### B.A. in Mathematics -- Quarter to Semester Translation Table

#### Quarter Requirements (AY 2017-18)

<table>
<thead>
<tr>
<th>Quarter Courses</th>
<th>Semester Courses</th>
<th>Acceptable Semester Course Substitutions</th>
<th>Available Semester Course Substitutes</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
</table>
| MATH 2210 and 2220 (each 4 units, quarters) | MATH 2210 and 2220 (each 4 units, quarters) | MATH 2210 and 2220 (each 4 units, quarters) | MATH 2210 and 2220 (each 4 units, quarters) | 8 | 8 | If a student has completed MATH 211 on quarters, then the student should complete MATH 2120Q2S and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q2S to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
| MATH 241 (2 units, quarters) | MATH 241 (2 units, quarters) | MATH 241 (2 units, quarters) | MATH 241 (2 units, quarters) | 8 | 8 | If a student has completed MATH 241 on quarters, then the student will still need to complete CSE 2010. If a student has only completed CSE 201 on quarters, then they have met the major requirement for this area but may still need to take addtional unit(s) to meet the total units required for graduation.

#### Upper Division Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 329</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 355</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 372</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 465</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 455</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 470</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 474</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 485</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 510</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 529</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 531</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 553</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 554</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 555</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 557</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 565</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 570</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 576</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 595D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Total Units

<table>
<thead>
<tr>
<th>Total Units</th>
<th>Quarter Units</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>56-57</td>
<td>12</td>
</tr>
</tbody>
</table>

#### Additional Notes

- If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474.
- If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.
- If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Quarter Courses</th>
<th>Semester Courses</th>
<th>Quarter Units</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division Requirements</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Upper Division Requirements</td>
<td>CSE 5140 or 5160 on quarters</td>
<td>CSE 5140 or 5160 on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Biology (MACB)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Computer Science (MACS)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Economics (MACE)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Geographic Information Systems (MAGI)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Mathematics (MAGT)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

