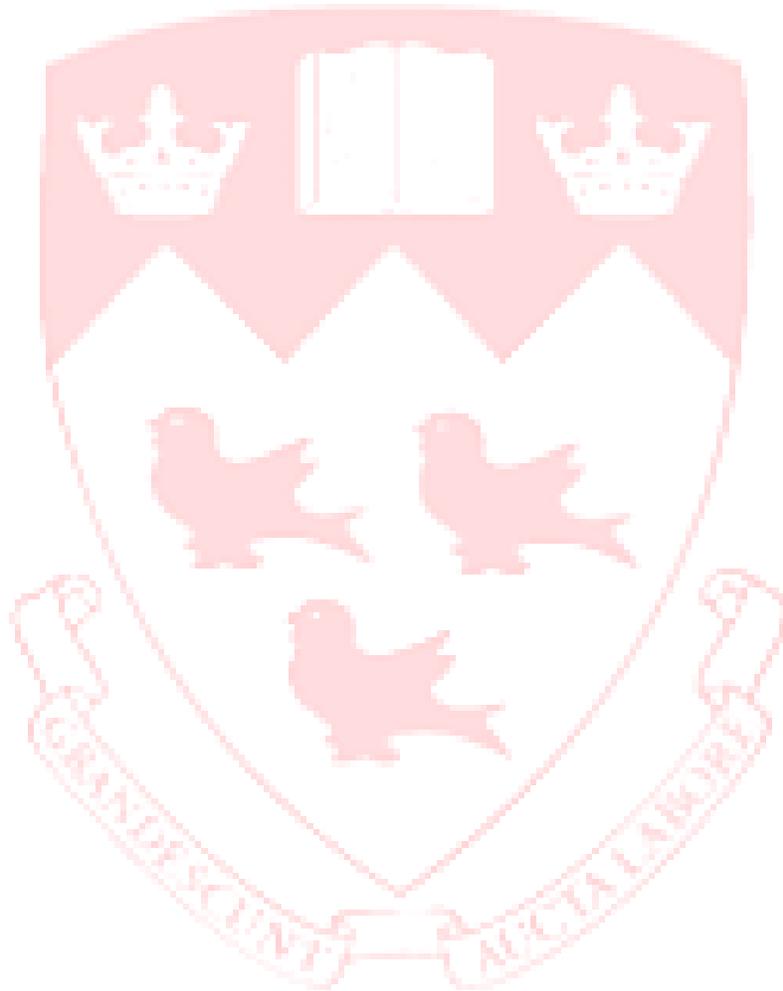


BIOENG Undergraduate FAQs

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Is Bioengineering right for me?

Our program is unique in Canada as it provides a solid fundamental base in biology, general engineering, and bioengineering. These complement additional courses in mathematics, physics, chemistry, and elective/complementary courses. Almost all current related programs in Canada are focused on specific sub-areas such as biomedical, biochemical, agricultural, or biotechnology. Our program provides students with the ability to apply systematic knowledge of biology, physical sciences, and mathematics, as well as solid engineering foundations in order to solve problems of a biological nature. In addition, it prepares students for the broad area of bioengineering, incorporating both biology-focused biological engineering and medicine-focused biomedical engineering. It encompasses both biological (analysis, synthesis or design of biological systems on all levels, biology-inspired engineering design) engineering and biomedical (applications of different engineering disciplines to medicine/life sciences) engineering.

The Department is very diverse, with professors from English and French-Canadian backgrounds, as well as international locations (besides Canada, from North America, Europe, and Australia) offering our students a range of engineering, science, and cultural perspectives. Furthermore, the Department professorship is diverse in terms of its prior experience. In addition to its academic experience in several leading Universities worldwide (University of California, University of Melbourne, Boston University, MIT), and several Professors have experience in the industry, healthcare and government sectors.

What can I do with Bioengineering?

