sciences Requirements**

Students complete a minimum of 21 upper division health sciences units, including all of

HSCI 305 - The Canadian Health System (3)

HSCI 319W - Applied Health Ethics (3)

HSCI 327 - Global Health Ethics (3)

HSCI 330 - Exploratory Strategies in Epidemiology (3)

HSCI 340 - Social Determinants of Health (3)

**HSCI 488 - Directed Studies: Public Health Ethics Capstone (3)**

**and one of**

**STAT 302 - Analysis of Experimental and Observational Data (3)**

**STAT 305 - Introduction to Biostatistical Methods for Health Sciences (3)**

**(Recommended course is STAT 305)**



and at least one 400-level health sciences course.

**Calendar Entry Change**

**Name of Program or Name of Faculty – Faculty of Health Sciences – BA Program**

<p><b>Rationale for change:</b>  <b>Changes to the Health Sciences major programs are necessary to indicate that the upper-division W course must be in the student's major subject. In the case of Health Sciences, HSCI 319W is the only upper division W course and should be listed as a mandatory course.</b></p> <p><b>Due to changes in course equivalencies for STAT 305 and STAT 302, the Faculty of Health Sciences indicates that though STAT 305 is the recommended course, the STAT 302 course will also be acceptable. Without this change, the APR tool will incorrectly indicate to students that STAT 302 is unsatisfactory.</b></p>
<p>Effective term and year: <b>Summer 2019</b></p>
<p>The following program(s) will be affected by these changes:</p> <p><b>Health Sciences Major – Bachelor of Arts</b>  <b>Health Sciences Honours – Bachelor of Arts</b></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>Students complete all of</p> <p>HSCI 304 - Perspectives on Human Health and the Environment (3)  HSCI 305 - The Canadian Health System (3)  HSCI 307 - Research Methods in Health Sciences (3)  HSCI 312 - Health Promotion: Individuals and Communities (3)  <b>HSCI 319W - Applied Health Ethics (3)</b>  HSCI 330 - Exploratory Strategies in Epidemiology (3)  HSCI 340 - Social Determinants of Health (3)  <del>STAT 305 – Introduction to Biostatistical Methods for Health Sciences (3)</del></p> <p>and one of</p> <p><del>HSCI 319W – Applied Health Ethics (3)</del>  <del>HSCI 327 – Global Health Ethics (3)</del></p>
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**and one of**

**STAT 302 - Analysis of Experimental and Observational Data (3)**

**STAT 305 - Introduction to Biostatistical Methods for Health Sciences (3)**

**(Recommended course is STAT 305)**

and at least 12 additional upper division HSCI units.



### Calendar Entry Change

Name of Program or Name of Faculty – Faculty of Health Sciences – BSc Program

**Rationale for change:**

**Changes to the Health Sciences major programs are necessary to indicate that the upper-division W course must be in the student's major subject. In the case of Health Sciences, HSCI 319W is the only upper division W course and should be listed as a mandatory course.**

Effective term and year: **Summer 2019**

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

**Health Sciences Major – Bachelor of Science – Life Sciences concentration**  
**Health Sciences Honours – Bachelor of Science – Life Sciences concentration**

**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**.

Students complete all of

HSCI 305 - The Canadian Health System (3)  
**HSCI 319W - Applied Health Ethics (3)**  
HSCI 321 - Human Pathophysiology (3)  
HSCI 324 - Human Population Genetics and Evolution (3)  
HSCI 330 - Exploratory Strategies in Epidemiology (3)  
MBB 331 - Molecular Biology (4)

and one of

STAT 302 - Analysis of Experimental and Observational Data (3)  
STAT 305 - Introduction to Biostatistical Methods for Health Sciences (3)

~~and one of~~

~~HSCI 319W – Applied Health Ethics (3)~~  
~~HSCI 327 – Global Health Ethics (3)~~



**Calendar Entry Change**

**Name of Program or Name of Faculty – Faculty of Health Sciences – BSc Program**

**Rationale for change:**

**Changes to the Health Sciences major programs are necessary to indicate that the upper-division W course must be in the student's major subject. In the case of Health Sciences, HSCI 319W is the only upper division W course and should be listed as a mandatory course.**

