Courses for Undergraduates in Actuarial Science

<table>
<thead>
<tr>
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<th>Potential Schedule I</th>
<th>Potential Schedule II</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td>Fall: Math 221, Econ 101</td>
<td>Spring: Math 222, Econ 102</td>
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<tr>
<td><strong>Sophomore</strong></td>
<td>Math 234, RMI 300, Stat 311, Act Sci 300</td>
<td>Act Sci/Math 303, Act Sci 301, Stat 312, Fin 300</td>
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Courses in “italics” above are not required for the major. See below for further information.

This advising sheet assumes that you are admitted to the Business School beginning Fall, 2009 or later.

1. **General Guidelines.**
   - Fill in your first year with Pre-Business courses and Liberal Studies required courses.
   - Fill in your remaining years with Business and Liberal Studies required courses.
   - Many actuarial science students have a second major in addition to actuarial science; risk management and insurance, and finance majors are the two most popular options.

2. **Actuarial Science Major Course Requirements.**
   - You must take one of either Act Sci 651 or Act Sci 653.
   - Finally, you must take one of Act Sci 654, Econ 301, or Math 632.

3. **Actuarial Science Other Course Recommendations**
   - Math 234 is a prerequisite for probability (Math 431, Stat 309, or Stat 311). Although not required, we recommend you take it.
   - You can take Math 234 and the probability class concurrently.
   - If you're looking for a good course your sophomore year, consider RMI 300, an introduction to risk management with little mathematics. It satisfies a breadth requirement and is useful for Exam P/1.
   - Comp Sci 302 will introduce you to programming skills. Math 340 introduces you to matrix algebra.

4. **Professional Requirements (CAS and SOA): Validated by Educational Experience (VEE).**
   - Since May 2005, the CAS and SOA have certain subjects that can be validated by college courses.
   - Each course requires a grade of BC or better to get VEE credit.
   - Economics: Either (Econ 101 and Econ 102) or Econ 111
   - Corporate Finance: Fin 300 and Fin 320

5. **Actuarial Exams**
   - Start passing your actuarial exams as early as possible.
   - Try to take Exam P/1 in May of your sophomore year or earlier. We recommend either Math 431, Stat 309 or Stat 311 for the material covered on this exam. Act Sci 300 is the review class for this exam. RMI 300 is useful, although not required.
   - Try to take Exam FM/2 as early as your second semester freshman year if possible. The material for this exam will be covered in Act Sci/Math 303. Act Sci 301 is the review class for this exam. It is helpful but not necessary to have Fin 300 before or concurrently.
   - If you can take Act Sci/Math 303 and a probability course by the end of your sophomore year, take the Act Sci 650/651 sequence in your junior year. You can take Exam MLC in May of your junior year.
   - Act Sci 652 and Act Sci 653 are the courses for Exam C/4.
   - Finance 330 and/or Act Sci 365 will help prepare you for Exam MFE/3F.
### UW Actuarial Science Program
#### Quick Reference

**Actuarial Major Courses and Pre-requisites as of Fall 2014**

<table>
<thead>
<tr>
<th>Class</th>
<th>Required for Major</th>
<th>Pre-requisites</th>
<th>Other</th>
<th>Preliminary Actuarial Exam*</th>
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</thead>
<tbody>
<tr>
<td>Act Sci 300</td>
<td>Two credits of either Act Sci 300 or 301**</td>
<td>Concurrent or following either Math 431, Stat 309, or Stat 311</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course P/1</td>
</tr>
<tr>
<td>Act Sci 301</td>
<td>Two credits of either Act Sci 300 or 301**</td>
<td>Concurrent or following Act Sci 303</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course FM/2</td>
</tr>
<tr>
<td>Act Sci/Math 303***</td>
<td>Yes</td>
<td>Math 234 or con reg, or cons inst</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course FM/2</td>
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<tr>
<td>Act Sci 650</td>
<td>Yes</td>
<td>Act Sci 303 and either Math 431, Stat 309, or Stat 311</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course MLC/3L*</td>
</tr>
<tr>
<td>Act Sci 651</td>
<td>Either Act Sci 651 or 653 required</td>
<td>Act Sci 650</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course MLC/3L*</td>
</tr>
<tr>
<td>Act Sci 652</td>
<td>Yes</td>
<td>Act Sci 650 or con reg, and either Math 431, Stat 309, or Stat 311</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course C/4</td>
</tr>
<tr>
<td>Act Sci 653</td>
<td>Either Act Sci 651 or 653 required</td>
<td>Act Sci 652 and either Stat 310 or Stat 312</td>
<td>Offered both Fall and Spring semesters</td>
<td>Course C/4</td>
</tr>
<tr>
<td>Act Sci 654</td>
<td>One of Act Sci 654, Econ 301 or Math 632 required for major</td>
<td>Either Stat 310 or Stat 312</td>
<td>Offered both Fall and Spring semesters</td>
<td>VEE</td>
</tr>
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</table>

* The preliminary exams are lettered by the Society of Actuaries (SOA) and numbered by the Casualty Actuarial Society (CAS). With the exception of Course MLC/3L, the preliminary actuarial exams for both the SOA and the CAS are jointly administered and joint credit is given by both the SOA and CAS when passing the exam. For the life contingencies topics covered on MLC/3L, students are given credit by the CAS for course 3L if they pass exam MLC, but students who take CAS exam 3L are not given credit by the SOA for course MLC. Therefore we advise all of our students to take exam MLC to give them the most flexibility as they chose their career path.

**You may take Act Sci 300 or 301 as many times as you would like, but you can get at most 2 credits per course number.**

***Act Sci 303 is cross-listed as Math 303.
UW Courses Related to Actuarial Professional Exams
Revised Fall 2014

Math 431, Stat 309 or Stat 311 and Act Sci 300

Act Sci 303 and Act Sci 301

Act Sci 650 and Act Sci 651

Act Sci 365** and/or Fin 330**

Act Sci 652 and Act Sci 653

Stat 310 or Stat 312

Course P/1 (Probability)

Course FM/2 (Financial Mathematics)

Course MLC* (Life Contingencies)

Course MFE/3F (Financial Economics)

Course C/4 (Construction & Evaluation of Actuarial Models)

Econ 101 and Econ 102 Or Econ 111

Fin 300 and Fin 320

Econ VEE

Finance VEE

Validation for Educational Experience (VEE)

Act Sci 654 Or GB 304 and Stat 349 Or Econ 410 Or Stat 333 and Stat 349

Statistics VEE

*Students should take the SOA exam MLC, as the CAS gives credit for exam 3L if you pass MLC, but the reverse is not true.

**About 50% of the material for exam MFE/3F is covered in Fin 330. Act Sci 365 is a 1 credit review course for exam MFE. Some students will take both courses, others will cover material more on their own and take review course to prepare for the exam.