SFU OFFICE OF THE VICE-PROVOST, LEARNING & TEACHING

Strand Hall 3034
8888 University Drive
Burnaby B.C. Canada V5A 1S6

TEL + 1 778 782 5433
avplt@sfu.ca
SFU.CA/vpacademic/learnteach

MEMORANDUM

ATTENTION:	Senate
FROM:	Elizabeth Elle, Vice-Chair, Senate Committee on Undergraduate Studies
RE:	Program Changes
DATE:	14 October 2022

For information:

Acting under delegated authority at its meeting of October 13, 2022 SCUS approved the following curriculum revision effective Summer 2023.

a. Faculty of Applied Sciences

1. School of Mechatronic Systems Engineering **(SCUS 22-55)**

(i) Requirement changes to the:

- Mechatronic Systems Engineering Major
- Mechatronic Systems Engineering and Business Double Degree Program Major
- Mechatronic Systems Engineering Honours

b. Faculty of Communication, Art and Technology (SCUS 22-57)

1. School of Interactive Arts and Technology

(i) Admission requirement changes to the major and joint major programs

2. **Faculty of Science SCUS 22-63)**

1. Department of Molecular Biology and Biochemistry

(i) 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.

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

PROGRAM MODIFICATION TEMPLATE

Name of Program or Name of Faculty School of Mechatronic Systems Engineering (MSE) in the Faculty of Applied Sciences (FAS).
Rationale for change: The proposed Concentration in AgriTech builds upon the Faculty of Applied Sciences' strong commitment to technology-based innovation and furthers SFU's interest in supporting strategies that will contribute to the development of vibrant, sustainable and technologically innovative communities. Through partnerships with City of Surrey and relevant industry leaders and offering a cutting-edge curriculum, this program is positioned to advance Faculty and University level goals in several key areas such as expanding industry collaborations within the South Fraser Region, strengthening ties with City of Surrey and surrounding municipalities, and expanding the talent pool for the emerging AgriTech sector. It contributes to SFU's strategic interest in capitalization on opportunities and needs to advance innovation and exciting academic programs in Surrey, especially in creative technologies.
Effective term and year: Summer 2023
The following program(s) will be affected by these changes: Mechatronic Systems Engineering Major Mechatronic Systems Engineering and Business Double Degree Program Mechatronic Systems Engineering 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.**

Mechatronic Systems Engineering Major

(…)

Co-operative Education Work Experience

MSE students normally complete three mandatory co-op terms in industry (MSE 293, 393, 493*). They may participate in additional work terms but are encouraged to seek diversity in their experience. The three mandatory work terms may include one special co-op term (MSE 294, 394, 494*). Special co-op may include, but is not restricted to, self-directed, entrepreneurial, service or research co-op work terms. Permission of the MSE co-op office is required.

MSE students also have an opportunity to participate in research co-op terms, where they gain experience in an academic, research and/or lab setting at SFU. Ideally, at least two of

the three mandatory work terms should be completed in industry unless compelling justification for research co-op is made. Students wishing to take three research co-ops should seek prior approval from the UCC Chair for their third research co-op.

An optional non-technical work term (MSE 193) is also available which is often completed after the first two study terms. MSE 193 does not count toward the mandatory three co-op terms requirement.

*** For the Agricultural Technology (AgriTech) concentration, at least two of the co-op work terms must be on AgriTech-based placements.**

~~First Year Requirements~~

~~The first year of mechatronic systems engineering is the Systems One program, a joint program with the software systems program. The courses required for Systems One are included in the following list of requirements.~~

