SFU OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

MEMORANDUM

ATTENTION	Senate	DATE	September 16, 2022
FROM	Elizabeth Elle, Vice-Chair	PAGES	1/2
RE:	Senate Committee on Undergraduate Studies Program Changes		

Elizabet Elle

For information:

Acting under delegated authority at its meeting of September 15, 2022 SCUS approved the following curriculum revision effective Summer 2023.

a. Faculty of Applied Sciences (SCUS 22-55)

1. School of Computing Science

(i) Upper division requirement changes to the:
- Computing Science Major
- Computing Science Honours
- Computing Science Dual Degree Program
- Computing Science Second Degree
- Computing Science and Linguistics Joint Major
- Information Systems in Business Administration and Computing Science Joint Major
- Computing Science Minor
- Computing Studies Certificate

2. School of Engineering Science (Fall 2023)

(i) Requirement changes:
- Engineering Science, Computer Engineering Option Major
- Engineering Science, Electronics Engineering Option Major
- Engineering Science, Systems Engineering Option Major
- Engineering Science, Biomedical Engineering Option Honours
- Engineering Science, Computer Engineering Option Honours
- Engineering Science, Electronics Engineering Option Honours
- Engineering Science, Engineering Physics Option Honours
- Engineering Science, Systems Engineering Option Honours

- Computer and Electronics Design Minor
- Engineering Science Second Degree

b. Beedie School of Business (SCUS 22-56)

(i) Admission requirement changes to the major and joint major programs (Fall 2024)
(ii) Admission requirement changes to the (Fall 2024):
- Business and Communication Joint Major
- Business and Economics Joint Major
- Business and Geography Joint Major
- Business and Psychology Joint Major
- Business, Philosophy and the Law Joint Major
- Information Systems in Business Administration and Computing Science Joint Major
- Interactive Arts and Technology and Business Joint Major BA or BBA
- Interactive Arts and Technology and Business Joint Major BSc
- Molecular Biology and Biochemistry and Business Administration Joint Major
- Sustainable Business Joint Major

(iii) Upper and lower division requirement changes to Sustainable Business Joint Major (Fall 2023)

c. Faculty of Science (SCUS 22-58)

1. Department of Molecular Biology and Biochemistry (Fall 2023)

(i) Upper and lower division requirement changes to the:
- Molecular Biology and Biochemistry Major
- Molecular Biology and Biochemistry Honours

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.

SFU
SENATE COMMITTEE ON
UNDERGRADUATE STUDIES

Name of Program or Name of Faculty School of Computing Science
Rationale for change: Add new approved courses for Summer 2022 and Fall 2022 (CMPT 403, 410, 420, 362, and 372) to appropriate Concentration Tables of Calendar.
Effective term and year: Summer 2023
The following program(s) will be affected by these changes: Computing Science Major; Computing Science Honours; Computing Science Dual Degree Program ; Computing Science Second Degree ; Computing Science and Linguistics Joint Major; Computing Science Minor; Computing Studies Certificate; Information Systems in Business Administration and Computing Science 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.**

<u>Computing Science Major; Computing Science Honours; Computing Science Dual Degree Program ; Computing Science Second Degree ; Computing Science and Linguistics Joint Major; Computing Science Minor; Computing Studies Certificate</u>   ARTIFICIAL INTELLIGENCE CMPT 310 - Introduction to Artificial Intelligence (3) CMPT 340 - Biomedical Computing (3) **CMPT 410 – Machine Learning (3)** CMPT 411 - Knowledge Representation (3)

CMPT 412 - Computational Vision (3)
CMPT 413 - Computational Linguistics (3)
CMPT 414 - Model-Based Computer Vision (3)
CMPT 417 - Intelligent Systems (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 420 – Deep Learning (3)

[…]

COMPUTING SYSTEMS

CMPT 300 - Operating Systems I (3)
CMPT 305 - Computer Simulation and Modelling (3)
CMPT 371 - Data Communications and Networking (3)
CMPT 379 - Principles of Compiler Design (3)
CMPT 403 – System Security and Privacy (3)
CMPT 431 - Distributed Systems (3)
CMPT 433 - Embedded Systems (3)
CMPT 450 - Computer Architecture (3)
CMPT 471 - Networking II (3)
CMPT 479 - Special Topics in Computing Systems (3)
CMPT 499 - Special Topics in Computer Hardware (3)

INFORMATION SYSTEMS

CMPT 353 - Computational Data Science (3)
CMPT 354 - Database Systems I (3)
CMPT 362 - Mobile Applications Programming and Design (3)
CMPT 372 - Web II - Server-side Development (3)
CMPT 441 - Computational Biology (3)
CMPT 454 - Database Systems II (3)
CMPT 456 - Information Retrieval and Web Search (3)
CMPT 459 - Special Topics in Database Systems (3)
CMPT 474 - Web Systems Architecture (3)

Information Systems in Business Administration and Computing Science Joint Major

Table I - Computing Science Concentrations

ARTIFICIAL INTELLIGENCE

CMPT 310 - Introduction to Artificial Intelligence (3)
CMPT 340 - Biomedical Computing (3)
CMPT 410 – Machine Learning (3)
CMPT 411 - Knowledge Representation (3)

CMPT 412 - Computational Vision (3)
CMPT 413 - Computational Linguistics (3)
CMPT 414 - Model-Based Computer Vision (3)
CMPT 417 - Intelligent Systems (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 420 – Deep Learning (3)
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COMPUTING SYSTEMS

CMPT 300 - Operating Systems I (3)
CMPT 305 - Computer Simulation and Modelling (3)
CMPT 371 - Data Communications and Networking (3)
CMPT 379 - Principles of Compiler Design (3)
CMPT 403 – System Security and Privacy (3)
CMPT 431 - Distributed Systems (3)
CMPT 433 - Embedded Systems (3)
CMPT 450 - Computer Architecture (3)
CMPT 471 - Networking II (3)
CMPT 479 - Special Topics in Computing Systems (3)
CMPT 499 - Special Topics in Computer Hardware (3)

INFORMATION SYSTEMS

CMPT 353 - Computational Data Science (3)
CMPT 354 - Database Systems I (3)
CMPT 362 - Mobile Applications Programming and Design (3)
CMPT 372 - Web II - Server-side Development (3)
CMPT 441 - Computational Biology (3)
CMPT 454 - Database Systems II (3)
CMPT 456 - Information Retrieval and Web Search (3)
CMPT 459 - Special Topics in Database Systems (3)
~~CMPT 470 - Web-based Information Systems (3)~~
CMPT 474 - Web Systems Architecture (3)

Name of Program or Name of Faculty
School of Engineering Science

Rationale for change:
1. The School of Engineering Science has decided to remove the co-op as pre-requisite to declare the option as well as taking upper division courses. This pre-req is not practical these days and many students are affected by not being able to progress in their educational plan. Therefore, the school has decided to remove this requirement.

2. The School of Engineering Science has introduced a new course ENSC151 that replaces CMPT128 for all aspects of the engineering science program. CompSc removed their CMPT275 and replaced it with CMPT276. These two changes affect our core courses and we want to make this reflect in the core-course section of university calendar.

3. In alignment with other units of the Faculty of Applied Sciences, the School of Engineering Science would like to remove the minimum course load policy.

