**APPLIED MATHEMATICS CONCENTRATION**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 304</td>
<td>Vector Analysis</td>
<td>4</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Linear Analysis II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 350</td>
<td>Mathematical Software</td>
<td>4</td>
</tr>
<tr>
<td>or CSC/CPE 202</td>
<td>Data Structures</td>
<td></td>
</tr>
<tr>
<td>MATH 408</td>
<td>Complex Analysis I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 413</td>
<td>Introduction to Analysis II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 416</td>
<td>Differential Equations II</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 418</td>
<td>Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 451</td>
<td>Numerical Analysis I</td>
<td>4</td>
</tr>
<tr>
<td>STAT 301</td>
<td>Statistics I</td>
<td>4</td>
</tr>
<tr>
<td>or STAT 305</td>
<td>Introduction to Probability and Simulation</td>
<td></td>
</tr>
<tr>
<td>or STAT 425</td>
<td>Probability Theory</td>
<td></td>
</tr>
</tbody>
</table>

**Tracks**

Select courses from one of the following tracks.  

1. **Track A**
   - MATH 335  
   - MATH 406  
   - MATH 409  
   - MATH 414  
   - MATH 416  
   - MATH 418  
   - MATH 437  
   - MATH 452  
   - MATH 453  
   - MATH 460  
   - MATH 461  
   - MATH 462  
   - MATH 476  

2. **Track B**
   - DATA 301  
   - DATA 401  
   - MATH 335  
   - or MATH 453  

3. **Approved Electives**
   - Select three courses in one of the following categories, with at least one course at the 300-level or above.  

**Physics Category:**
   - ASTR 301  
   - ASTR 302  
   - ASTR 326  
   - PHYS 132  
   - PHYS 211  
   - PHYS 301  
   - PHYS 302  
   - PHYS 303  
   - PHYS 318  

**Statistics Category:**
   - STAT 302  
   - STAT 305  
   - STAT 323  
   - STAT 330  
   - STAT 331  
   - STAT 334  
   - STAT 416  
   - STAT 417  
   - STAT 418  
   - STAT 419  
   - STAT 421  
   - STAT 423  
   - STAT 425  
   - STAT 426  
   - STAT 427  

**Computer Science Category:**
   - CSC/CPE 202  
   - CSC/CPE 203  
   - CSC 225  
   - CSC 349  
   - CSC/CPE 357  
   - CSC 448  

**Mechanical Engineering Category:**
   - ME 211  
   - ME 212  
   - ME 302  
   - ME 326  
   - ME 341  

**Economics Category:**
   - ECON 311  
   - ECON 312  
   - ECON 313  
   - ECON 403  
   - ECON 408  
   - ECON 409  

Total units: 56

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1. Only students in the Applied Mathematics concentration who are pursuing a Data Science minor should select Track B.
2. Students who select Track B should select Approved Electives from the Statistics Category that will fulfill prerequisites for courses in the Data Science minor.
Consultation with advisor is recommended prior to selecting Approved Electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

Other choices are also possible, and should be pre-approved in consultation with an academic advisor. Approved Electives are to be taken outside of the Mathematics department and should have significant applications to mathematics.