Program Requirements

Students complete all of

CMPT 130 - Introduction to Computer Programming I (3)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 232 - Applied Linear Algebra (3)
MATH 260 - Introduction to Ordinary Differential Equations (3)
MSE 100 - Engineering Graphics and Design (3)
MSE 101W - Process, Form, and Convention in Professional Genres (3)
MSE 102 - Applied Science, Technology and Society (3)
MSE 110 - Mechatronics Design I (3)
MSE 210 - Engineering Measurement and Data Analysis (3)
MSE 211 - Computational Methods for Engineers (3)
MSE 220 - Engineering Materials (3)
MSE 221 - Statics and Strength of Materials (4)
MSE 222 - Kinematics and Dynamics of Rigid Bodies and Mechanisms (4)
MSE 223 - Introduction to Fluid Mechanics (4)
MSE 250 - Electric Circuits (4)
MSE 251 - Electronic Circuits (4)
MSE 280 - Linear Systems (3)
MSE 300 - The Business of Engineering I (3)
MSE 310 - Sensors and Actuators (4)
MSE 311 - Introduction to Microelectromechanical Systems (3)
MSE 312 - Mechatronics Design II (4) *
MSE 320 - Machine Design (4)

MSE 321 - Engineering Thermodynamics and Heat Transfer (4)
MSE 352 - Digital Logic and Microcontrollers (4)
MSE 353 - Power Electronics and Electric Machinery (4)
MSE 380 - Systems Modeling and Simulation (3)
MSE 381 - Feedback Control Systems (4) *
MSE 402 - Engineering Ethics, Law, and Professional Practice (2)
MSE 405W - The Business of Engineering II, Entrepreneurship for Engineers (4)
MSE 410 - Capstone Design Technical Project I (3)
MSE 411 - Capstone Design Technical Project II (3)
PHYS 140 - Studio Physics - Mechanics and Modern Physics (4)
PHYS 141 - Studio Physics - Optics, Electricity and Magnetism (4)

and one of

MATH 150 - Calculus I with Review (4)
MATH 151 - Calculus I (3)

and one of

CHEM 120 - General Chemistry I (3)
CHEM 121 - General Chemistry and Laboratory I (4)

Prior approval by the director of the school is required if the student plans a term with fewer than 12 course units.

* strongly recommended to be completed concurrently

[…]

~~MSE~~ **Mechatronic Systems Engineering** Elective Courses

Students must also complete six mechatronic systems engineering elective courses selected from a **pre-approved MSE** ~~list of~~ electives **list** that is available at https://www.sfu.ca/mechatronics/current-students/undergraduate-students/undergraduate-program-requirements/technical-studies-electives.html.

With undergraduate curriculum committee chair permission, students may replace one ~~mechatronic systems engineering~~ **MSE** elective with either a directed study or a special project laboratory course. Special topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.

Agriculture Technology (AgriTech) Concentration

This concentration is for students who wish to specialize in agriculture technology.

Students who choose this concentration will complete all of:

BISC 100 – Introduction to Biology (3)
MSE 360 – Introduction to Biosystems Engineering (3)
SEE 351 – Bioprocess Engineering Systems (3)
MSE 460 – Precision AgriTech Engineering (3)
MSE 480 – Manufacturing Systems (3)

Students do not need to complete the following from the program requirements:
MSE 311 – Introduction to Microelectromechanical Systems (3)

Students also complete three mechatronic systems engineering elective courses selected from a pre-approved MSE electives list instead of six courses.

(…)

Mechatronic Systems Engineering and Business Double Degree Program

(…)
Co-operative Education Work Experience

This double degree program requires the completion of a minimum of three mandatory engineering co-operative education work terms (MSE 293/294, MSE 393/394, and MSE 493/494*). Dual-degree students may also take up to two additional co-op terms in Business (BUS 225, 325, 326, 327, 328). These additional co-op terms will NOT count towards the three mandatory engineering co-op terms.

*** For the Agricultural Technology (AgriTech) concentration, at least two of the co-op work terms must be on AgriTech-based placements.**

(…)

Program Requirements

Students complete all of

BUS 251 - Financial Accounting I (3)
BUS 254 - Managerial Accounting I (3) **
BUS 272 - Behaviour in Organizations (3)