- Bioengineers work in various and diverse fields, including the pharmaceutical, medical device, healthcare, bio-energy, and agricultural biotechnology sectors.
- In addition to working in industrial research & development, there exist many exciting opportunities for graduate studies in a variety of fields (Engineering, Biology, Physiology, Neuroscience) at McGill or elsewhere.
- As bioengineers obtain the complementary skills needed to be good project managers through their studies, they may also move into management and executive positions.

What is the difference between Bioengineering and Biomedical Engineering?

Biomedical Engineering and Bioengineering share many interests, methods, and research challenges, however, there are also key differences. Biomedical engineering focuses almost uniquely on the domain of medicine, and while Bioengineering also explores medicine, it is much broader in scope applying biology as a tool in engineering: this encompasses fields beyond health, including basic principles of biological systems, bio-inspired materials, bio-computation, agriculture, biofuels, and biosynthesis of compounds.

Is the Bioengineering BEng program accredited?

Yes, the Department of Bioengineering at McGill University was accredited in June 2020
<https://www.mcgill.ca/bioengineering/studies/accreditation>

Admissions

- How can I apply to the Dept of Bioengineering's BEng program?

All admissions are handled centrally at Service Point/Enrolment Services – the Department of Bioengineering cannot advise on applications for admissions nor admission requirement

<https://www.mcgill.ca/servicepoint/contact-us>

<https://www.mcgill.ca/undergraduate-admissions/apply/requirements>

Transfer credits (U0)

If you believe you have completed an equivalent course prior to McGill, here is some information as to how you may transfer those credits:

- https://www.mcgill.ca/engineering/files/engineering/instructional_newly_admitted_transfer_credit_process_faculty_of_engineering_2020.pdf
 - <https://www.mcgill.ca/engineering/students/undergraduate/new-students/transfer-credits>

When can I take my Science Placement (AP) exam?

Eligible only in term of admission: If you believe that you have completed the equivalent of one or more university-level mathematics or science courses, but do not have acceptable certification to that effect, you may be eligible to write admission placement exams in linear algebra, biology, chemistry, math or physics.

Please consult the Exam [website](#) for details. Note that Placement Exams are handled by Enrolment Services/Service Point. Please contact their offices should you have any questions as it is not handled by the Department of Bioengineering. <https://www.mcgill.ca/exams/dates/science>

*Note that students who have previously taken a course equivalent to MATH 203 cannot receive credit for the course. In other words, students must take MATH 203 at McGill, **no exceptions.**

*Similarly, most CEGEP students take a course equivalent to BIOL 112 or CHEM 212 in CEGEP. Students must take the placement exam for these courses order to be exempt from taking them at McGill.

How can I transfer into Bioengineering?

<https://www.mcgill.ca/engineering/students/undergraduate/advising-programs/readmission-faculty-transfers>

You may contact a Faculty advisor at advisor.engineering@mcgill.ca

Can I speak with students currently registered in Bioengineering?

YES! The Bioengineering Undergraduate Student Society (BUSS) is always happy to speak with new and current students. You can find them on Facebook, or send Brenda Shen (BUSS President 2020-21) an email at buss.president@mcgilleus.ca

Facebook group for incoming BIOENG students (2020 cohort):

- <https://www.facebook.com/groups/659783764802733/>

The BUSS Facebook page is

- <https://www.facebook.com/BUSSMcGill>

How do I schedule an appointment with an advisor?

For general inquiries:

- You may book an appointment with a Faculty Advisor at MESC here: <https://outlook.office365.com/owa/calendar/McGillEngineeringStudentCentreMESC1@McGill.onmicrosoft.com/bookings/>
- You may book an appointment with a Departmental Advisor in Bioeng here: <https://outlook.office365.com/owa/calendar/BioengineeringStudentAdvising@McGill.onmicrosoft.com/bookings/>
- Or, you may send an email at studentaffairs.bioeng@mcgill.ca

For questions pertaining to transfer credits, the different streams, BIEN course content, pre-reqs, accreditation units, you may email:

- Prof. Sebastian Wachsmann-Hogiu (sebastian.wachsmannhogiu@mcgill.ca) or Prof. Georgios Mitsis (georgios.mitsis@mcgill.ca)

Please don't forget to include your McGill ID in all email correspondences!

