The Second Major in Computer Science + Mathematics

The McKelvey School of Engineering and the College of Arts & Sciences have developed a new second major that efficiently captures the intersection of the complementary studies of computer science and math.

- **Core Requirements:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 131</td>
<td>Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Math 132</td>
<td>Calculus II</td>
<td>3</td>
</tr>
<tr>
<td>CSE 131</td>
<td>Introduction to Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>Math 233</td>
<td>Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Math 310</td>
<td>Foundations for Higher Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>or Math 310W</td>
<td>Foundations for Higher Mathematics with Writing</td>
<td></td>
</tr>
<tr>
<td>or CSE 240</td>
<td>Logic and Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>CSE 247</td>
<td>Data Structures and Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>Math 309</td>
<td>Matrix Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Math 3200</td>
<td>Elementary to Intermediate Statistics and Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or ESE 326</td>
<td>Probability and Statistics for Engineering</td>
<td></td>
</tr>
<tr>
<td>CSE 347</td>
<td>Analysis of Algorithms</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units: 27-28

- **Electives:** Eight upper-level courses from Math or CSE can be chosen from an approved list (https://docs.google.com/spreadsheets/d/1nVxw2jVScJ7pTw5QQ6vPlijGmyA19Q37_RBsxQ/edit/#gid=0), with the following caveats:

  1. No fewer than three courses can be chosen from each department.
  2. Up to two preapproved courses from outside both departments can be selected.