BUS 312 - Introduction to Finance (4)
BUS 343 - Introduction to Marketing (3)
BUS 360W - Business Communication (4) †
BUS 381 - Introduction to Human Resource Management (3)
BUS 393 - Commercial Law (3)
BUS 478 - Strategy (3) **
BUS 232 - Data and Decisions I (4)
CHEM 120 - General Chemistry I (3)
CMPT 130 - Introduction to Computer Programming 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)
MSE 100 - Engineering Graphics and Design (3)
MSE 101W - Process, Form, and Convention in Professional Genres (3)
MSE 102 - Applied Science, Technology and Society (3)
MSE 110 - Mechatronics Design I (3)
MSE 210 - Engineering Measurement and Data Analysis (3)
MSE 211 - Computational Methods for Engineers (3)
MSE 220 - Engineering Materials (3)
MSE 221 - Statics and Strength of Materials (4)
MSE 222 - Kinematics and Dynamics of Rigid Bodies and Mechanisms (4)
MSE 223 - Introduction to Fluid Mechanics (4)
MSE 250 - Electric Circuits (4)
MSE 251 - Electronic Circuits (4)
MSE 280 - Linear Systems (3)
MSE 310 - Sensors and Actuators (4)
MSE 311 - Introduction to Microelectromechanical Systems (3)
MSE 312 - Mechatronics Design II (4) *
MSE 320 - Machine Design (4)
MSE 321 - Engineering Thermodynamics and Heat Transfer (4)
MSE 352 - Digital Logic and Microcontrollers (4)
MSE 353 - Power Electronics and Electric Machinery (4)
MSE 380 - Systems Modeling and Simulation (3)
MSE 381 - Feedback Control Systems (4) *
MSE 402 - Engineering Ethics, Law, and Professional Practice (2)
MSE 410 - Capstone Design Technical Project I (3)
MSE 411 - Capstone Design Technical Project II (3)
PHYS 140 - Studio Physics - Mechanics and Modern Physics (4)
PHYS 141 - Studio Physics - Optics, Electricity and Magnetism (4)

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

BUS 207 - Managerial Economics (3)
ECON 201 - Microeconomic Theory I: Competitive Behavior (4)

Prior approval by the director of the school is required if the student plans a term with fewer than 12 course units.

* Strongly recommended to be completed concurrently.

** To be completed at Simon Fraser University.

† To be completed before the student's 75th unit and at Simon Fraser University in accordance with the WQB requirements.

Agriculture Technology (AgriTech) Concentration

This concentration is for students who wish to specialize in agriculture technology.

Students who choose this concentration will complete all of:

BISC 100 – Introduction to Biology (3)
MSE 360 – Introduction to Biosystems Engineering (3)
SEE 351 – Bioprocess Engineering Systems (3)
MSE 460 – Precision AgriTech Engineering (3)
MSE 480 – Manufacturing Systems (3)

Students do not need to complete the following from the program requirements:
MSE 311 - Introduction to Microelectromechanical Systems (3)

Students also complete three mechatronic systems engineering elective courses selected from a pre-approved MSE electives list instead of six courses.
(…)

Mechatronic Systems Engineering Elective Courses

Students **must** also complete six mechatronic systems engineering elective courses selected from a pre-approved MSE electives list that is available at https://www.sfu.ca/mechatronics/current-students/undergraduate-students/undergraduate-program-requirements/technical-studies-electives.html.

With undergraduate curriculum committee chair permission, students may replace one MSE elective with either a directed study or a special project laboratory course. Special topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.

Mechatronic Systems Engineering Honours

Co-operative Education Work Experience

MSE students normally complete three mandatory co-op terms in industry (MSE 293, 393, 493*). They may participate in additional work terms but are encouraged to seek diversity in their experience. The three mandatory work terms may include one special co-op term (MSE 294, 394, 494* . Special co-op may include, but is not restricted to, self-directed, entrepreneurial, service or research co-op work terms. Permission of the MSE co-op office is required.

MSE students also have an opportunity to participate in research co-op terms, where they gain experience in an academic, research and/or lab setting at SFU. Ideally, at least two of the three mandatory work terms should be completed in industry unless compelling justification for research co-op is made. Students wishing to take three research co-ops should seek prior approval from the UCC Chair for their third research co-op.

An optional non-technical work term (MSE 193) is also available which is often completed after the first two study terms. MSE 193 does not count toward the mandatory three co-op terms requirement.