Add/Drop Deadline?

<https://www.mcgill.ca/importantdates/key-dates>

Withdrawing from a course after add/drop

<https://www.mcgill.ca/importantdates/key-dates>

If you wish to withdraw from a course after the add/drop deadline, you must complete a [course authorization form](#). The students must sign the form, submit it to studentaffairs.bioeng@mcgill.ca for approval. Once approved, submit the form to MESC (advisor.engineering@mcgill.ca) for final approval.

Where can I find my curriculum?

You can access the curricula here:

<https://www.mcgill.ca/bioengineering/studies/undergrad/curriculum>

Additional information may also be found in the Student Handbook:

https://www.mcgill.ca/bioengineering/files/bioengineering/student_undergraduate_handbook.pdf

When do I need to select a stream, and which stream is best for me?

You only need to select a stream after your U1 year (i.e., at the start of your 3rd year for non-CEGEP, and at the start of your 2nd year for CEGEP students). The curricula are designed so the first 4 semesters are identical for all non-CEGEP students, and the first 2 semesters are identical for all CEGEP students.

Each week in your first Bioengineering course (BIEN 200: Introduction to Bioengineering), a different Professor in our Department will introduce an area of research within Bioengineering. By being exposed to various areas related to Bioengineering, you may find topics that interest you more than others. This should help you with the selection of your stream. If you are still unsure, feel free to contact any of our Professors, and/or our Undergraduate Program Directors, Professor Sebastian Wachsmann Hogiu or Professor Georgios Mitsis

Having trouble registering for a course (registration error)

BIEN COURSES:

- Send us an email at studentaffairs.bioeng@mcgill.ca
 - o Provide the course number (BIEN XXX) and section number(s) and/or CRNs
- If you would like to register for a BIEN course, but you are not registered in the Bioengineering BEng program, we may need to add you to a waitlist, and update you closer to the add/drop period, should seats remain in the course.

NON-BIEN COURSES

- If you are trying to register for a **non-BIEN course** and receive an error, you must email the Department offering the course so they may remove the restriction. For example, if you are trying to register for MIME 261, you must email the MIME Department.
- For **FACC** courses, please email info.faceng@mcgill.ca

Please do not forget to include your McGill ID number in all correspondences

What is the maximum number of credits per semester?

The maximum number of credits a student is permitted to take per term is 18 credits. To be considered a full-time student, a student must be registered for a minimum of 12 credits per semester.

If you want to register for more than 18 credits, you must complete a [course authorization form](#) to add additional credits in one semester. Students must sign the form, send it to studentaffairs.bioeng@mcgill.ca, and then submit it to MESC at advisor.engineering@mcgill.ca

Can I register for courses listed in the curriculum in a different order?

If you satisfy the prerequisites you may, but it is strongly suggested that you follow the curriculum. Deviating from the proposed program structure can lead to scheduling conflicts in upcoming semesters, which can be difficult or impossible to avoid.

The [Visual Schedule Builder](#) (VSB) is a great tool to help students create their course schedules.

When can I use the S/U (Satisfactory/Unsatisfactory) grading option?

The S/U option is only available for general complementary courses (CS group A and B) and elective courses (CEGEP students only).

If a grade of **S** (Satisfactory) is earned, then these courses can be counted for credit.

A grade of **U** (Unsatisfactory - below 55%) doesn't count for credit and does not affect GPA.

The S/U option must be selected before the add/drop deadline.

NOTE: there is an exception for the 2020-2021 academic year due to the COVID pandemic. You may consult the website here: <https://www.mcgill.ca/student-records/adjusted-academic-measures>

Any course in the Bioengineering program may be taken as S/U, even required courses, as long as you follow the 6-credit limit for the 2020-2021 term. There is no need to obtain approval from the Department.