### Concentration in Physics (MAGP)

<table>
<thead>
<tr>
<th>Lower Division Requirements</th>
<th>Required courses</th>
<th>MATH 5170 (3 units) on quarters</th>
<th>MATH 5170 (3 units) on semesters</th>
<th>3</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division Requirements</td>
<td>Required courses</td>
<td>MATH 5170 (3 units) on quarters</td>
<td>MATH 5170 (3 units) on semesters</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Notes:
- Students must choose either the General Track or one of the applied concentration which follow.
- Students may not use MATH 4455 to count as a semester elective if a student uses MATH 4455 as a grade replacement substitute for MATH 570.
- Students must take at least twelve units of 500-level or higher courses.
- Students must take at least eight units of 400-level or higher courses.
- Students must take at least eight units of 300-level or higher courses.
- Students must take at least eight units of 200-level or higher courses.
- Students must take at least twelve units of 100-level or higher courses.
- Students must take at least twelve units of 100-level or higher courses.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 373</td>
<td></td>
</tr>
<tr>
<td>PHYS 3100</td>
<td></td>
</tr>
<tr>
<td>PHYS 306</td>
<td></td>
</tr>
<tr>
<td>PHYS 3200</td>
<td></td>
</tr>
<tr>
<td>PHYS 307</td>
<td></td>
</tr>
<tr>
<td>PHYS 313</td>
<td></td>
</tr>
<tr>
<td>PHYS 3400</td>
<td></td>
</tr>
<tr>
<td>PHYS 314</td>
<td></td>
</tr>
<tr>
<td>PHYS 4400</td>
<td></td>
</tr>
<tr>
<td>PHYS 315</td>
<td></td>
</tr>
<tr>
<td>PHYS 5400</td>
<td></td>
</tr>
<tr>
<td>PHYS 324</td>
<td></td>
</tr>
<tr>
<td>PHYS 3500</td>
<td></td>
</tr>
<tr>
<td>PHYS 370</td>
<td></td>
</tr>
<tr>
<td>ASTR 3300</td>
<td></td>
</tr>
<tr>
<td>PHYS 421</td>
<td></td>
</tr>
<tr>
<td>PHYS 4700</td>
<td></td>
</tr>
<tr>
<td>PHYS 422</td>
<td></td>
</tr>
<tr>
<td>PHYS 5700</td>
<td></td>
</tr>
<tr>
<td>PHYS 430</td>
<td></td>
</tr>
<tr>
<td>PHYS 4800</td>
<td></td>
</tr>
<tr>
<td>PHYS 450</td>
<td></td>
</tr>
<tr>
<td>PHYS 5500</td>
<td></td>
</tr>
<tr>
<td>PHYS 461</td>
<td></td>
</tr>
<tr>
<td>PHYS 463</td>
<td></td>
</tr>
<tr>
<td>PHYS 473</td>
<td></td>
</tr>
<tr>
<td>PHYS 5100</td>
<td></td>
</tr>
<tr>
<td>PHYS 480A</td>
<td></td>
</tr>
<tr>
<td>PHYS 480B</td>
<td></td>
</tr>
<tr>
<td>PHYS 485A</td>
<td></td>
</tr>
<tr>
<td>PHYS 4851</td>
<td></td>
</tr>
<tr>
<td>PHYS 573</td>
<td></td>
</tr>
<tr>
<td>MATH 320</td>
<td></td>
</tr>
<tr>
<td>MATH 3320</td>
<td></td>
</tr>
<tr>
<td>MATH 455</td>
<td></td>
</tr>
<tr>
<td>MATH 4455</td>
<td></td>
</tr>
<tr>
<td>MATH 470</td>
<td></td>
</tr>
<tr>
<td>MATH 4270</td>
<td></td>
</tr>
<tr>
<td>MATH 474</td>
<td></td>
</tr>
<tr>
<td>MATH 3953</td>
<td></td>
</tr>
<tr>
<td>MATH 480</td>
<td></td>
</tr>
<tr>
<td>MATH 3480</td>
<td></td>
</tr>
<tr>
<td>MATH 485</td>
<td></td>
</tr>
<tr>
<td>MATH 4485</td>
<td></td>
</tr>
<tr>
<td>MATH 510</td>
<td></td>
</tr>
<tr>
<td>MATH 5510</td>
<td></td>
</tr>
<tr>
<td>MATH 529</td>
<td></td>
</tr>
<tr>
<td>MATH 5529</td>
<td></td>
</tr>
<tr>
<td>MATH 531</td>
<td></td>
</tr>
<tr>
<td>MATH 5310</td>
<td></td>
</tr>
<tr>
<td>MATH 546</td>
<td></td>
</tr>
<tr>
<td>MATH 554</td>
<td></td>
</tr>
<tr>
<td>MATH 5300</td>
<td></td>
</tr>
<tr>
<td>MATH 555</td>
<td></td>
</tr>
<tr>
<td>MATH 5550</td>
<td></td>
</tr>
<tr>
<td>MATH 557</td>
<td></td>
</tr>
<tr>
<td>MATH 5170</td>
<td></td>
</tr>
<tr>
<td>MATH 565</td>
<td></td>
</tr>
<tr>
<td>MATH 5565</td>
<td></td>
</tr>
<tr>
<td>MATH 570</td>
<td></td>
</tr>
<tr>
<td>MATH 4455</td>
<td></td>
</tr>
<tr>
<td>MATH 576</td>
<td></td>
</tr>
<tr>
<td>MATH 4360</td>
<td></td>
</tr>
<tr>
<td>MATH 595D</td>
<td></td>
</tr>
<tr>
<td>MATH 5593</td>
<td></td>
</tr>
</tbody>
</table>

**Total**

| Units | 49 |

**Electives**

Twelve units chosen from 12 6-12 PHYS 307, PHYS 461, PHYS 463, PHYS 480A, PHYS 480B, and PHYS 573 have been deleted. Consultation with the PHYS department is recommended for any issues related to repeating these courses for grade forgiveness.