*** For the Agriculture Technology (AgriTech) Concentration, at least two of the co-op work terms must be on AgriTech-based placements.**

~~First Year Requirements~~

~~The first year of mechatronic systems engineering is the Systems One program, a joint program with the software systems program. The courses required for Systems One are included in the following list of requirements.~~

Program Requirements

Students complete all of

CMPT 130 - Introduction to Computer Programming I (3)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 232 - Applied Linear Algebra (3)
MATH 260 - Introduction to Ordinary Differential Equations (3)
MSE 100 - Engineering Graphics and Design (3)
MSE 101W - Process, Form, and Convention in Professional Genres (3)
MSE 102 - Applied Science, Technology and Society (3)
MSE 110 - Mechatronics Design I (3)
MSE 210 - Engineering Measurement and Data Analysis (3)
MSE 211 - Computational Methods for Engineers (3)
MSE 220 - Engineering Materials (3)
MSE 221 - Statics and Strength of Materials (4)
MSE 222 - Kinematics and Dynamics of Rigid Bodies and Mechanisms (4)
MSE 223 - Introduction to Fluid Mechanics (4)
MSE 250 - Electric Circuits (4)
MSE 251 - Electronic Circuits (4)
MSE 280 - Linear Systems (3)
MSE 300 - The Business of Engineering I (3)
MSE 310 - Sensors and Actuators (4)
MSE 311 - Introduction to Microelectromechanical Systems (3)
MSE 312 - Mechatronics Design II (4) *
MSE 320 - Machine Design (4)
MSE 321 - Engineering Thermodynamics and Heat Transfer (4)
MSE 352 - Digital Logic and Microcontrollers (4)
MSE 353 - Power Electronics and Electric Machinery (4)
MSE 380 - Systems Modeling and Simulation (3)
MSE 381 - Feedback Control Systems (4) *
MSE 402 - Engineering Ethics, Law, and Professional Practice (2)
MSE 405W - The Business of Engineering II, Entrepreneurship for Engineers (4)
MSE 410 - Capstone Design Technical Project I (3)
MSE 411 - Capstone Design Technical Project II (3)
MSE 498 - Mechatronic Systems Engineering Thesis Proposal (3)
MSE 499 - Mechatronic Systems Engineering Undergraduate Thesis (9)
PHYS 140 - Studio Physics - Mechanics and Modern Physics (4)
PHYS 141 - Studio Physics - Optics, Electricity and Magnetism (4)

and one of

MATH 150 - Calculus I with Review (4)
MATH 151 - Calculus I (3)
and one of

CHEM 120 - General Chemistry I (3)
CHEM 121 - General Chemistry and Laboratory I (4)

Prior approval by the director of the school is required if the student plans a term with fewer than 12 course units.

* strongly recommended to be completed concurrently

[…]

~~MSE~~ **Mechatronic Systems Engineering** Elective Courses

Students must also complete six ~~mechatronics~~ **mechatronic systems engineering** elective courses selected from a ~~list of~~ pre-approved MSE electives **list** that is available at https://www.sfu.ca/mechatronics/current-students/undergraduate-students/undergraduate-program-requirements/technical-studies-electives.html.

With undergraduate curriculum committee chair permission, students may replace one **MSE** ~~engineering~~ elective with either a directed study or a special project laboratory course. Special topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.

Thesis

Students will start their thesis work

MSE 498 - Mechatronic Systems Engineering Thesis Proposal (3)
and

MSE 499 - Mechatronic Systems Engineering Undergraduate Thesis (9)

on or off campus, either integrated with an optional (or mandatory) work term or as independent work with appropriate supervision.

Agriculture Technology (AgriTech) Concentration

This concentration is for students who wish to specialize in agriculture technology.

Students who choose this concentration will complete all of:

BISC 100 – Introduction to Biology (3)
MSE 360 – Introduction to Biosystems Engineering (3)
SEE 351 – Bioprocess Engineering Systems (3)

MSE 460 – Precision AgriTech Engineering (3)
MSE 480 – Manufacturing Systems (3)

Students do not need to complete the following from the program requirements:
MSE 311 - Introduction to Microelectromechanical Systems (3)

Students also complete four mechatronic systems engineering elective courses selected from a pre-approved MSE electives list instead of six courses.
(…)

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

PROGRAM MODIFICATION TEMPLATE

Name of Program or Name of Faculty
School of Interactives Arts and Technology (SIAT)
Faculty of Communication Art and Technology (FCAT)

Rationale for change:
We are frequently receiving similar questions from internal transfer students around transfer requirements and how the competitive selection process works. We are intending to use the revised language below - reviewed by students sitting on our UCC, our advising team, and the UCC itself - to provide a clearer and ideally more transparent explanation to students looking to transfer.

