**Mathematics Major**

**Specialization in Pure and Applied Mathematics**

Total Credits: 42-44 Credits

**REQUIRED COURSES (7 COURSES, 24 CREDITS):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1412</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1413</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MAT 1510</td>
<td>Multivariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MAT 2105</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1520</td>
<td>Advanced Calculus 1 (or MAT 5300)</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2461</td>
<td>Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2601</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>

**ELECTIVES: 1500 LEVEL OR HIGHER (4 COURSES, 12 CREDITS):**

Recommended courses include MAT 1504, MAT 2462, MAT 1521 or MAT 5301, MAT 1540 or 5405, MAT 2215 or MAT 5339

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT ELECT 1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAT ELECT 2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAT ELECT 3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MAT ELECT 4</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**CORRELATES (2 COURSES, 6-8 CREDITS):**

Chosen from computer science, or graduate mathematics, artificial intelligence, data analytics and visualization

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORR 1</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>CORR 2</td>
<td></td>
<td>3-4</td>
</tr>
</tbody>
</table>

**NOTE:** Courses within any given major or minor require a grade of a "C-" or better to fulfill its requirement