

## M.Sc. Applied - Bioresource Engineering - Integrated Food and Bioprocessing Registration Guide 2021-22

Typical program sequence: (45 credits total)	Fall	Winter	Summer
	16 credits	14 credits	15 credits
<b>International students</b> are obliged to register for a minimum of 12 credits per term (full-time status) to fulfill their study permit obligations. The exception is the last term of the program when they may be registered for fewer than 12 credits.	<b>BREE 651</b> (Seminar) (1) 5 lectured courses from course list (15) *	<b>BREE 652</b> (Seminar) (1) 4 lectured courses from course list (12)	<b>BREE 601</b> or <b>BREE 671</b> (6) <b>BREE 602</b> or <b>BREE 672</b> (6)
*An <b>EXTRA fall term</b> may be taken for remaining credits, for example, if only 4 courses are taken in initial fall term.		<b>BREE 600</b> Project Proposal (1)	<b>BREE 699</b> (3)

**Project/Internship:** Students normally will aim to do their Project or Internship in the Summer semester. **Summer term registration opens in MARCH.**

**In the table below are the overall program requirements** summarized with course availabilities in Fall & Winter terms. A course that is "not offered" means it is not being offered in that term. "Open" means the course is available for registration. "Temporarily closed" means the course is temporarily closed but should open in the near future. Some approved alternatives have also been suggested, in case the regular courses are not offered or there are timetable conflicts.

**At the end of this document you will find an example of a non-conflicting course schedule for Fall 2021 and Winter 2022.**

**Certain courses have a pre-requisite or require permission of the instructor in order to register. You can e-mail the instructor directly** to request a permit to register for the course on Minerva, stating 1) the reason you would like to take the course, and 2) proof of any required pre-requisites. You also need to provide your name, McGill ID, and the name of the program you are in (M.Sc. Applied, Integrated Food and Bioprocessing) and the Faculty in some cases, if the course is in another faculty. Contact information for faculty and staff can generally be found here:  
<https://www.mcgill.ca/directory/staff/>

**If a course is full:** you may also try contacting the instructor to see if there are any extra spaces possible, particularly if it is required for your program.

**BREE 651 & 652:** Attendance to SEMINAR section is mandatory. The CONFERENCE sections are not sessions that need to be attended more than three times per year; they are there for students to use to be able to practice their seminar. Please ignore any timetable "conflicts" that may arise because of the Conference. You may register for other courses that take place during the same time as the Conferences.

**The approval of your Program Advisor is required for:**

- 1) Elective courses NOT found in the lists below
- 2) Any proposed alternatives to complementary courses in the program (due to course cancellations, for example)

**To explore other course possibilities,** please browse through the course listings at <https://www.mcgill.ca/study/2021-2022/courses/search> or search within Minerva's registration menu (advanced filters) in related Departments and verify permissions and pre-requisites. ALL COURSES MUST BE 500-level or higher. It is also possible to take a course in another Quebec university (<https://www.mcgill.ca/transfercredit/iut>) or another university in Canada.

**Important to consider when choosing a course:** **It is strongly recommended you e-mail the course instructor to confirm that you have the appropriate background to succeed in a course.** You should confirm the course requirements before registering for a course. **McGill Graduate Grading Policy:** The minimum passing grade for a graduate student is B- or 65%. **McGill Graduate Failure Policy:** After a second course failure a student will be withdrawn from the university.

## MScA IFB Course Offerings 2021-22

Required courses (6 credits)	FALL 2021	WINTER 2022	SUMMER 2022
1. BREE 651 (1) Departmental Seminar M.Sc. 1	Open		
2. BREE 652 (1) Departmental Seminar M.Sc. 2		Open	
3. BREE 600* (1) Project/Internship proposal		Open	
4. BREE 699 (3) Scientific Publication			Open

\*Permission from Prof. Michael Ngadi required for BREE 600.

### Complementary Courses (39 credits)

#### Statistics

Minimum of 3 credits of graduate level statistics in any department:

Courses *not* on this list require approval from your Program Advisor.

Courses	FALL 2021	WINTER 2022	Notes
AEMA 610 (3) Statistical Methods 2	Open	not offered	
AEMA 611 (3) Experimental Designs 1*	not offered	not offered	
AEMA 614 (3) Temporal and Spatial Statistics 1 *	not offered	Open	
ENVB 506 (3) Quantitative Methods: Ecology	not offered	Open	
CIVE 555 (3) Environmental Data Analysis	not offered	Open	
SOCI 504 (3) Quantitative Methods 1	Open	not offered	

\* Offered bi-yearly

#### Group 1 - Bioresource Engineering

Minimum of 9 credits from courses selected from the following:

Courses	FALL 2021	WINTER 2022	Notes
BREE 518 (3) Ecological Engineering	not offered	Open	
BREE 519 (3) Advanced Food Engineering*	not offered	Open	
BREE 520 (3) Food, Fibre and Fuel Elements*	not offered	not offered	
BREE 530 (3) Fermentation Engineering	not offered	Open	
BREE 531 (3) Post-Harvest Drying*	not offered	Open	
BREE 532 (3) Post-Harvest Storage*	not offered	not offered	
BREE 535 (3) Food Safety Engineering	Open	not offered	
BREE 603 (3) Advanced Properties: Food & Plant Materials	Open	not offered	