As part of this review we also want to ensure that students who are excelling in our program but perhaps did not excel in their prior program at SFU are considered as part of our transfer review. Including language in the transfer requirements around reviewing IAT GPA and CGPA separately will enable us to do so.

Effective term and year:
Summer 2023

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

https://www.sfu.ca/students/calendar/faculties-research/faculty-communication-art-tech.html#admission_requirements

School of Interactive Arts and Technology
Undergraduate Programs

- Major Admission Requirements
- Joint Major Admission 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.**

Under 'School of Interactive Arts and Technology', 'Undergraduate Programs', 'Major Admission Requirements', 'Internal Transfer - Students enrolled in another school/program at Simon Fraser University' headings:

~~Students who have already been admitted to another Simon Fraser University program, and now wish to transfer to the School of Interactive Arts and Technology major program may apply after completing 18 units of the lower division requirements including MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157), CMPT 166 or equivalent (CMPT 120, CMPT 125, CMPT 126 or CMPT 128), IAT 100, or IAT 110, and or IAT 102.~~

~~Admission is selective and a minimum competitive CGPA will be required.~~

Students already admitted to another Simon Fraser University program may apply to transfer into the School of Interactive Arts & Technology (SIAT) major after completing:

- MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157)
- CMPT 120 or equivalent (CMPT 125, 126, 128, 130, 135, or 166)
- Four IAT courses

The transfer process is competitive. Amount of space available for transfers into SIAT varies from term to term. Students with higher Interactive Arts & Technology grade point averages (IAT GPA) and cumulative grade point averages (CGPA) will be selected first. Students with an IAT GPA or CGPA lower than 2.75 are not normally considered. For more information on the current IAT GPA/CGPA admissions requirements, visit: http://www.sfu.ca/siat/programs/undergraduate/prospective-students/admissions-and-transfers.html

Under 'School of Interactive Arts and Technology', 'Undergraduate Programs', 'Joint Major Admission Requirements', 'Bachelor of Arts, Joint Major, Interactive Arts and Technology/Bachelor of Business Administration' headings:

~~Students who have already been admitted to another Simon Fraser University program, and now wish to transfer to the School of Interactive Arts and Technology joint major program may apply after completing 18 units of the lower division requirements including MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157), CMPT 166 or equivalent (CMPT 120, CMPT 125, CMPT 126 or CMPT 128), IAT 100, or IAT 110, and or IAT 102.~~

Students already admitted to another Simon Fraser University program may apply to transfer into the School of Interactive Arts & Technology (SIAT) major after completing:
- MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157)
- CMPT 120 or equivalent (CMPT 125, 126, 128, 130, 135, or 166)
- Four IAT courses
The transfer process is competitive. Amount of space available for transfers into SIAT varies from term to term. Students with higher Interactive Arts & Technology grade point averages (IAT GPA) and cumulative grade point averages (CGPA) will be selected first. Students with an IAT GPA or CGPA lower than 2.75 are not normally considered. For more information on the current IAT GPA/CGPA admissions requirements, visit: http://www.sfu.ca/siat/programs/undergraduate/prospective-students/admissions-and-transfers.html

In addition to meeting the above requirements, students applying into the joint major program must either be already accepted to the Beedie School of Business portion of the joint major, or be eligible for admission that term.