4. Admission criteria for internal transfer applicants for all options, the Computer & Electronics Design Minor, and Engineering Science Second Degree have changed to include ENSC 151.

Effective term and year:
Fall 2023

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

Major
Engineering Science, Computer Engineering Option Bachelor of Applied Science
Engineering Science, Electronics Engineering Option Bachelor of Applied Science
Engineering Science, Systems Engineering Option Bachelor of Applied Science
Honours
Engineering Science, Biomedical Engineering Option Bachelor of Applied Science
Engineering Science, Computer Engineering Option Bachelor of Applied Science
Engineering Science, Electronics Engineering Option Bachelor of Applied Science
Engineering Science, Engineering Physics Option Bachelor of Applied Science
Engineering Science, Systems Engineering Option Bachelor of Applied Science
Minor
Computer and Electronics Design
Other
Engineering Science Second Degree Bachelor of Applied Science

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Engineering Science, Computer Engineering Option Major

[...]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

Please see www.sfu.ca/students/admission/admission-requirements.html for further information.

Internal Transfer from Another Simon Fraser University Program

Simon Fraser University students who wish to transfer to Engineering Science from another program should formally apply for an internal transfer. The qualification for internal transfer will be calculated based on the following four criteria: CGPA, engineering related grade point average (ERGPA) at Simon Fraser University, no more than five repeated courses, and the course load during the term prior to the application deadline. In regards to the course load, we require the term prior to requesting the transfer to the School of Engineering Science, that the student must have been enrolled in at least 12 Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher. Further, Simon Fraser University students applying for admission to the School of Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201

- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225 ~~and~~ **275 and ENSC 151;**
- at least one physics course chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

All three courses must be completed prior to application. For complete information, contact an Applied Sciences Advisor. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available.

[...]

~~**Minimum Course Load Policy**~~
~~SFU ENSC students are expected to maintain a minimum course load of 12 units per term. Students are permitted to take fewer units in exceptional circumstances, provided that the average number of units per enrolled term does not drop below 10 units/term.~~

~~The minimum course load policy will be enforced once per year, after the completion of the Spring term. The Progress Rate will be calculated for each student as the number of units divided by the number of enrolled terms (excluding coop). Students who at the time of evaluation have a Progress Rate below the required minimum of 10.00 units/term, will be transferred to the BGS program.~~

~~Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).~~

[...]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[...]

Core Course Requirements

The following core courses are required for the Engineering Science Major in Computer Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. "Equivalent" courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
CMPT 225 - Data Structures and Programming (3)
~~CMPT 275 - Software Engineering I (4)~~
CMPT 276 – Introduction to Software Engineering (3)
CMPT 300 - Operating Systems I (3)
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)
ENSC 204 - Graphical Communication for Engineering (1)
ENSC 220 - Electric Circuits I (4)
ENSC 225 - Microelectronics I (4)
ENSC 251 - Software Design and Analysis for Engineers (4)
ENSC 252 - Fundamentals of Digital Logic & Design (4)
ENSC 254 - Introduction to Computer Organization (4)
ENSC 280 - Engineering Measurement and Data Analysis (4)
ENSC 320 - Electric Circuits II (4)
ENSC 324 - Electronic Devices (3)
ENSC 327 - Communication Systems (4)
ENSC 350 - Digital Systems Design (4)
ENSC 351 - Embedded and Real Time System Software (4)
ENSC 380 - Linear Systems (3)
ENSC 405W - Capstone A: Project Design, Management, and Documentation (3)
ENSC 406 - Engineering Ethics, Law, and Professional Practice (2)
ENSC 410 - The Business of Engineering (3) or ENSC 411 - The Business of Entrepreneurial Engineering (4)
ENSC 429 - Digital Signal Processing (4)
ENSC 440 - Capstone B: Engineering Design Project (3)
~~ENSC 450 - VLSI Systems Design (4) or ENSC 452 - Advanced Digital System Design (4)~~
MACM 201 - Discrete Mathematics II (3)

MACM 316 - Numerical Analysis I (3)
MATH 151 - Calculus I (3) *
MATH 152 - Calculus II (3)
MATH 232 - Applied Linear Algebra (3)
MATH 251 - Calculus III (3)
MATH 260 - Introduction to Ordinary Differential Equations (3)
PHYS 120 - Mechanics and Modern Physics (3)
PHYS 121 - Optics, Electricity and Magnetism (3)
* or MATH 150 Calculus I with Review if you do not meet the MATH 151 prerequisites

And any two of
ENSC 450 - VLSI Systems Design (4)
ENSC 452 - Advanced Digital System Design (4)
ENSC 453 Programming for Heterogeneous Computing Systems (4)

[…]

Engineering Science, Electronics Engineering Option Major
[…]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

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Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher. Further, Simon Fraser University students applying for admission to the School of Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, and 275 **and ENSC 151**
- at least one physics course chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
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Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).

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[…]

Core Course Requirements

The following core courses are required for the Engineering Science Major in Electronics Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[…]

Engineering Science, Systems Engineering Option Major

[…]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);

- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

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- at least one physics course chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

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~~Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).~~

[…]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[…]

Core Course Requirements

The following core courses are required for the Engineering Science Major in Systems Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
CMPT 225 - Data Structures and Programming (3)
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)

ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and
Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[...]

Engineering Science, Biomedical Engineering Option Honours

[...]

Minimum Admission Requirements

Applicants must be eligible for University admission, must submit a University application,
and must have successfully completed the following high school courses: physics 12,
mathematics 12, chemistry 12, and English 12.

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required,
including:
- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)),
  ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS
  321

Please see www.sfu.ca/students/admission/admission-requirements.html for further
information.

Internal Transfer from Another Simon Fraser University Program

Simon Fraser University students who wish to transfer to Engineering Science from
another program should formally apply for an internal transfer. The qualification for
internal transfer will be calculated based on the following four criteria: CGPA, engineering
related grade point average (ERGPA) at Simon Fraser University, no more than five
repeated courses, and the course load during the term prior to the application deadline. In
regards to the course load, we require the term prior to requesting the transfer to the
School of Engineering Science, that the student must have been enrolled in at least 12
Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher.
Further, Simon Fraser University students applying for admission to the School of

Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, ~~and~~ 275 **and ENSC 151**
- at least one physics courses chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

All three courses must be completed prior to application. For complete information, contact an Applied Sciences Advisor. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available.

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[…]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[…]

Core Course Requirements

The following core courses are required by the Engineering Science Honours program in Biomedical Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

BPK 201 - Biomechanics (3)
BPK 208 - Introduction to Physiological Systems (3)
BPK 308 - Experiments and Models in Systems Physiology (3)
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 180 - The Chemistry of Life (3)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[…]

Engineering Science, Computer Engineering Option Honours

[…]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

SENATE COMMITTEE ON
UNDERGRADUATE STUDIES

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
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SENATE COMMITTEE ON
UNDERGRADUATE STUDIES

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Upper Division Enrollment Requirements

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There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

Program Requirements

[...]

