

JOINT HONOURS BSOCSC IN MATHEMATICS AND ECONOMICS

Mathematics

Mathematics and statistics are not only powerful problem-solving tools, but also highly creative fields of studies that combine imagination with logic, and precision with intuition.

Mathematics is much more than numbers! Its basic goal is to reveal and model general patterns to help explain our world, whether they be found in electrical impulses in the human nervous system, the evolution of animal populations in their habitats, fluctuations in stock-market prices, or electronic communications. Mathematics reaches far beyond science and engineering into medicine, business and the social sciences.

Advances in mathematics and statistics lie behind many discoveries that are now part of our daily lives, such as MRI scanners, digital compression of music and video, secure electronic communications, data mining, genomic algorithms, futures pricing, and many other innovations.

The Department of Mathematics and Statistics offers Honours, majors and minors both in mathematics and in statistics. Our Honours program in statistics is accredited by the Statistical Society of Canada, allowing graduates to earn the A.Stat. professional designation. Moreover, the Department offers a joint honours program in mathematics and economics, a joint honours program in mathematics and computer science, as well as a multidisciplinary program in financial mathematics and economics. All our honours programs also include the co-operative education option.

Economics

Ever wonder why some countries are richer than others? Ever question why income inequality has been growing? Ever wonder why Canadian politicians worry when other countries may be going bankrupt? Economics can answer all these questions.

Economics examines how individuals and society make choices in a world where resources are limited. It focuses on the production, distribution and consumption of goods and services. Two important themes are efficiency (the absence of waste in the use of resources) and fairness. Since making choices is central to all human activities, studying economics often helps explain why people and governments behave in certain ways.

This program is offered in English and in French.

Program Requirements

Co-operative education is available with this program.

Requirements for this program have been modified. Please consult the 2025-2026 calendars (<http://catalogue.uottawa.ca/en/archives/>) for the previous requirements.

Basic skills

ENG 1100	Workshop in Essay Writing	3 Units
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ENG 1120	Selected Topics in Literature and Composition	3 Units
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Total: 6 Units

Mathematics (51 course units)

Compulsory Courses at the 1000 level

MAT 1320	Calculus I	3 Units
MAT 1322	Calculus II	3 Units
MAT 1341	Introduction to Linear Algebra	3 Units
MAT 1362	Mathematical Reasoning and Proofs	3 Units

Compulsory Courses at the 2000 level

MAT 2122	Multivariable Calculus	3 Units
MAT 2125	Elementary Real Analysis	3 Units
MAT 2371	Introduction to Probability	3 Units
STA 2100	Introduction to Statistics	3 Units

Optional Courses

3 course units from: 3 Units

MAT 2141	Honours Linear Algebra ¹
MAT 2342	Introduction to Applied Linear Algebra

6 course units from: 6 Units

MAT 2143	Introduction to Group Theory
MAT 2324	Ordinary Differential Equations and the Laplace Transform
MAT 2348	Discrete Mathematics
MAT 2355	Introduction to Geometry
MAT 2362	Foundations of Mathematics ²

12 optional course units in mathematics (MAT) at the 3000 or 4000 level^{3,4} 12 Units

6 optional course units in mathematics (MAT) at the 4000 level^{3,4} 6 Units

Economics (42 course units)

Compulsory Courses at the 1000 level

ECO 1102	Introduction to Macroeconomics	3 Units
ECO 1104	Introduction to Microeconomics	3 Units

Compulsory Courses at the 2000 level

ECO 2142	Macroeconomic Theory I	3 Units
ECO 2143	Macroeconomic Theory II	3 Units
ECO 2144	Microeconomic Theory I	3 Units
ECO 2145	Microeconomic Theory II	3 Units
ECO 2151	Introduction to Econometrics	3 Units

Compulsory Courses at the 3000 level

ECO 3152	Macroeconomic Theory III	3 Units
ECO 3153	Microeconomic Theory III	3 Units

Optional Courses

9 optional course units in economics (ECO) at the 3000 or 4000 level 9 Units

6 optional course units in economics (ECO) at the 4000 level 6 Units

Total: 93 Units

Elective courses

21 elective course units	21 Units
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Total: 21 Units

This is a copy of the 2026-2027 catalog.

Note(s)

- ¹ Students interested in graduate studies in mathematics should choose MAT 2141.
- ² MAT 2362 is strongly recommended and is required for further study of logic.
- ³ The course MAT 3153 cannot be counted for units if you have previously passed MAT 4153. You may however take MAT 3153 and then subsequently take MAT 4153, and count both for units.
- ⁴ Students planning to go to graduate school in Mathematics and Statistics must consult the Department of Mathematics and Statistics.