~~Admission is selective and a minimum competitive CGPA will be required.~~

Under 'School of Interactive Arts and Technology', 'Undergraduate Programs', 'Joint Major Admission Requirements', 'Bachelor of Science, Joint Major Interactive Arts and Technology/Bachelor of Business Administration' headings:

~~Students who have already been admitted to another Simon Fraser University program, and now wish to transfer to the School of Interactive Arts and Technology joint major program may apply after completing 18 units of the lower division requirements including MACM 101, CMPT 166 or equivalent (CMPT 120, CMPT 125, CMPT 126 or CMPT 128), IAT 100, or IAT 110, and or IAT 102.~~

Students already admitted to another Simon Fraser University program may apply to transfer into the School of Interactive Arts & Technology (SIAT) major after completing:

- MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157)
- CMPT 120 or equivalent (CMPT 125, 126, 128, 130, 135, or 166)
- Four IAT courses

The transfer process is competitive. Amount of space available for transfers into SIAT varies from term to term. Students with higher Interactive Arts & Technology grade point averages (IAT GPA) and cumulative grade point averages (CGPA) will be selected first. Students with an IAT GPA or CGPA lower than 2.75 are not normally considered. For more information on the current IAT GPA/CGPA admissions requirements, visit: http://www.sfu.ca/siat/programs/undergraduate/prospective-students/admissions-and-transfers.html

In addition to meeting the above requirements, students applying into the joint major program must either be already accepted to the Beedie School of Business portion of the joint major, or be eligible for admission that term.

~~Admission is selective and a minimum competitive CGPA will be required.~~

Under 'School of Interactive Arts and Technology', 'Undergraduate Programs', 'Joint Major Admission Requirements', 'Bachelor of Arts, Joint Major, Interactive Arts and Technology/Communication' headings:

~~Students who have already been admitted to another Simon Fraser University program, and now wish to transfer to the School of Interactive Arts and Technology joint major program may apply after completing 18 units of the lower division requirements including MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157), CMPT 166 or equivalent (CMPT 120, CMPT 125, CMPT 126 or CMPT 128), IAT 100, or IAT 110, and or IAT 102.~~

Students already admitted to another Simon Fraser University program may apply to transfer into the School of Interactive Arts & Technology (SIAT) major after completing:

- MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157)
- CMPT 120 or equivalent (CMPT 125, 126, 128, 130, 135, or 166)
- Four IAT courses

The transfer process is competitive. Amount of space available for transfers into SIAT varies from term to term. Students with higher Interactive Arts & Technology grade point averages (IAT GPA) and cumulative grade point averages (CGPA) will be selected first. Students with an IAT GPA or CGPA lower than 2.75 are not normally considered. For more information on the current IAT GPA/CGPA admissions requirements, visit: http://www.sfu.ca/siat/programs/undergraduate/prospective-students/admissions-and-transfers.html

In addition to meeting the above requirements, students applying into the joint major program must either be already accepted to the Communication portion of the joint major, or be eligible for admission that term.

~~Admission is selective and a minimum competitive CGPA will be required~~.

Under 'School of Interactive Arts and Technology', 'Undergraduate Programs', 'Joint Major Admission Requirements', 'Bachelor of Science, Joint Major, Interactive Arts and Technology/Communication' headings:

~~Students who have already been admitted to another Simon Fraser University program, and now wish to transfer to the School of Interactive Arts and Technology joint major program may apply after completing 18 units of the lower division requirements including MACM 101, CMPT 166 or equivalent (CMPT 120, CMPT 125, CMPT 126 or CMPT 128), IAT 100, or IAT 110, and or IAT 102~~.

Students already admitted to another Simon Fraser University program may apply to transfer into the School of Interactive Arts & Technology (SIAT) major after completing:

- MACM 101 or MATH 130 or equivalent (MATH 150, 151, 154, or 157)
- CMPT 120 or equivalent (CMPT 125, 126, 128, 130, 135, or 166)
- Four IAT courses

The transfer process is competitive. Amount of space available for transfers into SIAT varies from term to term. Students with higher Interactive Arts & Technology grade point averages (IAT GPA) and cumulative grade point averages (CGPA) will be selected first. Students with an IAT GPA or CGPA lower than 2.75 are not normally considered. For more information on the current IAT GPA/CGPA admissions requirements, visit: http://www.sfu.ca/siat/programs/undergraduate/prospective-students/admissions-and-transfers.html

In addition to meeting the above requirements, students applying into the joint major program must either be already accepted to the Communication portion of the joint major, or be eligible for admission that term.