**To strengthen the quantitative component of the PQHS curriculum, there will be a requirement to complete two instead of only one designated population health quantitative course. To allow for more flexibility in course options, students will be able to select from a broader range of upper division HSCI courses while still maintaining the same number of total upper division units required previously.**

Effective term and year: **Summer 2019**

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

**Health Sciences Major – Bachelor of Science- PQHS concentration  
Health Sciences Honours- Bachelor of Science- PQHS concentration**

**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**.

Students complete all of

- HSCI 305 - The Canadian Health System (3)
- HSCI 307 - Research Methods in Health Sciences (3)
- HSCI 319W - Applied Health Ethics (3)**
- HSCI 324 - Human Population Genetics and Evolution (3)
- HSCI 330 - Exploratory Strategies in Epidemiology (3)

and one of

- STAT 302 - Analysis of Experimental and Observational Data (3)
- STAT 305 - Introduction to Biostatistical Methods for Health Sciences (3)

~~and one of~~

~~HSCI 319W – Applied Health Ethics (3)~~



~~HSCI 327—Global Health Ethics (3)~~

~~and at least six of the following courses, which include a minimum of one as indicated by +~~

~~BISC 441—Evolution of Health and Disease (3)~~

~~BISC 422—Population Genetics (3)~~

~~HSCI 304—Perspectives on Human Health and the Environment (3)~~

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

~~HSCI 410—Exploratory Data Analysis (3) +~~

~~HSCI 416—Health Services Research (4) +~~

~~HSCI 424—Strategic Applications of GIS in Health (4) +~~

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

~~HSCI 432—Seminar in Epidemiology (3) +~~

~~HSCI 478—Seminar in Molecular Epidemiology of Infectious Diseases (3) +~~

~~HSCI 481—Senior Seminar in Social Health Science (3)~~

~~HSCI 483—Senior Seminar in Environmental Health (3)~~

~~HSCI 484—Senior Seminar in Population Health Research (3) +~~

~~HSCI 485—Senior Seminar in Mental Health and Addictions (3)~~

~~HSCI 486—Senior Seminar in Global Health (3)~~

~~MBB 441—Bioinformaties (3)~~

~~REM 412—Environmental Modeling (3)~~

~~SA 355—Quantitative Methods (S) (4) +~~

**and at least two of the following courses**

**HSCI 410 - Exploratory Data Analysis (3)**

**HSCI 416 - Health Services Research (4)**

**HSCI 424 - Strategic Applications of GIS in Health (4)**

**HSCI 432 - Seminar in Epidemiology (3)**

**HSCI 478 - Seminar in Molecular Epidemiology of Infectious Diseases (3)**

**HSCI 484 - Senior Seminar in Population Health Research (3)**

**and at least 12 additional upper division HSCI units.**





**Calendar Entry Change:** Revise upper division course requirements for MBB Minors.  
**Name of Program or Name of Faculty:** MBB

**Rationale for change:** Requirements are out of date – there are no course combinations that will add up to 14 units and MBB 400 is no longer offered. MBB Minors are permitted to take a 3- or 5-unit Individual Research Semester (ISS) course (MBB 491-5 or 498-3) but other ISS courses are reserved for Honors students.

**Effective term and year:** Summer 2019

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

**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**.

Upper Division Requirements  
Students complete a total of ~~14-18 units, consisting~~ a **minimum** of five upper division MBB courses (~~and any~~ **some of which may have** lower division prerequisites), **which may include one of MBB 491 or 498 but** excludes MBB 400, 471, 481, 482, 483 and 492.



**Calendar Entry Change:** Change format of Upper Division Requirements course options so that hyperlinks can be added for each course.