Core Course Requirements

The following core courses are required for the Engineering Science Honours program in Computer Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
CMPT 225 - Data Structures and Programming (3)
~~CMPT 275 - Software Engineering I (4)~~
CMPT 276 – Introduction to Software Engineering (3)
CMPT 300 - Operating Systems I (3)
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)
ENSC 204 - Graphical Communication for Engineering (1)
ENSC 220 - Electric Circuits I (4)
ENSC 225 - Microelectronics I (4)
ENSC 251 - Software Design and Analysis for Engineers (4)
ENSC 252 - Fundamentals of Digital Logic & Design (4)
ENSC 254 - Introduction to Computer Organization (4)
ENSC 280 - Engineering Measurement and Data Analysis (4)
ENSC 320 - Electric Circuits II (4)
ENSC 324 - Electronic Devices (3)
ENSC 327 - Communication Systems (4)
ENSC 350 - Digital Systems Design (4)
ENSC 351 - Embedded and Real Time System Software (4)
ENSC 380 - Linear Systems (3)
ENSC 405W - Capstone A: Project Design, Management, and Documentation (3)
ENSC 406 - Engineering Ethics, Law, and Professional Practice (2)
ENSC 410 - The Business of Engineering (3) or ENSC 411 - The Business of Entrepreneurial Engineering (4)
ENSC 429 - Digital Signal Processing (4)
ENSC 440 - Capstone B: Engineering Design Project (3)
~~ENSC 450 - VLSI Systems Design (4) or ENSC 452 - Advanced Digital System Design (4)~~
ENSC 498 - Engineering Science Thesis Proposal (1)
ENSC 499 - Engineering Science Undergraduate Thesis (9)
MACM 201 - Discrete Mathematics II (3)
MACM 316 - Numerical Analysis I (3)
MATH 151 - Calculus I (3) *
MATH 152 - Calculus II (3)
MATH 232 - Applied Linear Algebra (3)
MATH 251 - Calculus III (3)
MATH 260 - Introduction to Ordinary Differential Equations (3)
PHYS 120 - Mechanics and Modern Physics (3)
PHYS 121 - Optics, Electricity and Magnetism (3)

* or MATH 150 Calculus I with Review if you do not meet the MATH 151 prerequisites

And any two of
ENSC 450 - VLSI Systems Design (4)
ENSC 452 - Advanced Digital System Design (4)
ENSC 453 - Programming for Heterogeneous Computing Systems (4)

[…]

Engineering Science, Electronics Engineering Option Honours
[…]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:
- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

Please see www.sfu.ca/students/admission/admission-requirements.html for further information.

Internal Transfer from Another Simon Fraser University Program

Simon Fraser University students who wish to transfer to Engineering Science from another program should formally apply for an internal transfer. The qualification for internal transfer will be calculated based on the following four criteria: CGPA, engineering related grade point average (ERGPA) at Simon Fraser University, no more than five repeated courses, and the course load during the term prior to the application deadline. In regards to the course load, we require the term prior to requesting the transfer to the School of Engineering Science, that the student must have been enrolled in at least 12 Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher. Further, Simon Fraser University students applying for admission to the School of Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, ~~and~~ 275 **and ENSC 151**
- at least one physics course chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

All three courses must be completed prior to application. For complete information, contact an Applied Sciences Advisor. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available.

[...]

~~**Minimum Course Load Policy**~~

~~SFU ENSC students are expected to maintain a minimum course load of 12 units per term. Students are permitted to take fewer units in exceptional circumstances, provided that the average number of units per enrolled term does not drop below 10 units/term.~~

~~The minimum course load policy will be enforced once per year, after the completion of the Spring term. The Progress Rate will be calculated for each student as the number of units divided by the number of enrolled terms (excluding coop). Students who at the time of evaluation have a Progress Rate below the required minimum of 10.00 units/term, will be transferred to the BGS program.~~

~~Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).~~

[...]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[...]

Core Course Requirements

The following core courses are required for the Engineering Science Honours program in Electronics Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details in obtaining permission.
CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[...]

Engineering Science, Engineering Physics Option Honours

[...]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

Please see www.sfu.ca/students/admission/admission-requirements.html for further information.

Internal Transfer from Another Simon Fraser University Program

Simon Fraser University students who wish to transfer to Engineering Science from another program should formally apply for an internal transfer. The qualification for internal transfer will be calculated based on the following four criteria: CGPA, engineering related grade point average (ERGPA) at Simon Fraser University, no more than five repeated courses, and the course load during the term prior to the application deadline. In regards to the course load, we require the term prior to requesting the transfer to the School of Engineering Science, that the student must have been enrolled in at least 12 Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher. Further, Simon Fraser University students applying for admission to the School of Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, ~~and~~ 275 **and ENSC 151**
- at least one physics courses chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

All three courses must be completed prior to application. For complete information, contact an Applied Sciences Advisor. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available.

[...]

~~**Minimum Course Load Policy**~~

~~SFU ENSC students are expected to maintain a minimum course load of 12 units per term. Students are permitted to take fewer units in exceptional circumstances, provided that the average number of units per enrolled term does not drop below 10 units/term.~~

~~The minimum course load policy will be enforced once per year, after the completion of the Spring term. The Progress Rate will be calculated for each student as the number of units divided by the number of enrolled terms (excluding coop). Students who at the time of evaluation have a Progress Rate below the required minimum of 10.00 units/term, will be transferred to the BGS program.~~

~~Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).~~
[…]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[…]

Core Course Requirements

The following core courses are required for the Engineering Science Honours program in Engineering Physics and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[…]

Engineering Science, Systems Engineering Option Honours

[...]

External Transfer from Another Post-Secondary Institution

Admission is competitive. A minimum of 24 units of transferable coursework is required, including:

- at least one mathematics course chosen from: MATH 152, MATH 232 (or 240);
- at least one computing course chosen from: CMPT 128 (or 135; or (125 and 127)), ~~and~~ 225 **and ENSC 151**;
- at least one physics course chosen from: PHYS 121 (or 141), PHYS 221, and PHYS 321

Please see www.sfu.ca/students/admission/admission-requirements.html for further information.

Internal Transfer from Another Simon Fraser University Program

Simon Fraser University students who wish to transfer to Engineering Science from another program should formally apply for an internal transfer. The qualification for internal transfer will be calculated based on the following four criteria: CGPA, engineering related grade point average (ERGPA) at Simon Fraser University, no more than five repeated courses, and the course load during the term prior to the application deadline. In regards to the course load, we require the term prior to requesting the transfer to the School of Engineering Science, that the student must have been enrolled in at least 12 Simon Fraser University course load units and earned an overall CGPA of 2.5 or higher. Further, Simon Fraser University students applying for admission to the School of Engineering Science are competitively selected for admission on the basis of an engineering-related grade point average (ERGPA). Typically, we expect the ERGPA to be as high as 2.8, and the ERGPA is determined based on the number of seats available. Therefore, meeting the minimum requirements does not guarantee admission. The ERGPA is calculated over all courses the student has taken from this list, where a minimum of three courses from this list is required, such that:

- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, ~~and~~ 275 **and ENSC 151**
- at least one physics courses chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365
- additional courses may include: CHEM 121

All three courses must be completed prior to application. For complete information, contact an Applied Sciences Advisor. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available.

[...]