If you have a scholarship or receive any type of funding, you may need to consult with the office who issued the award if there are any restriction to S/U option.

Additionally, if you intend to apply for a graduate program after your BEng, you may consult the Academic Advisors of graduate programs you are interested in applying for to see how the S/U option may affect your eligibility for admission. **The Department of Bioengineering cannot advise on graduate programs.**

Where can I find the list of approved Complementary Studies Courses?

Group A (Impact) & Group B (Humanities & Social Sciences)

The list of approved general complementary courses may be found at:

https://www.mcgill.ca/bioengineering/files/bioengineering/student_undergraduate_handbook.pdf

Where can I find the list of Elective courses?

Elective courses will only appear in the CEGEP curricula, and will need to complete a total of 9 credits towards electives. For the list of elective courses, please see:

https://www.mcgill.ca/bioengineering/files/bioengineering/student_undergraduate_handbook.pdf

An elective is any course at McGill at the 200-level or higher.

Elective courses must be passed with a D grade (55%) or higher.

Extra courses

For students who want to take a course outside the program, or outside their minor:

<https://www.mcgill.ca/engineering/students/undergraduate/courses-registration/courses-grades/extra-courses>

Students must complete a [course authorization form](#). The student must sign the form, submit it to studentaffairs.bioeng@mcgill.ca for approval. Once approved, submit the form to MESC (advisor.engineering@mcgill.ca) for final approval

Note that extra courses may not be taken as S/U

How do I register for a minor program?

Please consult the Undergraduate Calendar or the Engineering website at [Minors](#) for a complete list of the minors that are available to you.

- **How can I apply to add a minor?**

You can now apply electronically:

<https://www.mcgill.ca/engineering/students/undergraduate/advising-programs/minor-programs>

- **When is the deadline to apply for a minor?**

There is no deadline as long as you apply for the minor before you complete your degree.

For more information, you may contact the Department offering the minor. Should you need any help to add the minor to your transcript, you may email advisor.engineering@mcgill.ca

Reviewing your assessments

All students have the right to review their assessments. Students should contact the Professor offering the course to set-up a meeting to review the assessment.

If you feel like you have been graded unfairly on a **final** exam, you may make a request with the Faculty to have your final exam re-graded by another Professor:

<https://www.mcgill.ca/engineering/students/undergraduate/courses-registration/exams-assessment/reassessment-grade>

(Note that this reassessment only applies to final exams – for other assessments, this can be discussed, and reviewed, one-on-one with the Professor)

REMINDER: If your final exam is reviewed, the professor can either lower, increase, or maintain your grade.

Deferring a final exam

If you would like to defer one or more of your final exams, here are the procedures as to how you may apply

- <https://www.mcgill.ca/engineering/students/undergraduate/courses-registration/exams-assessment/deferred-exams>
- https://www.mcgill.ca/engineering/files/engineering/deferral_form_2019_final.pdf

You may also contact a Faculty advisor at deferralexam.engineering@mcgill.ca

Degree Evaluation

Students may complete a degree evaluation themselves. All you need to do is have unofficial transcript and your curriculum side by side. For every course completed on your unofficial transcript, cross out that course on the curriculum. Any courses which have not been crossed out are remaining courses you'll need to complete before graduation.

Quick Tip: Here is how you can quickly identify your stream:

- MIME courses will only appear in stream 1
- BIEN 590 is only offered to stream 2
- In stream 3 for 2016 – 2018 cohorts, CHEM 267 and 367 were TCs. For 2019 and 2020 cohorts, you won't find MIME or BIEN 590 in the degree eval

Graduation

Students must apply for graduation in Minerva by the **deadline**. More information may be found here:

- <https://www.mcgill.ca/engineering/students/undergraduate/advising-programs/graduation>
- <https://www.mcgill.ca/graduation/>

Don't forget to attend your Iron Ring Ceremony as well!