\* Offered bi-yearly

#### Group 2 - Project/Internship

Minimum of 12 credits selected from the following:

BREE 671 (6) Project 1	Project or Internship is done in summer term. More information will be given in first term of program.	
BREE 672 (6) Project 2		
BREE 601 (6) Integrated Food and Bioprocessing Internship 1		
BREE 602 (6) Integrated Food and Bioprocessing Internship 2		

#### Group 3 - Policy/Economics

Minimum of 3 credits selected from the following:

AGEC 630 (3) Food and Agricultural Policy	not offered	not offered	<i>background required</i>
AGEC 633 (3) Environmental and Natural Resource Economics*	not offered	Open	<i>background required</i>
AGEC 642 (3) Economics of Agricultural Development	not offered	Open	<i>background required</i>
AGRI 510 (3) Professional Practice*	not offered	not offered	
GEOG 530 (3) Global Land and Water Resources.	Open	not offered	<i>alternative</i>
URBP 506 (3) Environmental Policy and Planning	Open	not offered	<i>alternative</i>

\* Offered bi-yearly

<b>Group 4</b>			
<b>Minimum of 3 credits selected from the following:</b>	<b>FALL 2021</b>	<b>WINTER 2022</b>	
BTEC 502 (3) Biotechnology Ethics and Society	not offered	Open	
FDSC 519 (3) Advanced Food Processing*	not offered	Open	
FDSC 525 (3) Food Quality Assurance	not offered	Open	alternative
FDSC 535 (3) Food Biotechnology*	not offered	not offered	
FDSC 651 (3) Principles of Food Analysis 2	Open	not offered	alternative
FDSC 626 (3) Food Safety Risk Assessment	Open	not offered	alternative
GEOG 515 (3) Contemporary Dilemmas of Development	not offered	not offered	
IGFS 611 (3) Advanced Issues on Development, Food and Agriculture	not offered	Open	alternative
NUTR 501 (3) Nutrition in Developing Countries	Open	not offered	
NUTR 512 (3) Herbs, Foods and Phytochemicals	Open	not offered	alternative
NUTR 641 (3) Advanced Global Food Security	Open	not offered	alternative
* Offered bi-yearly			
<b>Elective Courses</b>			
<b>9 credits of any relevant graduate-level course (from the above or the following list). Approval needed for any course not on the lists.</b>	<b>FALL 2020</b>	<b>WINTER 2021</b>	
BREE 608 (3) Special Problems in Bioresource Engineering	Open	Open	See note below **
BREE 533 (3) Water Quality Management	Open	not offered	
BUSA 664 (3) Creating the Small Business (Sect. 2)	Open	not offered	Contact
BUSA 665 (3) Managing the Small Enterprise (Sect. 2)	not offered	Open	ana.gomezrivas@mcgill.c
CHEE 511 (3) Catalysis for Sustainable Fuels and Chemicals	not offered	Open	
FDSC 520 (3) Biophysical Chemistry of Food*	Open	not offered	
FDSC 545 (3) Advances in Food Microbiology	not offered	Open	
FDSC 555 (3) Comparative Food Law	not offered	TBD	
OCCH 608 (3) Biological Hazards	not offered	Open	
OCCH 612 (3) Principles of Toxicology	Open	not offered	
* Offered bi-yearly			
** Independent Research project - Consult Prof. Ngadi or Prof. Dumont.			
<b>Example of non-conflicting combinations of Required, Complementary, and Elective courses for Fall 2021 and Winter 2022. Other combinations are possible.</b>			
<b>IFB Fall 2021 - Sample Schedule - 13 credits</b>			
BREE 651 (1) Seminar		Seminar 1	
BREE 535 (3) Food Safety Engineering		Group 1	
NUTR 501 (3) Nutrition in Developing Countries		Group 4	
Elective (3) from approved list above		Elective	
Elective (3) from approved list above		Elective	
<b>IFB Winter 2022 - Sample Schedule - 17 credits</b>			
BREE 600 (1) Project/Internship proposal		Proposal (no classes)	
BREE 652 (1) Seminar		Seminar 2	
AGEC 633 (3) Environmental and Natural Resource Economics* <i>background needed</i>		Group 3	
BREE 519 (3) Advanced Food Engineering		Group 1	
BREE 530 (3) Fermentation Engineering		Group 1	
ENVB 506 (3) Quantitative Methods: Ecology		Statistics	
Elective (3) from approved list above		Elective	
<b>Group 2 (Projects/Internships) and BREE 699 (Scientific Publication) can be taken in summer term to complete your program in 12 months. <u>Another option</u> is to take one less lectured course in winter term and take only the project courses in the summer, and extend your program to a fourth term in the fall to take one lectured course and BREE 699.</b>			