~~Minimum Course Load Policy~~

~~SFU ENSC students are expected to maintain a minimum course load of 12 units per term. Students are permitted to take fewer units in exceptional circumstances, provided that the average number of units per enrolled term does not drop below 10 units/term.~~

~~The minimum course load policy will be enforced once per year, after the completion of the Spring term. The Progress Rate will be calculated for each student as the number of units divided by the number of enrolled terms (excluding coop). Students who at the time of evaluation have a Progress Rate below the required minimum of 10.00 units/term, will be transferred to the BGS program.~~

~~Students who have completed 120 credits of the Engineering Science program are exempt from the minimum Progress Rate requirement, however they still have to meet the other requirements (i.e. minimum CGPA requirements, timely completion of coop, etc.).~~

[...]

Upper Division Enrollment Requirements

To be eligible to enroll in upper division engineering courses, excluding ENSC 320, students must have declared their option.

There is an absolute minimum of 80 units completed to enroll in 400-level courses. Please note that specific courses may have higher requirements.

[...]

Core Course Requirements

The following core courses are required for the Engineering Science Honours program in Systems Engineering and cannot be substituted for "equivalent" courses in other areas without prior approval by the School. 'Equivalent' courses taken without prior approval will not be applied to graduation requirements. Students should consult an academic advisor within their program for details on obtaining permission.

CHEM 121 - General Chemistry and Laboratory I (4)
~~CMPT 128 - Introduction to Computing Science and Programming for Engineers (3)~~
CMPT 225 - Data Structures and Programming (3)
ECON 103 - Principles of Microeconomics (4)
ENSC 100W - Engineering, Science and Society (3)
ENSC 105W - Process, Form, and Convention in Professional Genres (3)
ENSC 120 - Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)
ENSC 151 – Introduction to Software Development for Engineers (4)
ENSC 180 - Introduction to Engineering Analysis (3)

[…]

Computer and Electronics Design Minor

Admission Requirements

Entrance is open to all non-engineering science majors. Students apply after successfully completing the following five courses, with a minimum grade of C-. Enrollment is competitive and limited.
- MATH 232-3
- ENSC 100W-3 Engineering, Science, and Society
- ENSC 105W-3 Process, Form, and Convention in Professional Genres
- PHYS 120-3
- CMPT 125/127, CMPT 135 or CMPT 128 **or ENSC 151**

[…]

Engineering Science, Second Degree

Admission Requirements

With an international reputation for innovation, Engineering Science at SFU offers an intense program that mirrors life at the cutting-edge of high-tech development. Areas of study can include microelectronics, computer engineering, robotics, biomedical engineering, multimedia, systems or telecommunications.

Students wishing to join us after completing a previous degree must first gain admission to SFU as a non-degree student. Once admitted, students with a previous degree in mathematics, physics, computing science, or a related discipline may apply directly to the School of Engineering Science by completing the online form available via

www.sfu.ca/engineering/prospective-students/undergraduate-students/admissions/second-degree.html.

We do not accept students who already have an undergraduate degree in Electrical and/or Computer Engineering or a related area, or whose undergraduate course work from a previous degree has significant overlap with the Engineering Science curriculum, as determined by the Admissions Chair and UCC Chair.

Students who have a previous degree in a non-related discipline will need to take courses or equivalents from the list below prior to being considered for admission to Engineering Science. These applicants must have completed the previous degree with a CGPA of at least 2.5, and with fewer than 6 repeated courses.

Applicants are selected for admission on the basis of an engineering-related grade point average (ERGPA). The ERGPA is calculated over all courses from the following list, where a minimum of 3 courses is required:
- at least one mathematics course chosen from MATH 151 (or 150), MATH 152, MATH 232 (or 240), MATH 251, MACM 101, MACM 201
- at least one computing course chosen from CMPT 128 or 135 or (125 and 127), 225, ~~and~~ 275 **and ENSC 151**
- at least one physics course chosen from PHYS 120 (or 140), PHYS 121 (or 141), PHYS 221, PHYS 321, PHYS 365

All courses must be completed prior to application. If a course is a duplicate of any previous course completed at Simon Fraser University or elsewhere, only the last attempt will be included in the average. For complete information, contact an Applied Sciences Advisor. Upon completion of these courses, students must have an ERGPA of at least 2.5. Admission is competitive and the admission average is established on a per term basis, depending on the number of spaces available. Once meeting these requirements, students apply online through the ENSC website for second degree admissions. Questions regarding second degree admissions may be directed to the Faculty of Applied Sciences advisors at asadvise@sfu.ca or to the Office Assistant in Engineering Science at enscoa@sfu.ca.

As per university policies and regulations, course credits earned for the previous degree cannot be transferred to the second degree program.

For more information about degree requirements, please click here.

SENATE COMMITTEE ON
UNDERGRADUATE STUDIES

Name of Program or Name of Faculty Beedie School of Business
Rationale for change: The Beedie School of Business would like to support changes to their College/University (external) Transfer and Internal Transfer (for current SFU students) admission requirements following a comprehensive transfer admissions review.
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Business Admissions Requirements

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.**

Admission Requirements
Major Admission Requirements

For admission to the major program within the Beedie School of Business, students will be competitively selected from one of the following ~~three streams~~ **pathways: Secondary School, College/University Transfer, or Internal Transfer (current SFU students)**.

Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and

additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

ADMISSION PATHWAYS

Secondary School Applicants

~~DIRECT FROM SECONDARY SCHOOL~~

Secondary school graduates, **International Baccalaureate students,** or students with fewer 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:~~

- ~~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~~

College ~~or~~ /University Transfer **Applicants**- Direct from a Recognized Post-Secondary Institution

~~A portion of the annual admission will be competitively selected from students transferring from recognized post-secondary institutions who meet the university admission requirements and have completed all of the eight lower division courses required for admission**. Students may also be required to submit a supplemental application for consideration. Of the required courses, a maximum of two of the eight courses may be repeated one time each for admission; students should review course equivalencies as stated in the SFU Calendar.~~

~~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~~

Applicants transferring from a recognized post-secondary institution will be eligible to be considered for admission to the BBA program at the Beedie School of Business by completing a minimum of 24-60 transferable units, which must include the following course equivalents with a minimum C- letter grade:

> **1. ECON 103-4 Principles of Microeconomics or ECON 113-3 Introduction to Microeconomics**
> **2. ECON 105-4 Principles of Macroeconomics or ECON 115-3 Introduction to Macroeconomics**
> **3. MATH 157-3 Calculus for the Social Sciences (or MATH 150-4, 151-3, 154-3)**
> **4. 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 Writing to Persuade**
>> **• PHIL 100W-3 Knowledge and Reality**
>> **• PHIL 105-3 Critical Thinking**
>> **• PHIL 110-3 Introduction to Logic and Reasoning**
>> **• PHIL 120W-3 Moral and Legal Problems**
>> **• PHIL 150-3 Great Works in the History of Philosophy**
>> **• WL 101W-3 Writing in World Literature**
>> **• WL 103W-3 Early World Literatures**
>> **• WL 104W-3 Modern World Literatures**
>> **• WL 105W-3 World Literature Lab**

*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.

