PHYSICS LIBERAL PROGRAM - CORE SCIENCE COMPONENT (B.SC.) (45 CREDITS)

Offered by: Physics (Faculty of Science)
Degree: Bachelor of Science
Program credit weight: 45

Program Description

The B.Sc.; Liberal Program - Core Science Component in Physics offers an overview of key physics topics, focusing on fundamentals. Topics include dynamics, electricity and magnetism, quantum mechanics, experimental methods and more. This program allows students also pursue a minor or major concentration in another discipline.

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.

Program Prerequisites

Students entering Physics programs from the Freshman program must have successfully completed the courses below or their equivalents. Quebec students must have completed the DEC with appropriate science and mathematics courses.

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Course	Title	Credits
CHEM 110	General Chemistry 1.	4
CHEM 120	General Chemistry 2.	4
PHYS 131	Mechanics and Waves.	4
PHYS 142	Electromagnetism and Optics.	4

One of:

Expand allContract all

Course	Title	Credits
BIOL 111	Principles: Organismal Biology.	3
BIOL 112	Cell and Molecular Biology.	3

MATH 133 Linear Algebra and Geometry. and either MATH 140 Calculus 1./MATH 141 Calculus 2. or MATH 150 Calculus A./MATH 151 Calculus B..

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Course	Title	Credits
MATH 133	Linear Algebra and Geometry.	3
MATH 140	Calculus 1.	3
MATH 141	Calculus 2.	4
MATH 150	Calculus A.	4
MATH 151	Calculus B.	4

Required Courses (36 credits)

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Course	Title	Credits
MATH 222	Calculus 3.	3
MATH 223	Linear Algebra.	3
MATH 314	Advanced Calculus.	3
MATH 315	Ordinary Differential Equations.	3
PHYS 230	Dynamics of Simple Systems.	3
PHYS 232	Heat and Waves.	3
PHYS 241	Signal Processing.	3
PHYS 257	Experimental Methods 1.	3
PHYS 258	Experimental Methods 2.	3
PHYS 333	Thermal and Statistical Physics.	3
PHYS 340	Majors Electricity and Magnetism.	3
PHYS 346	Majors Quantum Physics.	3

Complementary Courses (9 credits)

9 credits selected from:

Expand allContract all

Course	Title	Credits
PHYS 328	Electronics.	3
PHYS 331	Topics in Classical Mechanics.	3
PHYS 339	Measurements Laboratory in General Physics.	3
PHYS 342	Majors Electromagnetic Waves.	3
PHYS 434	Optics.	3
PHYS 447	Applications of Quantum Mechanics.	3