

A background image showing students in a laboratory setting. They are working with electronic equipment, including a computer monitor displaying graphs and data. The image is overlaid with a blue gradient.

# PURE AND APPLIED SCIENCE

## ABOUT

Pure and Applied Science is a two-year pre-university DEC program that prepares students to pursue university studies in physics, mathematics and statistics, aerospace, electrical, mechanical, software, or civil engineering, and much more.

- We ensure that students are well-equipped for university studies by training them in the fundamentals of the physical and engineering science by using methods such as:
  - Differential equations
  - Advanced calculus
  - Statistics
  - Problem-solving in engineering physics using MATLAB

## QUICK INFO

Pre-University


DEC

2 Years

 200.B1

 DEC

 4 semesters

 Start dates: Fall, Winter

 In-person; Daytime

# PURE AND APPLIED SCIENCE

## COURSE LIST

### SEMESTER 1

- 202-SN1-RE GENERAL CHEMISTRY
- 201-SN2-RE DIFFERENTIAL CALCULUS
- 203-SN1-RE MECHANICS
- 602-100-MQ BASIC FRENCH OR 601-961-TV TEXTES NARRATIFS\*
- 345-101-MQ KNOWLEDGE
- 603-101-MQ INTRODUCTION TO COLLEGE ENGLISH

### SEMESTER 2

- 420-SN1-RE PROGRAMMING IN SCIENCE
- 202-SN2-RE CHEMISTRY OF SOLUTIONS
- 201-SN3-RE INTEGRAL CALCULUS
- 101-SN1-RE CELLULAR BIOLOGY
- 602-TVA-TV FRENCH FOR SPECIFIC PROGRAMS: LEVEL 1 OR 601-962-TV POÉSIE ET THÉÂTRE\*
- 603-102-MQ LITERARY GENRES
- 109-101-MQ PHYSICAL ACTIVITY AND HEALTH
- COM-001-03 COMPLEMENTARY COURSE (IN FRENCH)

### SEMESTER 3

- 203-SN2-RE ELECTRICITY AND MAGNETISM
- 201-SN1-RE PROBABILITY AND STATISTICS
- 201-SN4-RE LINEAR ALGEBRA AND VECTOR GEOMETRY
- 101-SN2-RE ECOLOGY AND EVOLUTION
- 345-102-MQ WORLD VIEWS
- 603-103-MQ LITERARY THEMES
- 109-102-MQ PHYSICAL ACTIVITY AND EFFECTIVENESS
- COM-001-03 COMPLEMENTARY COURSE (IN FRENCH) OR 601-963-TV LITTÉRATURE COMPARÉE\*

### SEMESTER 4

- 203-SN3-RE WAVES AND MODERN PHYSICS
- 360-ES1-TV END OF STUDIES PROJECT
- 203-ENP-TV ENGINEERING PHYSICS
- 201-CL3-TV CALCULUS III
- 345-TVH-TV CRITICAL THOUGHT APPLIED TO WORLD ISSUES
- 603-TVE-TV ENGLISH ADAPTED TO PROGRAM
- 109-103-MQ PHYSICAL ACTIVITY AND AUTONOMY

\* The course you will take depends on whether you hold a certificate of eligibility or not.

\*For students with a certification of eligibility, one additional French course will be required. For more information regarding the mandatory language requirements, please refer to p. 14 of the document.

## IS THIS FOR YOU?

The Pure and Applied Science DEC program is for the student who wishes to have a career in engineering, architecture, mathematics, statistics, or physical science. If you are interested in solving problems using mathematics and are curious about the modern world's evolving physical and technical infrastructures, this program may be for you.

## AFTER THE PROGRAM?

This program prepares students to apply to university in any of the following disciplines:

- Architecture
- Engineering:
  - Aerospace
  - Mechanical
  - Electrical
  - Building
  - Civil
  - Computer
  - Software
  - Industrial
  - Chemical
- Fundamental Science:
  - Chemistry
  - Biology
  - Biochemistry
  - Physics
  - Mathematics
- Many other programs

## PREREQUISITES

- Mathematics Science and Technology 564-506 OR Mathematics Science 565-506
- Chemistry 551-504
- Physics 553-504 OR academic background judged equivalent to the DES.

For more program specific and general admission requirement, for DEC programs.