Transfer applicants can only transfer a maximum of 60 units. See here for more information on Transfer Credit:
https://www.sfu.ca/students/admission/admissionrequirements/transfer-credit.html

For further information on our College/University Transfer Admission Requirements please visit:
https://beedie.sfu.ca/programs/undergraduate/bbamajor/requirements?poe=College%20or%20University%20Transfer

Internal Transfer (current SFU Students) - All Courses at Simon Fraser University or a Combination of Simon Fraser University and Other Post-Secondary courses

~~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 eight lower division courses required for admission**. Students may also be required to submit a supplemental application for consideration. Of the required courses, a maximum of two of the eight courses may be repeated one time each for admission; students should review course equivalencies as stated in the SFU Calendar.~~

~~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. Students should also review and meet the Beedie School of Business grade requirements, which are listed here.~~

~~**The eight 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~~

~~and one of:~~

~~BUS 232-3 Business Statistics~~
~~ECON 233-4 Introduction to Economics Data and Statistics~~
~~STAT 270-3 Introduction to Probability and Statistics~~

~~and one of:~~

~~ECON 103-4 Principles of Microeconomics~~
~~ECON 113-3 Introduction to Microeconomics~~

~~and one of:~~

~~ECON 105-4 Principles of Macroeconomics~~

~~ECON 115-3 Introduction to Macroeconomics~~

~~and one of:~~

~~MATH 150-4 Calculus I with Review~~
~~MATH 151-3 Calculus I~~
~~MATH 154-3 Mathematics for the Life Sciences I~~
~~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 Writing to Persuade~~
~~PHIL 100W-3 Knowledge and Reality~~
~~PHIL 105-3 Critical Thinking~~
~~PHIL 110-3 Introduction to Logic and Reasoning~~
~~PHIL 120W-3 Moral and Legal Problems~~
~~PHIL 150-3 Great Works in the History of Philosophy~~
~~WL 101W-3 Writing in World Literature~~
~~WL 103W-3 Early World Literatures~~
~~WL 104W-3 Modern World Literatures~~
~~WL 105W-3 World Literature Lab~~
~~^ 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.~~

Simon Fraser University students currently enrolled in a faculty other than Business can transfer to the Beedie School of Business according to the following:

ENTRY WITH 24 TO 47 UNITS COMPLETED

To be eligible for consideration for admission, applicants with 24 to 47 units must have completed the following requirements at the time of the admission evaluation: between 24-47 units, of which at least 12 units must have been completed at SFU, and the following 4 course equivalents with a minimum C- letter grade:

1. ECON 103-4 Principles of Microeconomics or ECON 113-3 Introduction to Microeconomics
2. ECON 105-4 Principles of Macroeconomics or ECON 115-3 Introduction to Macroeconomics
3. MATH 157-3 Calculus for the Social Sciences (or MATH 150-4, 151-3, 154-3)

4. 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 Writing to Persuade**
- **PHIL 100W-3 Knowledge and Reality**
- **PHIL 105-3 Critical Thinking**
- **PHIL 110-3 Introduction to Logic and Reasoning**
- **PHIL 120W-3 Moral and Legal Problems**
- **PHIL 150-3 Great Works in the History of Philosophy**
- **WL 101W-3 Writing in World Literature**
- **WL 103W-3 Early World Literatures**
- **WL 104W-3 Modern World Literatures**
- **WL 105W-3 World Literature Lab**

*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.

ENTRY WITH 48 UNITS OR MORE

To be eligible for consideration for admission, applicants with 48 units or more to the BBA program must have completed the following requirements at the time of the admission evaluation: 48 or more units, of which at least 12 units must have been completed at SFU, and the following 8 course equivalents with a minimum C- grade:

1. BUS 232-3 Data and Decisions I or ECON 233-4 Introduction to Economics Data
and Statistics or STAT 270-3 Introduction to Probability and Statistics
2. BUS 237-3 Introduction to Business Technology Management
3. BUS 251-3 Financial Accounting I
4. BUS 272-3 Behaviour in Organizations
5. ECON 103-4 Principles of Microeconomics or ECON 113-3 Introduction to Microeconomics
6. ECON 105-4 Principles of Macroeconomics or ECON 115-3 Introduction to Macroeconomics
7. MATH 157-3 Calculus for the Social Sciences (or MATH 150-4, 151-3, 154-3)
8. 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 Writing to Persuade**
- **PHIL 100W-3 Knowledge and Reality**
- **PHIL 105-3 Critical Thinking**
- **PHIL 110-3 Introduction to Logic and Reasoning**
- **PHIL 120W-3 Moral and Legal Problems**
- **PHIL 150-3 Great Works in the History of Philosophy**
- **WL 101W-3 Writing in World Literature**
- **WL 103W-3 Early World Literatures**
- **WL 104W-3 Modern World Literatures**
- **WL 105W-3 World Literature Lab**

*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.

SFU students who have used more than three SFU course repeats reduce their chances of being admitted.

For further information on our Internal Transfer Admission Requirements please visit:
https://beedie.sfu.ca/programs/undergraduate/bbamajor/requirements?poe=Internal%20SFU%20transfer

APPLICATION PROCEDURES

Students applying directly from a secondary school or an external post-secondary institution should apply to the faculty at the same time that they apply for admission to the university.

Internal transfer applicants (current SFU students) should apply to the faculty ~~during the term in which~~ **upon completion of** the admission requirements ~~are completed~~.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie School of Business Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

APPLICATION DEADLINES

Visit https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply for application deadlines.

Admission Requirements
Joint Major Admission Requirements

All students wishing to pursue a joint major with the Beedie School of Business and another department/faculty must be admissible to both programs that comprise the joint major.

DIRECT FROM SECONDARY SCHOOL OR COLLEGE/UNIVERSITY TRANSFER - DIRECT FROM A RECOGNIZED POST-SECONDARY INSTITUTION

Students must first gain admission to the Beedie School of Business through the ~~secondary school~~ **Secondary School** or ~~the college or university transfer~~ **College/University Transfer** application process described above. Once attending SFU, the student must satisfy the admission requirements listed for the non-Business portion of the joint major program in order to have their Business plan changed from a major to a joint major. Students should consult with both Beedie and the accompanying joint major department/faculty before applying to the joint major program.

COURSES COMPLETED AT SIMON FRASER UNIVERSITY ONLY, OR BOTH SFU AND ANOTHER POST-SECONDARY INSTITUTION(S)

Students admitted to an SFU faculty outside of the Beedie School of Business must be admissible to both the Beedie School of Business via **an** ~~internal transfer~~ **Internal Transfer** (as described in the major admission requirements above) and the other program that comprises that particular joint major.

When applying to **the** Beedie **School of Business**, students will be competitively selected for admission based on the specific course requirements for the particular joint major program and ~~may also~~ **will** be required to submit a supplemental application. Students should consult both **a** Beedie **School of Business Academic Advisor** and the accompanying joint major department/faculty before applying to the joint major program.

~~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 here.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website:
https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements

For further details on the required courses for admission, please refer to the specific business joint major program requirements.

APPLICATION PROCEDURES

Students applying directly from a secondary school or an external post-secondary institution should apply to the faculty at the same time that they apply for admission to the university.

Internal transfer applicants (current SFU students) should apply to the faculty ~~during the term in which the admission requirements are completed~~ **upon completion of the admission requirements**.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie School of Business Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

APPLICATION DEADLINES

Visit https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply for application deadlines.

