

# PHYSIOLOGY LIBERAL PROGRAM - CORE SCIENCE COMPONENT (B.SC.) (48 CREDITS)

**Offered by:** Physiology (Faculty of Science)

**Degree:** Bachelor of Science

**Program credit weight:** 48

## 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 (33 credits)

Expand allContract all

Course	Title	Credits
BIOL 200	Molecular Biology.	3
BIOL 202	Basic Genetics.	3
BIOL 301	Cell and Molecular Laboratory.	4
CHEM 212	Introductory Organic Chemistry 1. <sup>1</sup>	4
CHEM 222	Introductory Organic Chemistry 2. <sup>1</sup>	4
PHGY 200	Cutting-Edge Research in Physiology.	1
PHGY 209	Mammalian Physiology 1.	3
PHGY 210	Mammalian Physiology 2.	3
PHGY 212	Introductory Physiology Laboratory 1.	1
PHGY 213	Introductory Physiology Laboratory 2.	1
PHGY 312	Respiratory, Renal, and Cardiovascular Physiology.	3
PHGY 313	Blood, Gastrointestinal, and Immune Systems Physiology.	3

<sup>1</sup> Students who have taken CHEM 212 Introductory Organic Chemistry 1. and/or CHEM 222 Introductory Organic Chemistry 2. in CEGEP are exempt and must replace these credits with elective credits.

## Complementary Courses (15 credits)

3 credits from:

Expand allContract all

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

3 credits from:

Expand allContract all

Course	Title	Credits
PHGY 311	Channels, Synapses and Hormones.	3
PHGY 314	Integrative Neuroscience.	3

3 credits from:

Expand allContract all

Course	Title	Credits
BIOL 309	Mathematical Models in Biology.	3
BIOL 373	Biometry.	3
COMP 204	Computer Programming for Life Sciences.	3
COMP 250	Introduction to Computer Science.	3
PSYC 305	Statistics for Experimental Design.	3

## Upper-Level Physiology (ULP) Courses

6 credits selected from the Upper-Level Physiology (ULP) course list as follows:

Expand allContract all

Course	Title	Credits
BIOL 532	Developmental Neurobiology Seminar.	3
BMDE 505	Cell and Tissue Engineering.	3
BMDE 519	Biomedical Signals and Systems.	3
EXMD 502	Advanced Endocrinology 1.	3
EXMD 503	Advanced Endocrinology 02.	3
EXMD 506	Advanced Applied Cardiovascular Physiology.	3
EXMD 507	Advanced Applied Respiratory Physiology.	3
EXMD 508	Advanced Topics in Respiration.	3
MIMM 414	Advanced Immunology.	3
MIMM 509	Inflammatory Processes.	3
PHGY 425	Analyzing Physiological Systems.	3
PHGY 451	Advanced Neurophysiology.	3
PHGY 459D1	Physiology Seminar. <sup>1</sup>	3
PHGY 459D2	Physiology Seminar. <sup>1</sup>	3
PHGY 461D1	Experimental Physiology. <sup>2</sup>	4.5

PHGY 461D2	Experimental Physiology. <sup>2</sup>	4.5
PHGY 488	Stem Cell Biology.	3
PHGY 502	Exercise Physiology.	3
PHGY 513	Translational Immunology.	3
PHGY 515	Blood-Brain Barrier in Health and Disease.	3
PHGY 516	Physiology of Blood .	3
PHGY 518	Artificial Cells.	3
PHGY 524	Chronobiology.	3
PHGY 525	Cortical Plasticity.	3
PHGY 531	Topics in Applied Immunology.	3
PHGY 550	Molecular Physiology of Bone.	3
PHGY 556	Topics in Systems Neuroscience.	3
PHGY 560	Light Microscopy-Life Science.	3
PSYC 470	Memory and Brain.	3
PSYT 500	Advances: Neurobiology of Mental Disorders.	3

<sup>1</sup> The 6-credit course PHGY 459D1 Physiology Seminar./PHGY 459D2 Physiology Seminar. equals 3 credits of ULP and 3 credits of electives.

<sup>2</sup> The 9-credit course PHGY 461D1 Experimental Physiology./PHGY 461D2 Experimental Physiology. equals 3 credits of ULP and 6 credits of electives.