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 material that is included in 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 course work.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>One of these sequences:</td>
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<tr>
<td>STAT:4100-</td>
<td>Mathematical Statistics</td>
<td>6</td>
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<tr>
<td>STAT:4101</td>
<td>I-II (same as IGPI:4100-IGPI:4101)</td>
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<tr>
<td>STAT:5100-</td>
<td>Statistical Inference I-II (for well prepared students)</td>
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<tr>
<td>STAT:5101</td>
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<tr>
<td>All of these:</td>
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<td>ACTS:3080</td>
<td>Mathematics of Finance I</td>
<td>3</td>
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<td>ACTS:4130</td>
<td>Quantitative Methods for Actuaries</td>
<td>3</td>
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<td>ACTS:4180</td>
<td>Life Contingencies I</td>
<td>3</td>
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<tr>
<td>ACTS:4280</td>
<td>Life Contingencies II</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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<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:6160 Topics in Actuarial Science, ACTS:4180 Life Contingencies I, ACTS:4280 Life Contingencies II, and ACTS:4380 Mathematics of Finance II. Students who do not succeed the first time they take the exam may repeat it once.

Admission

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations of the Graduate College.

Career Advancement

Most actuaries are employed by insurance companies or employee benefits consulting firms. They have responsibilities related to all phases of product development and maintenance for their companies. Individual employers who need guidance in establishing employee insurance and retirement programs also hire actuarial science graduates. A growing number of actuaries work in asset/liability management, some in investment firms, and others in insurance companies.

Actuaries have always been in high demand and earn good salaries. Most Iowa graduates find work as actuaries, but some become financial managers and teachers. They take positions in locations all across the country, often in large metropolitan areas.

The Pomerantz Career Center offers multiple resources to help students find internships and jobs.