Name of Program or Name of Faculty Beedie School of Business
Rationale for change: After completing a transfer admissions review, the Beedie School of Business would like to support changes to their College/University Transfer (external) and Internal Transfer (for current SFU students) admissions requirements, which include Joint Major programs.
Effective term and year: Fall 2024
The following program(s) will be affected by these changes: Business Joint 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.**

Business and Communication Joint Major
BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[...]

Admission Requirements

~~ADMISSION REQUIREMENTS - BEEDIE SCHOOL OF BUSINESS~~ **Beedie School of**

Business Admission Requirements

Joint major applicants should apply to Beedie through the ~~internal transfer~~ **Internal Transfer** process, which is outlined ~~here~~ **on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>,** after completing ~~30~~ **24** units, ~~including the eight lower division courses required for admission and~~ **of which at least 12 units must have been completed at SFU, and the required courses for joint**

major program admission with a minimum C- letter grade. Students must either already be accepted to the communications portion of the joint major or be eligible for admission that term. ~~Students not accepted upon initial application may reapply. Unsuccessful candidates are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

[...]

Business and Economics Joint Major
BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[…]

Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the ~~internal transfer~~ **Internal Transfer** process, which is outlined ~~here~~ **on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>,** after completing ~~30~~ **24** units, ~~including the eight lower division courses required for admission~~ o**f which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade.** Students must already be accepted to the economics portion of the joint major or be eligible for admission that term.

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Business and Geography Joint Major
BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[...]

~~ADMISSION REQUIREMENTS - BEEDIE SCHOOL OF BUSINESS~~ **Beedie School of Business Admission Requirements**

Joint major applicants should apply to Beedie through the ~~internal transfer~~ **Internal Transfer** process, which is outlined ~~here~~ **on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>**,
after completing ~~30~~ 24 units, ~~including the eight lower division courses required for admission,~~ **of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade.** ~~and~~ **Students** must either already be accepted to the geography portion of the joint major or be eligible for admission that term. ~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink:
https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and

additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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
- Any additional information in support of the application

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Business and Psychology Joint Major
BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[...]

~~Admission Requirements - Beedie School of Business~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the ~~internal transfer~~ **Internal Transfer** process, which is outlined ~~here~~ **on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>,** after completing ~~30~~ 24 units, ~~including the eight lower division courses required for admission~~, **of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade.** ~~and~~ **Students** must either already be accepted to the psychology portion of the joint major or

be eligible for admission that term. ~~Students not accepted upon initial application may reapply. Unsuccessful candidates are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Business, Philosophy and the Law Joint Major

BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[…]

Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the ~~internal transfer~~ I**nternal Transfer** process, which is outlined ~~here~~ **on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/ requirements?poe=Internal%20SFU%20transfer>**, after completing ~~30~~ **24** units, ~~including the lower division courses (except BUS 217W and BUS 254) and~~ **of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students** must ~~either~~ already be accepted to the philosophy portion of the joint major or be eligible for admission that term.

~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**

- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Information Systems in Business Administration and Computing Science Joint Major
BACHELOR OF BUSINESS ADMINISTRATION OR BACHELOR OF SCIENCE

[…]

~~ADMISSION REQUIREMENTS - BEEDIE SCHOOL OF BUSINESS~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the Internal Transfer process, **which is outlined on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>, after completing 24 units, of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students must already be accepted to the computing science portion of the joint major or be eligible for admission that term.** ~~which is outlined~~ <u>here</u>~~, after completing 30 units, including the lower division courses (except BUS 217W and BUS 254) and must either already be accepted to the computing science portion of the joint major or be eligible for admission that term.~~

~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review

admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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
- Any additional information in support of the application

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Interactive Arts and Technology and Business Joint Major
BACHELOR OF ARTS OR BACHELOR OF BUSINESS ADMINISTRATION

[...]

~~Admission Requirements - Beedie School of Business~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the **I**nternal **T**ransfer process, **which is outlined on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>, after completing 24 units, of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students must already be accepted to the interactive arts and technology portion of the joint major or be eligible for admission that term**. ~~which is outlined~~ ~~here~~~~, after completing 30 units, including the lower division courses (except BUS 207, 217W and BUS 254) and must either already be accepted to the interactive arts and technology portion of the joint major or be eligible for admission that term.~~

~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Interactive Arts and Technology and Business Joint Major
BACHELOR OF SCIENCE

[...]

~~Admission Requirements - Beedie School of Business~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the **I**nternal **T**ransfer process**, which is outlined on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>, after completing 24 units, of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students must already be accepted to the interactive arts and technology portion of the joint major or be eligible for admission that term**. ~~which is outlined~~ ~~here~~~~, after completing 30 units, including the lower division courses (except BUS 207, BUS 217W and BUS 254) and must either already be accepted to the interactive arts and technology portion of the joint major or be eligible for admission that term.~~

~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business

admission website <hyperlink:
https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Molecular Biology and Biochemistry and Business Administration Joint Major
BACHELOR OF SCIENCE

[...]

~~ADMISSION REQUIREMENTS - BEEDIE SCHOOL OF BUSINESS~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the **I**nternal **T**ransfer process, **which is outlined on the Beedie School of Business website <hyperlink:** https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer**>, after completing 24 units, of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students must already be accepted to the molecular biology and biochemistry portion of the joint major or be eligible for admission that term.** ~~which is outlined here, after completing 30 units, (including MATH 150/151/154, and the lower division requirements for the business portion of the joint major, except BUS 217W and BUS 254) and must either already be accepted to molecular biology and biochemistry portion of the joint major or be eligible for admission that term.~~

~~Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements**>**

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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**
- **Any additional information in support of the application**

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Sustainable Business Joint Major
BACHELOR OF BUSINESS ADMINISTRATION OR BACHELOR OF ENVIRONMENT

[...]

~~Admission Requirements - Beedie School of Business~~ Beedie School of Business Admission Requirements

Joint major applicants should apply to Beedie through the **I**nternal **T**ransfer process, **which is outlined on the Beedie School of Business website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements?poe=Internal%20SFU%20transfer>, after completing 24 units, of which at least 12 units must have been completed at SFU, and the required courses for joint major program admission with a minimum C- letter grade. Students must already be accepted to the environment portion of the joint major or be eligible for admission that term** ~~here, after completing 30 units, including the seven lower division courses required for admission, and must either already be accepted to the environment portion of the joint major or be eligible for admission that term. Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.~~

Admission to the Beedie School of Business is competitive. Applicants must meet minimum GPA requirements to be considered; attainment of minimum admission requirements does not guarantee admission. Applicants are encouraged to review admission policies and requirements specified on the Beedie School of Business admission website <hyperlink: https://beedie.sfu.ca/programs/undergraduate/bba-major/requirements>

Supplemental Application

The Beedie School of Business requires all applicants to submit a Supplemental Application as part of their admission evaluation. The Supplemental Application will be used to assess factors beyond academics such as engagement, achievement, and additional qualities. For further information on the Supplemental Application please visit: https://beedie.sfu.ca/programs/undergraduate/bba-major/how-to-apply

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
- Any additional information in support of the application

Application Procedures

Internal Transfer Applicants (current SFU students) should apply for admission to the faculty upon completion of the admission requirements.

Students not accepted upon initial application may reapply. Unsuccessful applicants are permitted to appeal.

