MINOR 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

The table below includes only discipline-specific courses. Please refer to the Academic Regulations (https://www.uottawa.ca/about-us/policies-regulations/academic-regulations/b-2-program-studies/) for information on including a minor to your degree.

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

Compulsory Courses at the 1000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1341</td>
<td>Introduction to Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>One option from the following:</td>
<td></td>
</tr>
<tr>
<td>Option 1:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 1320</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MAT 1322</td>
<td>Calculus II</td>
<td></td>
</tr>
<tr>
<td>Option 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 1330</td>
<td>Calculus for the Life Sciences I</td>
<td></td>
</tr>
<tr>
<td>MAT 1332</td>
<td>Calculus for the Life Sciences II</td>
<td></td>
</tr>
<tr>
<td>3 course units from:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAT 1348</td>
<td>Discrete Mathematics for Computing</td>
<td>1</td>
</tr>
<tr>
<td>MAT 1362</td>
<td>Mathematical Reasoning and Proofs</td>
<td>1</td>
</tr>
</tbody>
</table>

Compulsory courses at the 2000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 2322</td>
<td>Calculus III for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>3 course units from:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAT 2141</td>
<td>Honours Linear Algebra</td>
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</tr>
<tr>
<td>MAT 2342</td>
<td>Introduction to Applied Linear Algebra</td>
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</tr>
<tr>
<td>6 course units from:</td>
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<td>6</td>
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</tbody>
</table>

Optional courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>MAT 2324</td>
<td>Ordinary Differential Equations and the Laplace Transform</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2348</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>MAT 2355</td>
<td>Introduction to Geometry</td>
<td></td>
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<tr>
<td>MAT 2362</td>
<td>Foundations of Mathematics</td>
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</tr>
<tr>
<td>MAT 2371</td>
<td>Introduction to Probability</td>
<td>5</td>
</tr>
<tr>
<td>MAT 2375</td>
<td>Introduction to Statistics</td>
<td>6</td>
</tr>
<tr>
<td>MAT 2379</td>
<td>Introduction to Biostatistics</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2384</td>
<td>Ordinary Differential Equations and Numerical Methods</td>
<td>3, 4</td>
</tr>
</tbody>
</table>

Total: 30 Units

Note(s)

1 Students interested in the major or honours in mathematics or statistics, the joint honours in mathematics and economics or the honours in financial mathematics and economics must take MAT 1362.

2 Students interested in the joint honours in computer science and mathematics must take MAT 1348.

3 MAT 2322 cannot count for units in the major or honours in mathematics or statistics. Students interested in the major or honours in mathematics or statistics must take MAT 2122 and MAT 2125 instead of MAT 2322.

4 A maximum of 3 course units may be selected amongst these courses.

5 This course cannot count for units in the major or Honours in mathematics or statistics.

6 MAT 2371 is highly recommended.

A maximum of 3 course units may be selected amongst these courses.