**Name of Program or Name of Faculty:** MBB

<b>Rationale for change:</b> Format change for list of Research and Directed Readings course options so that hyperlinks can be added (MBB 491, MBB 498).
<b>Effective term and year:</b> Fall 2019
<b>The following program(s) will be affected by these changes:</b> MBB 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>Upper Division Requirements</p> <p>Students complete a minimum of five upper division MBB courses (some of which may have lower division prerequisites), which may include one of <del>MBB 491 or 498</del></p> <p><b>MBB 491 - Individual Study Semester (5)</b> <b>MBB 498 - Individual Study Semester (3)</b></p> <p>but excludes MBB 471, 481, 482, 483 and 492.</p>
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**Calendar Entry Change:** add MBB 498 to list of Research and Directed Readings options  
**Name of Program or Name of Faculty:** MBB

**Rationale for change:** MBB 498-3 (Individual Study Semester) is a new research course that should be added to the list of Research and Directed Readings course options.

**Effective term and year:** Summer 2019

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

**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**.

Research and Directed Reading Courses

For honours degree credit, students are limited to 18 undergraduate research courses and/or directed reading units. These include courses such as MBB 471, 481, 482, 483, 490, 491, 492, **498** and corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 498, 499).



**Calendar Entry Change:** add MBB 498 to list of Research and Directed Readings options  
**Name of Program or Name of Faculty:** MBB

**Rationale for change:** MBB 498-3 (Individual Study Semester) is a new research course that should be added to the list of Research and Directed Readings course options.

**Effective term and year:** Summer 2019

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

**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**.

**Research and Directed Reading Courses**

For degree credit, students are limited to nine undergraduate research and/or directed reading units. These include MBB 471, 481, 482, 483, 490, 491, 492, **498** and corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 498, 499). If students complete more than nine units of these courses, they may not apply the extra units toward the degree total (120 units).

**Calendar Entry Change:** Change format of Research and Directed Reading Course options so that hyperlinks can be added for each course.

**Name of Program or Name of Faculty:** MBB

**Rationale for change:** Format change for list of Research and Directed Readings course options so that hyperlinks can be added for each MBB course (471, 481, 482, 483, 490, 491, 492, 498).

**Effective term and year:** Fall 2019

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

Research and Directed Reading Courses

For honours degree credit, students are limited to 18 undergraduate research courses and/or directed reading units. These include ~~courses such as MBB 471, 481, 482, 483, 490, 491, 492, 498~~

- MBB 471 - Undergraduate Colloquium (1)**
- MBB 481 - Individual Study Semester - Honours Thesis (5)**
- MBB 482 - Individual Study Semester - Honours Research Performance (5)**
- MBB 483 - Individual Study Semester - Honours Thesis Defense (5)**
- MBB 490 - Directed Readings in Molecular Biology and Biochemistry (2)**
- MBB 491 - Individual Study Semester (5)**
- MBB 492 - Individual Study Semester (10)**
- MBB 498 - Individual Study Semester (3)**

and corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 498, 499). If students complete more than 18 units of these courses, they may not apply the extra units toward the degree total (124 for honours). In addition, honours students may not complete more than 15 research and/or reading units in one term.



**Calendar Entry Change:** Change format of Research and Directed Reading Course options so that hyperlinks can be added for each course; remove MBB 481, 482, 483 and 492 as options.

**Name of Program or Name of Faculty:** MBB

**Rationale for change:** Format change for list of Research and Directed Readings course options so that hyperlinks can be added for each MBB course (471, 490, 491, 498). Remove MBB 481, 482, 483 and 492 from this list as these courses are only available to Honours students.

**Effective term and year:** Fall 2019

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

#### Research and Directed Reading Courses

For degree credit, students are limited to nine undergraduate research and/or directed reading units. These include ~~MBB 471, 481, 482, 483, 490, 491, 492, 498~~

**MBB 471 - Undergraduate Colloquium (1)**

**MBB 490 - Directed Readings in Molecular Biology and Biochemistry (2)**

**MBB 491 - Individual Study Semester (5)**

**MBB 498 - Individual Study Semester (3)**

and corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 498, 499). If students complete more than nine units of these courses, they may not apply the extra units toward the degree total (120 units).