HONOURS BSC FINANCIAL MATHEMATICS AND ECONOMICS

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.

This program is offered in English and in French.

Program Requirements

Co-operative education is available with this program.

The French immersion stream is available with this program.

Requirements for this program have been modified. Please consult the 2024-2025 calendars (http://catalogue.uottawa.ca/en/archives/) for the previous requirements.

Basic skills

3 optional course units in English (ENG) at the 1000 level	3 Units

Compulsory courses

ADM 1100	Introduction to Business	3 Units
ADM 1340	Financial Accounting	3 Units
ECO 1102	Introduction to Macroeconomics	3 Units
ECO 1104	Introduction to Microeconomics	3 Units
ITI 1120	Introduction to Computing I	3 Units
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
ADM 2350	Financial Management	3 Units
ADM 2352	Finance Theory	3 Units
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
MAT 2122	Multivariable Calculus	3 Units
MAT 2125	Elementary Real Analysis	3 Units
MAT 2335	Introduction to Numerical Methods	3 Units
MAT 2371	Introduction to Probability	3 Units
MAT 2375	Introduction to Statistics	3 Units
PHI 2397	Business Ethics	3 Units
ADM 3350	Corporate Finance	3 Units
ECO 3153	Microeconomic Theory III	3 Units
MAT 3172	Foundations of Probability	3 Units
MAT 3375	Regression Analysis	3 Units
MAT 3379	Introduction to Time Series Analysis	3 Units
ADM 4351	Options and Futures	3 Units
ECO 4185	Financial Econometrics	3 Units
MAT 4372	Financial Mathematics	3 Units

Optional courses

3 course units from:		3 Units
MAT 2141	Honours Linear Algebra	
MAT 2342	Introduction to Applied Linear Algebra	
6 course units from:		6 Units
ECO 3123	International Finance	
ECO 3152	Macroeconomic Theory III	
ECO 4115	Monetary Theory	
ECO 4139	Industrial Organization II	
ECO 4145	Mathematical Economics II	
ECO 4170	Game Theory with Applications in Corporate Finance	
ECO 4186	Applied Econometrics	
3 optional course units in management (ADM) at the 3000 or 4000 level		3 Units
9 optional course units in mathematics (MAT) at the 3000 or 4000 level [1, 2]		9 Units
3 optional course units in management (ADM) at the 4000 level		3 Units
3 optional course units in mathematics (MAT) at the 4000 level [2, 3]		3 Units

Elective courses

3 elective course units	3 Units
Total:	**120 Units**

Note(s)

[1]

Students intending to pursue graduate studies in mathematics should select 9 optional course units from MAT 3120, MAT 3121, MAT 3143 and MAT 3341 among their optional course units in mathematics (MAT).

[2]

Students intending to pursue graduate studies in statistics should select MAT 3175 and MAT 3378 among their optional course units in mathematics (MAT).

3

MAT 4374, MAT 4379, MAT 4380, MAT 4381, MAT 4382, MAT 4384 and
MAT 4387 are recommended.