Twelve units of mathematics electives selected from the following with at least one four unit course chosen from 500-level. If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474.

| Units | 32-39 |

If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.

If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
<table>
<thead>
<tr>
<th>Quarter Courses</th>
<th>Semester Courses</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATT</td>
<td>CSE 1100 or CSE 1250</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 241</td>
<td>MATH 329</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 345</td>
<td>MATH 3345</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 355</td>
<td>MATH 3100</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 372</td>
<td>MATH 3372</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 465</td>
<td>MATH 3460</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 480</td>
<td>MATH 3480</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 529</td>
<td>MATH 5529</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 545</td>
<td>MATH 4600 or MATH 5600</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 554</td>
<td>MATH 5300</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 555</td>
<td>MATH 5550</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 557</td>
<td>MATH 5170</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 570</td>
<td>MATH 4455</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 576</td>
<td>MATH 4360</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 595D</td>
<td>MATH 5953</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 270</td>
<td>MATH 2270</td>
<td></td>
<td></td>
<td>Repeat rule applies for this requirement</td>
</tr>
</tbody>
</table>
### Mathematics Minor – Quarter to Semester Translation Table

#### Quarter Requirements (AY 2017-18)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-MIN</td>
<td>Lower Division Requirements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSE 201</td>
<td>Required course</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CSE 2010</td>
<td>Acceptable semester course substitute</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 241</td>
<td>Acceptable semester course repeat</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 251</td>
<td>Acceptable semester course equivalent</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 252</td>
<td>Acceptable semester course equivalent</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 345</td>
<td>Acceptable semester course repeat</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 355</td>
<td>Acceptable semester course repeat</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

#### Upper Division Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 331</td>
<td>Required course</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 3320-5953</td>
<td>Any upper division mathematics course (ranging from 3320 to 5953) applicable to the math major with the exception of MATH 2900, MATH 4900, and MATH 5900, selected in consultation with a math faculty advisor</td>
<td>4</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>34</td>
<td>29-32</td>
<td></td>
</tr>
</tbody>
</table>

---

#### Mathematics Minor – Quarter to Semester Translation Table

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-MIN</td>
<td>Lower Division Requirements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 211, 212, and 213</td>
<td>Required courses</td>
<td>12</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>MATH 2210 and 2220</td>
<td>Required courses</td>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q2S and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q2S to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.

---

#### Upper Division Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Quarter Units</th>
<th>Semester Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 3100</td>
<td>Required course</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MATH 3320-5953</td>
<td>Any upper division mathematics course (ranging from 3320 to 5953) applicable to the math major with the exception of MATH 2900, MATH 4900, and MATH 5900, selected in consultation with a math faculty advisor</td>
<td>4</td>
<td>3-4</td>
<td></td>
</tr>
</tbody>
</table>

---

#### Total

<table>
<thead>
<tr>
<th></th>
<th>Quarter Units</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>34</td>
<td>29-32</td>
</tr>
</tbody>
</table>
### Applied Mathematics Minor—Quarter to Semester Translation Table

#### Quarter Requirements (AY 2017-18)

<table>
<thead>
<tr>
<th>Minor Requirements</th>
<th>Quarter Course Equivalencies</th>
<th>Quarter Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required courses</td>
<td>MATH 211, 212, and 213 (each 4 units, quarters)</td>
<td>12</td>
<td>If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.</td>
</tr>
</tbody>
</table>

