HONOURS BSC IN 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.

This program is offered in English and in French.

Program Requirements

Co-operative education is available with this program.

The extended French stream is available with this program.

Requirements for this program have been modified. Please consult the 2016-2017 calendars (http://catalogue.uottawa.ca/en/archives) for the previous requirements.

3 optional course units in English (ENG) at the 1000 or 2000 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
MAT 2122 Multivariable Calculus 3 Units
MAT 2125 Elementary Real Analysis 3 Units
MAT 2141 Linear Algebra I 3 Units
MAT 2143 Algebraic Structures 3 Units
MAT 2324 Ordinary Differential Equations and the Laplace Transform 3 Units
MAT 2362 Foundations of Mathematics 3 Units
MAT 2371 Introduction to Probability 3 Units
MAT 3120 Real Analysis 3 Units
MAT 3121 Complex Analysis I 3 Units
MAT 3143 Ring Theory 3 Units

3 course units from:

MAT 3141 Linear Algebra II 3 Units
MAT 3341 Applied Linear Algebra 3 Units
MAT 2348 Discrete Mathematics 3 Units
MAT 2355 Introduction to Geometry 3 Units
MAT 2375 Introduction to Statistics 3 Units

18 optional course units in mathematics (MAT) at the 3000 or 4000 level

MAT 3120 Calculus I 3 Units
MAT 3141 Applied Linear Algebra 3 Units
MAT 2348 Discrete Mathematics 3 Units
MAT 2355 Introduction to Geometry 3 Units
MAT 2375 Introduction to Statistics 3 Units

6 optional course units in mathematics (MAT) at the 4000 level

MAT 3120 Calculus I 3 Units
MAT 3141 Applied Linear Algebra 3 Units
MAT 2348 Discrete Mathematics 3 Units
MAT 2355 Introduction to Geometry 3 Units
MAT 2375 Introduction to Statistics 3 Units

9 elective course units offered by the Faculty of Arts, the Faculty of Education, the Faculty of Law, the Faculty of Social Sciences or the Telfer School of Management

36 elective course units

Total: 120 Units

Note(s)

1. Students interested in applied mathematics should take MAT 3341.
2. Students interested in discrete mathematics should take MAT 2348.
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.

This message is intended for students registered in the Faculty of Science. If the components of your program of study require common compulsory courses, you will have to replace the units as follows:

1. 1000-level courses must be replaced with elective course units;
2. 2000-level courses and above must be replaced with optional course units from either discipline at the same level or above.

Please note that all programs in the Faculty of Science require a minimum of 12 elective course units from the Faculty of Arts, the Faculty of Education, the Faculty of Law, the Faculty of Social Sciences or the Telfer School of Management. Once you have decided on the replacement courses, please inform the Office of Undergraduate Programs of the Faculty of Science by email at infosci@uOttawa.ca so that we may amend your Academic Advisement accordingly.