MICROBIOLOGY AND IMMUNOLOGY MAJOR (B.SC.) (66 CREDITS)

Offered by: Microbiology & Immunology (Faculty of Science)
Degree: Bachelor of Science
Program credit weight: 66

Program Description

The Major program is designed for students who want to acquire a substantial background in microbiology and immunology and related disciplines (chemistry, biology, biochemistry) which will prepare them for professional schools, graduate education, or entry into jobs in industry or research institutes.

Degree Requirements — B.Sc.

This program is offered as part of a Bachelor of Science (B.Sc.) degree.

To graduate, students must satisfy both their program requirements and their degree requirements.

- The program requirements (i.e., the specific courses that make up this program) are listed under the Course Tab (above).
- The degree requirements—including the mandatory Foundation program, appropriate degree structure, and any additional components—are outlined on the Degree Requirements page.

Students are responsible for ensuring that this program fits within the overall structure of their degree and that all degree requirements are met. Consult the Degree Planning Guide on the SOUSA website for additional guidance.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Required Courses

U1 Required Courses (26 credits)

Expand allContract all

Course	Title	Credits
BIOL 200	Molecular Biology.	3
BIOL 202	Basic Genetics.	3
CHEM 212	Introductory Organic Chemistry 1.[1]	4
CHEM 222	Introductory Organic Chemistry 2.[2]	4
MIMM 211	Introductory Microbiology.	3
MIMM 212	Laboratory in Microbiology.	3
MIMM 214	Introductory Immunology: Elements of Immunity.	3

[1] Students who have taken CHEM 212 Introductory Organic Chemistry 1. in CEGEP are exempt and must replace these credits with an elective course(s).

[2] Students who have taken CHEM 222 Introductory Organic Chemistry 2. in CEGEP are exempt and must replace these credits with an elective course(s).

One of:

Expand allContract all

Course	Title	Credits
BIOC 212	Molecular Mechanisms of Cell Function.	3
BIOL 201	Cell Biology and Metabolism.	3

U1, U2, or U3 Required Course (3 credits)

One of:

Expand allContract all

Course	Title	Credits
BIOL 373	Biometry.	3
MATH 203	Principles of Statistics 1.	3
PSYC 204	Introduction to Psychological Statistics.	3

U2 Required Courses (19 credits)

Expand allContract all

Course	Title	Credits
BIOC 311	Metabolic Biochemistry.	3
MIMM 301	Scientific Writing Skills in MIMM.	1
MIMM 314	Intermediate Immunology.	3
MIMM 323	Microbial Physiology.	3
MIMM 324	Fundamental Virology.	3
MIMM 384	Molecular Microbiology Laboratory.	3
MIMM 385	Laboratory in Immunology.	3

U3 Required Course (3 credits)

Expand allContract all

Course	Title	Credits
MIMM 413	Parasitology.	3

Complementary Courses

U3 Complementary Courses (6 credits)

6 credits selected from:

Expand allContract all

Course	Title	Credits
MIMM 414	Advanced Immunology.	3
MIMM 465	Bacterial Pathogenesis.	3
MIMM 466	Viral Pathogenesis.	3

Complementary Courses (9 credits)

9 credits selected from:

Expand allContract all

Course	Title	Credits
ANAT 261	Introduction to Dynamic Histology.	4
ANAT 262	Introductory Molecular and Cell Biology.	3

ANAT 365	Cellular Trafficking.	3
ANAT 458	Membranes and Cellular Signaling.[1]	3
BIOC 312	Biochemistry of Macromolecules.	3
BIOC 450	Protein Structure and Function.	3
BIOC 454	Nucleic Acids.	3
BIOC 458	Membranes and Cellular Signaling.[1]	3
BIOL 300	Molecular Biology of the Gene.	3
BIOL 309	Mathematical Models in Biology.	3
BIOL 314	Molecular Biology of Cancer.	3
BIOT 505	Selected Topics in Biotechnology.	3
CHEM 203	Survey of Physical Chemistry.	3
CHEM 204	Physical Chemistry/Biological Sciences 1.	3
CHEM 302	Introductory Organic Chemistry 3.	3
COMP 204	Computer Programming for Life Sciences.	3
COMP 206	Introduction to Software Systems.	3
COMP 250	Introduction to Computer Science.	3
EXMD 504	Biology of Cancer.	3
MIMM 387	The Business of Science.	3
MIMM 390	SEA-PHAGES: Phage Discovery.	3
MIMM 391	SEA-PHAGES: Genome Annotation.	3
MIMM 414	Advanced Immunology.	3
MIMM 465	Bacterial Pathogenesis.	3
MIMM 466	Viral Pathogenesis.	3
MIMM 496D1	Microbiology Advanced Research Project.	3
MIMM 496D2	Microbiology Advanced Research Project .	3
MIMM 497D1	Immunology Advanced Research Project.	3
MIMM 497D2	Immunology Advanced Research Project.	3
MIMM 509	Inflammatory Processes.	3
PATH 300	Human Disease.	3
PHAR 300	Drug Action.	3
PHAR 301	Drugs and Disease.	3
PHGY 209	Mammalian Physiology 1.	3
PHGY 210	Mammalian Physiology 2.	3

[1] Students may select either ANAT 458 Membranes and Cellular Signaling. or BIOC 458 Membranes and Cellular Signaling., but not both.