#### Closeout of the Following Groups:

<table>
<thead>
<tr>
<th>Group A</th>
<th>Quarter Courses</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 211, 212, 213</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>MATH 2210, 2220</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B</th>
<th>Quarter Courses</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 211, 212, 213</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>MATH 2210, 2220</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group C</th>
<th>Quarter Courses</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 211, 212, 213</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>MATH 2210, 2220</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group D</th>
<th>Quarter Courses</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 211, 212, 213</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>MATH 2210, 2220</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group E</th>
<th>Quarter Courses</th>
<th>Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 211, 212, 213</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>MATH 2210, 2220</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter Courses</td>
<td>Acceptable Semester Course Substitutions</td>
<td>Acceptable Semester Course Repeats</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>ECON 200</td>
<td>ECON 2201</td>
<td></td>
</tr>
<tr>
<td>ECON 202</td>
<td>ECON 2202</td>
<td></td>
</tr>
<tr>
<td>MATH 241</td>
<td>CSE 1100 or CSE 1250</td>
<td></td>
</tr>
<tr>
<td>MATH 251</td>
<td>MATH 2310</td>
<td></td>
</tr>
<tr>
<td>MATH 252</td>
<td>MATH 2320</td>
<td></td>
</tr>
<tr>
<td>ECON 300</td>
<td>ECON 4200</td>
<td></td>
</tr>
<tr>
<td>ECON 302</td>
<td>ECON 4100</td>
<td></td>
</tr>
<tr>
<td>MATH 320</td>
<td>MATH 3320</td>
<td></td>
</tr>
<tr>
<td>MATH 372</td>
<td>MATH 3372</td>
<td></td>
</tr>
<tr>
<td>MATH 465</td>
<td>MATH 3460</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td></td>
</tr>
</tbody>
</table>

Actuarial Science Certificate -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Lower-division required courses</th>
<th>Upper-division required courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 211, 212, and 213</td>
<td>MATH 2210 and 2220</td>
<td>MATH 311, 312, and 313</td>
</tr>
<tr>
<td>(each 4 units, quarters)</td>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 211 on quarters, then the student should complete MATH 212Q2S and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q2S to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Lower-division required courses</th>
<th>Upper-division required courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 215, 216, and 217</td>
<td>MATH 315, 316, and 317</td>
<td>MATH 311, 312, and 313</td>
</tr>
<tr>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 215 on quarters, then the student should complete MATH 216Q2S and MATH 317. If a student has completed MATH 215 and MATH 216 on quarters, then the student should take MATH 217Q2S to complete the sequence. If a student only completes MATH 315, then the student will only earn credit for MATH 215.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Lower-division required courses</th>
<th>Upper-division required courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 220, 221, and 222</td>
<td>MATH 320, 321, and 322</td>
<td>MATH 311, 312, and 313</td>
</tr>
<tr>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 220 on quarters, then the student should complete MATH 221Q2S and MATH 322. If a student has completed MATH 220 and MATH 221 on quarters, then the student should take MATH 222Q2S to complete the sequence. If a student only completes MATH 320, then the student will only earn credit for MATH 220.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Lower-division required courses</th>
<th>Upper-division required courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 230, 231, and 232</td>
<td>MATH 330, 331, and 332</td>
<td>MATH 311, 312, and 313</td>
</tr>
<tr>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 230 on quarters, then the student should complete MATH 231Q2S and MATH 332. If a student has completed MATH 230 and MATH 231 on quarters, then the student should take MATH 232Q2S to complete the sequence. If a student only completes MATH 330, then the student will only earn credit for MATH 230.

<table>
<thead>
<tr>
<th>Certificate Requirements</th>
<th>Lower-division required courses</th>
<th>Upper-division required courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 240, 241, and 242</td>
<td>MATH 340, 341, and 342</td>
<td>MATH 311, 312, and 313</td>
</tr>
<tr>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
<td>(each 4 units, semesters)</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

If a student has completed only MATH 240 on quarters, then the student should complete MATH 241Q2S and MATH 342. If a student has completed MATH 240 and MATH 241 on quarters, then the student should take MATH 242Q2S to complete the sequence. If a student only completes MATH 340, then the student will only earn credit for MATH 240.