Students applying for a Second Degree in Business must consult with a Beedie Academic Advisor. Students who have a Business Degree (e.g. BBA, BCom, Business Major/Joint Major, MBA, etc.) or have significant curriculum overlap will not be eligible for admission to the BBA program.

Name of Program or Name of Faculty Beedie School of Business
Rationale for change: The School for Resource and Environmental Management has revised all its undergraduate programs and developed a considerable number of new REM, SD and Planning (PLAN) undergraduate courses. Changes to the environment requirements of the SBJM aim to bring the program in line with the other REM undergraduate programs and take advantage of the new course offerings with a focus on REM and SD core courses that have had interest from business students in the past. The proposed changes to BUS requirements is to reduce overlap and in response to the changes on the REM side of the requirements.
Effective term and year: Fall 2023
The following program(s) will be affected by these changes: • Sustainable Business Bachelor of Business Administration 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.**

Sustainable Business Joint Major BACHELOR OF BUSINESS ADMINISTRATION OR BACHELOR OF ENVIRONMENT […] ## Lower Division Requirements Students complete all of Business Lower Division Requirements Students must complete all of

BUS 217W - Critical Thinking in Business (3)
BUS 251 - Financial Accounting I (3)
BUS 254 - Managerial Accounting I (3)
BUS 272 - Behaviour in Organizations (3)

and one of
BUS 232 - Business Statistics (3)
ECON 233 - Introduction to Economic Data and Statistics (4)
~~GEOG 251 - Quantitative Geography (3)~~
REM 225 – Quantitative Toolkit for Social-Ecological Systems (3)
STAT 270 - Introduction to Probability and Statistics (3)

and one of
BUS 237 - Introduction to Business Technology Management (3)
GEOG 255 - Geographical Information Science I (3)

and one of
ECON 103 - Principles of Microeconomics (4)
ECON 113 – Introduction to Microeconomics (3)

and one of
ECON 105 - Principles of Macroeconomics (4)
ECON 115 – Introduction to Macroeconomics (3)

and one of
MATH 150 - Calculus I with Review (4)
MATH 151 - Calculus I (3)
MATH 154 - Calculus I for the Biological Sciences (3)
MATH 157 - Calculus I for the Social Sciences (3)

[…]

Upper Division Requirements

Business Upper Division Requirements

Core Courses

Students complete all of:
BUS 312 - Introduction to Finance (3)
BUS 343 - Introduction to Marketing (3)
BUS 360W - Business Communication (4) **

and one of
BUS 374 - Organization Theory (3)
BUS 381 - Introduction to Human Resource Management (3)

and one of
GEOG 352 - Spatial Analysis (4)
GEOG 355 – Geographical Information Science II (4)
REM 325 - Uncertainty, Risk, and Decision Analysis (3)
REM 412 - Environmental Modeling (4)

and one of
BUS 303 - Business, Society and Ethics (3)
PHIL 328 - Environmental Philosophy (3)
REM 320W - Ethics and the Environment (3)

and one of
BUS 393 - Commercial Law (3)
REM 319 - Environmental and Planning Law (3)

Additional Upper Division Business Requirements

Student must complete the following
BUS 361 - Project Management (3)
BUS 475 - Sustainable Operations (3)

and one of
BUS 453 - Sustainable Innovation (3)
BUS 489 - Management Practices for Sustainability (3)

[…]

SENATE COMMITTEE ON
UNDERGRADUATE STUDIES

Name of Program or Name of Faculty
Department of Molecular Biology and Biochemistry
Rationale for change:
The COVID-19 pandemic and the antibiotic resistance crisis are existential threats requiring massive investments in research and education to combat. Many faculty in the MBB department use bioinformatics, structural biology, biochemistry, molecular and cell biology to study viral and bacterial pathogens and immune responses and have developed undergraduate courses focused on these topics. Given the current and progressive global health challenges, as well as the exciting and rapidly evolving field of immunotherapy, we feel it is timely to introduce a concentration in Infection and Immunity (I&I) that takes advantage of our unique expertise and of a growing interest in this field.
The I&I concentration will be a specialization within the standard MBB majors/honours programs. It will offer a core set of 300-level courses that build on the lower division molecular biology and biochemistry courses and provide a strong foundation in bacterial and viral pathogenesis, antimicrobial agents and resistance, the immune system and vaccines. At the 400-level students will have flexibility to explore current literature in microbial infections, epidemiology, immunopathologies and immunotherapies.
The requirement for an introductory genomics and bioinformatics course and the strong focus on protein structural biology differentiate the MBB I&I concentration from other Microbiology/Immunology programs. The I&I concentration will be attractive to many students and will prepare them for professional schools and graduate studies and for careers in biotechnology, biologics and pharmaceutics.
Both Lower Division and Upper Division course requirements are identical for the MBB Major/Honours Degree and the Concentration in Infection and Immunity. There are four additional Upper Division Requirements for students wanting to complete the I and I Concentration within the MBB Major/Honours as well as a more curated set of electives in the I and I Concentration.
Effective term and year:
Fall 2023
The following program(s) will be affected by these changes:
Molecular Biology and Biochemistry Major
Molecular Biology and Biochemistry 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.**

Molecular Biology and Biochemistry Major
[...]
Program Requirements
[...]

Upper Division Requirements

Students complete all of

MBB 308 - Molecular Biology Laboratory (3)
MBB 309W - Biochemistry Laboratory (4)
MBB 321 - Intermediary Metabolism (3)
MBB 322 - Molecular Physiology (3)
MBB 331 - Molecular Biology (4)

and a minimum of six courses chosen from the following list, three of which must be 400-level courses. There is no upper limit on the quantity in this list that can be completed.

HSCI 442 - Immunology Laboratory (4)
MBB 323 - Introduction to Physical Biochemistry (3)
MBB 324 - Protein Biochemistry (3)
MBB 326 - Introduction to the Immune System (3)
MBB 328 - Introduction to Microbial Pathogenesis (3)
MBB 342 - Introductory Genomics and Bioinformatics (3)
MBB 402 - Developmental Biology of Cell Signalling (3)
MBB 420 - Selected Topics in Contemporary Biochemistry (3)
MBB 421 - Nucleic Acids (3)
MBB 422 - Biomembranes (3)
MBB 423 - Protein Structure and Function (3)
MBB 424 - Membrane Transport Mechanisms (3)
MBB 427 - Immune Responses in Health and Disease (3)
MBB 429 - RNA-mediated Gene Regulation (3)
MBB 430 - Mechanisms of Secretory Transport (3)
MBB 431 - Cells and the Environment (3)
MBB 432 - Advanced Molecular Biology Techniques (4)
MBB 433 - Epithelial Cell Biology (3)
MBB 436 - Gene Expression (3)
MBB 438 - Human Molecular Genetics (3)
MBB 440 - Selected Topics in Contemporary Molecular Biology (3)
MBB 441 - Bioinformatics (3)
MBB 443 - Protein Biogenesis and Degradation (3)
MBB 446 - The Molecular Biology of Cancer (3)
MBB 460 - Selected Topics in Bioinformatics and Genomics (3)
MBB 461 - Comparative Genomics (3)
MBB 462 - Human Genomics (3)
MBB 463 - Forensic Genomics (3)
MBB 464 - From Genome to System (3)
MBB 465 - Cancer Genomics (3)

Concentration in Infection and Immunity

Students who choose this concentration will complete all of

MBB 308 - Molecular Biology Laboratory (3)
MBB 309W - Biochemistry Laboratory (4)
MBB 321 - Intermediary Metabolism (3)
MBB 322 - Molecular Physiology (3)
MBB 324 - Protein Biochemistry (3)
MBB/HSCI 326 - Introduction to the Immune System (3)
MBB 331 - Molecular Biology (4)
MBB 328 - Introduction to Microbial Pathogenesis (3)
MBB 342 - Introductory Genomics and Bioinformatics (3)

and two of

MBB/HSCI 427 - Immune Responses in Health and Disease (3)
MBB 445 - Advanced Microbial Pathogenesis (3)
HSCI 478 - Molecular Epidemiology of Infectious Diseases (3)

and a minimum of four courses chosen from the following list, two of which must be MBB courses. There is no upper limit on the number of courses that can be completed from this list but students will only receive credit for each course once.

