STATISTICS MAJOR CONCENTRATION (B.A.) (46 CREDITS)

Offered by: Mathematics and Statistics (Faculty of Science)
Degree: Bachelor of Arts; Bachelor of Arts and Science
Program credit weight: 46

Program Description

The program provides training in statistics with a mathematical core. Taken together with the B.A.; Supplementary Minor Concentration in Statistics, these two programs constitute an equivalent of the B.Sc.; Major in Statistics program offered by the Faculty of Science. With satisfactory performance in an appropriate selection of courses, these two programs can lead to the accreditation "A.Stat" from the Statistical Society of Canada, which is regarded as the entry level requirement for a statistician practicing in Canada. Students interested in this accreditation should consult an academic advisor.

Degree Requirements — B.A. students

To be eligible for a B.A. degree, a student must fulfil all Faculty and program requirements as indicated in Degree Requirements for the Faculty of Arts.

We recommend that students consult an Arts OASIS advisor for degree planning.

Degree Requirements — B.A. & Sc. students

This program is offered as part of a Bachelor of Arts & Science (B.A. & 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.

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Guidelines for Course Selection

Students who received advanced standing or the CEGEP equivalent of the 100-level Math courses listed below are no longer required to take them. Whenever an exemption without credits is granted for a 200-level and above required Math course, the latter must be replaced with a complementary course chosen in consultation with a program advisor.

Students are strongly advised to complete all required courses by the end of U2.

Where appropriate, Honours courses may be substituted for equivalent courses. Students planning to pursue
graduate studies are encouraged to make such substitutions.

Required Courses (34 credits)

Expand allContract all

Course	Title	Credits
MATH 133	Linear Algebra and Geometry.	3
MATH 140	Calculus 1.	3
MATH 141	Calculus 2.	4
MATH 203	Principles of Statistics 1.[1]	3
MATH 204	Principles of Statistics 2.[2]	3
MATH 208	Introduction to Statistical Computing.	3
MATH 222	Calculus 3.	3
MATH 223	Linear Algebra.	3
MATH 242	Analysis 1.	3
MATH 323	Probability.	3
MATH 324	Statistics.[2]	3

[1] Students who have taken an equivalent of MATH 203 Principles of Statistics 1. at CEGEP or elsewhere must replace it by another course from the Complementary course list.

[2] Students must take MATH 204 Principles of Statistics 2. before taking MATH 324 Statistics..

Complementary Courses (12 credits)

Expand allContract all

Course	Title	Credits
COMP 551	Applied Machine Learning.	4
MATH 308	Fundamentals of Statistical Learning.	3
MATH 410	Majors Project.[1]	3
MATH 420	Independent Study.[1]	3
MATH 423	Applied Regression.	3
MATH 427	Statistical Quality Control.	3
MATH 447	Introduction to Stochastic Processes.	3
MATH 523	Generalized Linear Models.	4
MATH 524	Nonparametric Statistics.	4
MATH 525	Sampling Theory and Applications.	4
MATH 527D1	Statistical Data Science Practicum.[1]	3
MATH 527D2	Statistical Data Science Practicum.[1]	3
MATH 545	Introduction to Time Series Analysis.	4
MATH 556	Mathematical Statistics 1.	4

MATH 557	Mathematical Statistics 2.	4
MATH 558	Design of Experiments.	4
MATH 559	Bayesian Theory and Methods.	4
MATH 598	Topics in Probability and Statistics.	4
WCOM 314	Communicating Science.[1]	3

[1] Students can take at most one of MATH 410 Majors Project., MATH 420 Independent Study., MATH 527D1 Statistical Data Science Practicum./MATH 527D2 Statistical Data Science Practicum. and WCOM 314 Communicating Science..