- <https://www.mcgill.ca/engineering/students/undergraduate/iron-ring>

Mental Health and Wellness Resources

If you are feeling stressed or overwhelmed, there are many resources at McGill to help you through more difficult times:

The Faculty of Engineering has a Local Wellness Advisor to provide you with tools for success

- <https://www.mcgill.ca/engineering/students/undergraduate/mesc/mental-health-and-wellness>

McGill also offers a wide variety of services through their Wellness Hub

- <https://www.mcgill.ca/counselling/mental-health>

How can I apply for an internship?

Students may contact the Engineering Career Center (ECC)

<https://www.mcgill.ca/careers4engineers/engineering-internship-program>

We also recommend contacting BUSS as many of our students have already been on an internship and may share their experiences with you

***Note that internships are not processed by the Department of Bioengineering. All inquiries about internships should be sent to ECC.**

How can I go on exchange?

The Faculty of Engineering provides Study Away opportunities. Students may contact MESC here: studyaway.engineering@mcgill.ca

<https://www.mcgill.ca/engineering/students/undergraduate/exchanges-study-away/study-away>

We also recommend you contact BUSS as they may be able to put you in touch with Bioeng students who have already been on exchange.

Note that students may only take Elective courses, Complementary Studies (Group A and B) courses, and courses which are not offered by the Faculty of Engineering on exchange. In other words, all BIEN, MECH, CIVE and MIME courses must be taken at McGill – no exceptions. This is to ensure all BEng students graduate with the required accreditation units.

Curriculum Updates and Course Switching

As the BEng program in Bioengineering is relatively new, we have made a few changes to the curriculum through the years as we start offering more and more BIEN courses. As a result, we have been allowing some courses offered to the earlier cohorts to be switched out for newer courses. Note that there are only a few exceptions per stream.

Here are the eligible switches:

- For **2016** and **2017** cohorts
 - o BREE 301 was replaced with **BIEN 300**
 - o CHEE 310 was replaced with **BIEN 360**
 - o CHEE 314 or CHEE 370 or BIOT 505 was replaced with **BIEN 314**
- For the **2016**, **2017**, and **2018 cohorts**, there were 10 Technical Complementary (TC) courses per stream. We have identified out of these 10 TCs which courses could be switched out for the new List B TCs in our revised curriculum offered as of 2019.

STREAM 1 TCS

BIEN 320	NO
BIEN 330	YES
BIEN 462	YES
BIEN 510	NO
BIEN 570	NO
CIVE 207	NO
MECH 547	YES
MECH/CHEE 563	YES
MIME 261	NO
MIME 470	NO

- You may replace any of the 4 courses in green above with any of the List B TCs in stream 1 found on page 2 here:
https://www.mcgill.ca/bioengineering/files/bioengineering/20200706_2020_c_s1_0.pdf

STREAM 2 TCs

BIEN 310	NO
BIEN 320	NO
BIEN 330	YES
BIEN 410	YES
BIEN 420	NO
BIEN 510	NO
BIEN 540	NO
BIEN 550	NO
BIEN 570	NO
BIEN 590	NO

- You may replace any of the 2 courses in green above with any of the List B TCs in stream 2 found on page 2 here:
https://www.mcgill.ca/bioengineering/files/bioengineering/20200706_2020_c_s2_1.pdf

STREAM 3 TCS

BIEN 310	NO
BIEN 410	NO
BIEN 420	NO
BIEN 462	YES
BIEN 530	NO
BIEN 540	NO
BIEN 560	NO
CHEM 267	YES
CHEM 367	YES
ECSE 415	NO

- You may replace any of the 3 courses in green above with any of the List B TCs in stream 1 found on page 3 here:
https://www.mcgill.ca/bioengineering/files/bioengineering/20200706_2020_c_s3_0.pdf