BISC 303 - Microbiology Lab course (3)
HSCI 338 - Animal Virology (3)
HSCI 441 - Virology Lab (4)
HSCI 442 - Immunology Laboratory (4)
HSCI 477 - Seminar in Vaccine Immunology (3)
HSCI 482 - Seminar in Infectious Disease (3)
MBB 402 - Developmental Biology of Cell Signalling (3)
MBB 422 - Biomembranes (3)
MBB 423 - Protein Structure and Function (3)
MBB 427 - Immune Responses in Health and Disease (3)
MBB 430 - Mechanisms of Secretory Transport (3)
MBB 432 - Advanced Molecular Biology Techniques (4)
MBB 438 - Human Molecular Genetics (3)
MBB 441 - Bioinformatics (3)
MBB 445 – Advanced Microbial Pathogenesis (3)
MBB 446 - The Molecular Biology of Cancer (3)
MBB 461 - Comparative Genomics (3)
MBB 462 - Human Genomics (3)
HSCI 478 Molecular Epidemiology of Infectious Diseases (3)

Molecular Biology and Biochemistry Honours

[...]
Program Requirements
[...]
Upper Division Requirements

Students complete all of

MBB 308 - Molecular Biology Laboratory (3)
MBB 309W - Biochemistry Laboratory (4)
MBB 321 - Intermediary Metabolism (3)
MBB 322 - Molecular Physiology (3)
MBB 331 - Molecular Biology (4)

and a minimum of six courses chosen from the following list, three of which must be 400-level courses. There is no upper limit on the quantity in this list that can be completed.

HSCI 442 - Immunology Laboratory (4)
MBB 323 - Introduction to Physical Biochemistry (3)
MBB 324 - Protein Biochemistry (3)
MBB 326 - Introduction to the Immune System (3)
MBB 328 - Introduction to Microbial Pathogenesis (3)
MBB 342 - Introductory Genomics and Bioinformatics (3)
MBB 402 - Developmental Biology of Cell Signalling (3)
MBB 420 - Selected Topics in Contemporary Biochemistry (3)
MBB 421 - Nucleic Acids (3)
MBB 422 - Biomembranes (3)
MBB 423 - Protein Structure and Function (3)
MBB 424 - Membrane Transport Mechanisms (3)
MBB 427 - Immune Responses in Health and Disease (3)
MBB 429 - RNA-mediated Gene Regulation (3)
MBB 430 - Mechanisms of Secretory Transport (3)
MBB 431 - Cells and the Environment (3)
MBB 432 - Advanced Molecular Biology Techniques (4)
MBB 433 - Epithelial Cell Biology (3)
MBB 436 - Gene Expression (3)
MBB 438 - Human Molecular Genetics (3)
MBB 440 - Selected Topics in Contemporary Molecular Biology (3)
MBB 441 - Bioinformatics (3)
MBB 443 - Protein Biogenesis and Degradation (3)
MBB 446 - The Molecular Biology of Cancer (3)
MBB 460 - Selected Topics in Bioinformatics and Genomics (3)
MBB 461 - Comparative Genomics (3)
MBB 462 - Human Genomics (3)

MBB 463 - Forensic Genomics (3)
MBB 464 - From Genome to System (3)
MBB 465 - Cancer Genomics (3)
and one additional upper division course from any department in the Faculty of Science
(including MBB)

and either all of the following, which are taken in a single term (option A)

MBB 481 - Directed Research - Honours Thesis (5)
MBB 482 - Directed Research - Honours Research Performance (5)
MBB 483 - Directed Research - Honours Thesis Defense (5)

or both of the following, to be taken in two consecutive terms (option B)

MBB 491 - Directed Research I (5)
MBB 492 - Directed Research II (10)

Students are required to complete additional upper division units to total a minimum of
60 upper division units.

Concentration in Infection and Immunity

Students who choose this concentration will complete all of

MBB 308 - Molecular Biology Laboratory (3)
MBB 309W - Biochemistry Laboratory (4)
MBB 321 - Intermediary Metabolism (3)
MBB 322 - Molecular Physiology (3)
MBB 324 - Protein Biochemistry (3)
MBB/HSCI 326 - Introduction to the Immune System (3)
MBB 331 - Molecular Biology (4)
MBB 328 - Introduction to Microbial Pathogenesis (3)
MBB 342 - Introductory Genomics and Bioinformatics (3)

and two of

MBB/HSCI 427 - Immune Responses in Health and Disease (3)
MBB 445 - Advanced Microbial Pathogenesis (3)
HSCI 478 - Molecular Epidemiology of Infectious Diseases (3)

**and a minimum of four courses chosen from the following list, two of which must
be MBB courses. There is no upper limit on the number of courses that can be
completed from this list but students will only receive credit for each course once.**

BISC 303 - Microbiology Lab course (3)
HSCI 338 - Animal Virology (3)
HSCI 441 - Virology Lab (4)
HSCI 442 - Immunology Laboratory (4)
HSCI 477 - Seminar in Vaccine Immunology (3)
HSCI 482 - Seminar in Infectious Disease (3)
MBB 402 - Developmental Biology of Cell Signalling (3)
MBB 422 - Biomembranes (3)
MBB 423 - Protein Structure and Function (3)
MBB 427 - Immune Responses in Health and Disease (3)
MBB 430 - Mechanisms of Secretory Transport (3)
MBB 432 - Advanced Molecular Biology Techniques (4)
MBB 438 - Human Molecular Genetics (3)
MBB 441 - Bioinformatics (3)
MBB 445 – Advanced Microbial Pathogenesis (3)
MBB 446 - The Molecular Biology of Cancer (3)
MBB 461 - Comparative Genomics (3)
MBB 462 - Human Genomics (3)
HSCI 478 Molecular Epidemiology of Infectious Diseases (3)

and either all of the following, which are taken in a single term (option A)

MBB 481 - Directed Research - Honours Thesis (5)
MBB 482 - Directed Research - Honours Research Performance (5)
MBB 483 - Directed Research - Honours Thesis Defense (5)

or both of the following, to be taken in two consecutive terms (option B)

MBB 491 - Directed Research I (5)
MBB 492 - Directed Research II (10)

Students are required to complete additional upper division units to total a minimum of 60 upper division units.