<table>
<thead>
<tr>
<th>1.0 Degree Title</th>
<th>2.0 Administering Faculty/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify the two degrees for concurrent degree programs</td>
<td>Science/Mathematics &amp; Statistics</td>
</tr>
<tr>
<td>1.1 Bachelor of Science</td>
<td>Offering Faculty/Department</td>
</tr>
<tr>
<td>2.0 Administering Faculty/Unit</td>
<td>Science/Mathematics &amp; Statistics</td>
</tr>
<tr>
<td>1.2 Concentration (Legacy = Concentration/Option) If applicable (30 char. max.)</td>
<td>3.0 Effective Term of revision or retirement Please give reasons in 5.0 “Rationale” in the case</td>
</tr>
<tr>
<td></td>
<td>of retirement (Ex. Sept. 2004 = 200409) Retirement</td>
</tr>
<tr>
<td>1.3 Minor (with Concentration, if applicable) (30 char. max.)</td>
<td>Term:</td>
</tr>
<tr>
<td>1.4 Category</td>
<td>201409</td>
</tr>
<tr>
<td>Faculty Program (FP)</td>
<td>4.0 Existing Credit Weight Proposed Credit Weight</td>
</tr>
<tr>
<td>Honours (HON) X</td>
<td>60 60</td>
</tr>
<tr>
<td>Major</td>
<td>5.0 Rationale for revised program</td>
</tr>
<tr>
<td>Joint Honours</td>
<td>The changes reflect the introduction of MATH 254 (Honours Analysis 1). Giving students the</td>
</tr>
<tr>
<td>Component (HC)</td>
<td>choice of MATH 242 (Analysis 1) and MATH 254 (Honours Analysis 1) allows for a fluid transfer</td>
</tr>
<tr>
<td>Major Concentration (CON)</td>
<td>between the Major and Honours Programs.</td>
</tr>
<tr>
<td>Internship/Co-op</td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>6.0 Revised Program Description (Maximum 150 words)</td>
</tr>
<tr>
<td>Thesis (T)</td>
<td></td>
</tr>
<tr>
<td>Minor Concentration (CON)</td>
<td></td>
</tr>
<tr>
<td>Non-Thesis (N)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Please specify</td>
<td></td>
</tr>
<tr>
<td>1.5 B.Sc. Honours in Mathematics</td>
<td></td>
</tr>
</tbody>
</table>
7.0 List of existing program and proposed program

**Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)**

<table>
<thead>
<tr>
<th>Honours Mathematics (60 credits)</th>
<th>Required Courses (48 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* MATH 314 may be substituted for MATH 248 if MATH 222 had to be taken in the Fall.</td>
<td></td>
</tr>
</tbody>
</table>

- MATH 235 Algebra 1 (3 credits)
- MATH 242 Analysis 1 (3 credits)
- MATH 248 Honours Advanced Calculus (3 credits) *
- MATH 251 Honours Algebra 2 (3 credits)
- MATH 255 Honours Analysis 2 (3 credits)
- MATH 325 Honours Ordinary Differential Equations (3 credits)
- MATH 354 Honours Analysis 3 (3 credits)
- MATH 355 Honours Analysis 4 (3 credits)
- MATH 356 Honours Probability (3 credits)
- MATH 357 Honours Statistics (3 credits)
- MATH 366 Honours Complex Analysis (3 credits)
- MATH 370 Honours Algebra 3 (3 credits)
- MATH 371 Honours Algebra 4 (3 credits)
- MATH 375 Honours Partial Differential Equations (3 credits)
- MATH 380 Honours Differential Geometry (3 credits)
- MATH 470 Honours Research Project (3 credits)

**Complementary Courses (12 credits)**

- 12 credits selected from:
  - MATH 350 Graph Theory and Combinatorics (3 credits)
  - MATH 352 Problem Seminar (1 credit)
  - MATH 376 Honours Nonlinear Dynamics (3 credits)
  - MATH 377 Honours Number Theory (3 credits)
  - MATH 387 Honours Numerical Analysis (3 credits)
  - MATH 397 Honours Matrix Numerical Analysis (3 credits)
  - MATH 480 Honours Independent Study (3 credits)
  - MATH 487 Honours Mathematical Programming (3 credits)
  - MATH 488 Honours Set Theory (3 credits)

- all MATH 500-level courses.

Honours-level courses from related disciplines:

* COMP 250 may be preceded by COMP 202.

- COMP 250 Introduction to Computer Science (3 credits) *
- COMP 252 Honours Algorithms and Data Structures (3 credits)

no more than 6 credits from the following courses for which no Honours equivalent exists:

- MATH 204 Principles of Statistics 2 (3 credits)
- MATH 329 Theory of Interest (3 credits)
- MATH 338 History and Philosophy of Mathematics (3 credits)
- MATH 348 Topics in Geometry (3 credits)
- MATH 407 Dynamic Programming (3 credits)

Students may select other courses with the permission of the Department.

**Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)**

<table>
<thead>
<tr>
<th>Honours Mathematics (60 credits)</th>
<th>Required Courses (45 credits)</th>
</tr>
</thead>
<tbody>
<tr>
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- MATH 235 Algebra 1 (3 credits)
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- MATH 251 Honours Algebra 2 (3 credits)
- MATH 255 Honours Analysis 2 (3 credits)
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- MATH 355 Honours Analysis 4 (3 credits)
- MATH 356 Honours Probability (3 credits)
- MATH 357 Honours Statistics (3 credits)
- MATH 366 Honours Complex Analysis (3 credits)
- MATH 370 Honours Algebra 3 (3 credits)
- MATH 371 Honours Algebra 4 (3 credits)
- MATH 375 Honours Partial Differential Equations (3 credits)
- MATH 380 Honours Differential Geometry (3 credits)
- MATH 470 Honours Research Project (3 credits)

**Complementary Courses (15 credits)**

- 3 credits selected from:
  - MATH 242 Analysis 1 (3 credits)
  - **MATH 254 Honours Analysis 1 (3 credits)**

  **It is strongly recommended that students take MATH 254.**

- 12 credits selected from:
  - MATH 350 Graph Theory and Combinatorics (3 credits)
  - MATH 352 Problem Seminar (1 credit)
  - MATH 376 Honours Nonlinear Dynamics (3 credits)
  - MATH 377 Honours Number Theory (3 credits)
  - MATH 387 Honours Numerical Analysis (3 credits)
  - MATH 397 Honours Matrix Numerical Analysis (3 credits)
  - MATH 480 Honours Independent Study (3 credits)
  - MATH 487 Honours Mathematical Programming (3 credits)
  - MATH 488 Honours Set Theory (3 credits)

- all MATH 500-level courses.

Honours-level courses from related disciplines:

***COMP 250 may be preceded by COMP 202.***

- COMP 250 Introduction to Computer Science (3 credits) ***
- COMP 252 Honours Algorithms and Data Structures (3 credits)

no more than 6 credits from the following courses for which no Honours equivalent exists:

- MATH 204 Principles of Statistics 2 (3 credits)
- MATH 329 Theory of Interest (3 credits)
- MATH 338 History and Philosophy of Mathematics (3 credits)
- MATH 348 Topics in Geometry (3 credits)
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Students may select other courses with the permission of the Department.

Attach extra page(s) as needed