~~Admission is selective and a minimum competitive CGPA will be required~~.

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES

PROGRAM MODIFICATION TEMPLATE

Name of Program or Name of Faculty Molecular Biology and Biochemistry Majors and Honours Programs
Rationale for change: Recognizing the need to introduce experiential learning earlier in the MBB program, and responding to recommendations from our 2019 External Review, we developed a 200-level lab course, MBB 229-2 (Introductory Molecular Biology & Biochemistry Laboratory, S.21-133), that provides hands-on instruction of foundational methods taught theoretically in MBB 222 (Molecular Biology & Biochemistry) and MBB 231 (Cellular Biology & Biochemistry). To make room for this course in the LD curriculum we will remove one required 3-unit course. Currently MBB majors are required to take 2 PHYS, 2 MATH and several CHEM courses. We will reduce these requirements by a single course, allowing students to decide which of these courses to take.
Effective term and year: Summer 2023
The following program(s) will be affected by these changes: Molecular Biology and Biochemistry Major and 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.**

Lower Division Requirements
Students complete all of
BISC 101 - General Biology (4)
BISC 102 - General Biology (4)
BISC 202 - Genetics (3)
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 122 - General Chemistry II (2)
CHEM 126 - General Chemistry Laboratory II (2)
CHEM 281 - Organic Chemistry and Laboratory I (4)
CHEM 286 - Organic Chemistry Laboratory II (2)
MBB 222 - Molecular Biology and Biochemistry (3)
MBB 229 – Introductory Molecular Biology and Biochemistry Laboratory (2)
MBB 231 - Cellular Biology and Biochemistry (3)

~~and all of~~
~~CHEM 210 – Introduction to Analytical Chemistry (2)~~
~~CHEM 216 – Introduction to Analytical Chemistry Laboratory (2)~~
~~CHEM 282 - Organic Chemistry II (2)~~

~~or all of~~
~~CHEM 210 – Introduction to Analytical Chemistry (2)~~
~~CHEM 216 – Introduction to Analytical Chemistry Laboratory (2)~~
~~CHEM 283 - Organic Chemistry IIb (3)~~

~~or all of~~
~~CHEM 283 - Organic Chemistry IIb (3)~~

~~CHEM 380 - Chemical and Instrumental Methods of Identification of Organic Compounds (4)~~

and one of
CHEM 282 - Organic Chemistry II (2)
CHEM 283 - Organic Chemistry IIb (3)

and one of
CMPT 120 - Introduction to Computing Science and Programming I (3)
MBB 110 – Data Analysis for Molecular Biology and Biochemistry (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)

~~and one of~~
~~MATH 152 - Calculus II (3)~~
~~MATH 155 - Calculus II for the Biological Sciences (3)~~

and one of
PHYS 101 - Physics for the Life Sciences I (3)
PHYS 120 - Mechanics and Modern Physics (3)
PHYS 125 - Mechanics and Special Relativity (3)
PHYS 140 - Studio Physics - Mechanics and Modern Physics (4)

~~and one of~~
~~PHYS 102 - Physics for the Life Sciences II (3)~~
~~PHYS 121 - Optics, Electricity and Magnetism (3)~~
~~PHYS 126 - Electricity, Magnetism and Light (3)~~
~~PHYS 141 - Studio Physics - Optics, Electricity and Magnetism (4)~~

and one of
STAT 201 - Statistics for the Life Sciences (3)
STAT 270 - Introduction to Probability and Statistics (3)

and two courses with different subjects from the following list, excluding courses already taken.
CHEM 210 (2) and CHEM 216 (2)
CHEM 380 - Chemical and Instrumental Methods of Identification of Organic Compounds (4)
PHYS 102 - Physics for the Life Sciences II (3)
PHYS 121 - Optics, Electricity and Magnetism (3)
PHYS 126 - Electricity, Magnetism and Light (3)
PHYS 141 - Studio Physics - Optics, Electricity and Magnetism (4)
MATH 152 - Calculus II (3)
MATH 155 - Calculus II for the Biological Sciences (3)

*recommended