Actuarial Science, M.S.

Requirements

The Master of Science program in actuarial science requires 36 s.h. of graduate credit. The program prepares students for actuarial careers by emphasizing the theory that underlies risk processes and the application of this theory to practical problems of insurance pricing and management. It also helps them learn the material that is tested on professional examinations administered by professional organizations such as the Society of Actuaries and the Casualty Actuarial Society.

Students complete required courses and a final examination. The M.S. with a major in actuarial science requires the following coursework.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>One of these sequences:</td>
<td></td>
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<tr>
<td>STAT:4100-STAT:4101</td>
<td>Mathematical Statistics I-II (same as IGPI:4100-IGPI:4101)</td>
<td>6</td>
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<tr>
<td>STAT:5100-STAT:5101</td>
<td>Statistical Inference I-II (for well prepared students)</td>
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<td>All of these:</td>
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<tr>
<td>ACTS:3080</td>
<td>Mathematics of Finance I</td>
<td>3</td>
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<tr>
<td>ACTS:4130</td>
<td>Quantitative Methods for Actuaries</td>
<td>3</td>
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<tr>
<td>ACTS:4180</td>
<td>Life Contingencies I</td>
<td>3</td>
</tr>
<tr>
<td>ACTS:4280</td>
<td>Life Contingencies II</td>
<td>3</td>
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<tr>
<td>ACTS:4380</td>
<td>Mathematics of Finance II</td>
<td>3</td>
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<tr>
<td>ACTS:6160</td>
<td>Topics in Actuarial Science</td>
<td>3</td>
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<tr>
<td>ACTS:6480</td>
<td>Loss Distributions</td>
<td>3</td>
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<tr>
<td>ACTS:6580</td>
<td>Credibility and Survival Analysis</td>
<td>3</td>
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<tr>
<td>STAT:4560</td>
<td>Statistics for Risk Modeling</td>
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<td>A course approved by the advisor</td>
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Final Examination

The final examination is offered the weekend before classes begin in January. The exam covers the material presented in ACTS:4130 Quantitative Methods for Actuaries, ACTS:4180 Life Contingencies I, ACTS:4280 Life Contingencies II, and ACTS:4380 Mathematics of Finance II. Students who do not succeed on their first attempt may retake the exam once.