The Capstone Certificate in Actuarial Science at the School of Business is a post-baccalaureate program designed to prepare students for an actuarial career. The capstone program is not a degree program. It is a high-quality certificate program designed to prepare students to pass the preliminary professional exams required by the Casualty Actuarial Society (CAS) or the Society of Actuaries (SOA). A key strength of the capstone program is its short time to completion. Full-time students can expect to complete the program in two semesters.

Students accepted into the capstone certificate program have a strong mathematics background and are interested in applying that strength to the actuarial science profession. Capstone students will take classes in actuarial mathematics, predictive modeling, and loss models, and have the option to take other classes with consent from faculty.

Capstone students have access to all School of Business resources available to undergraduate students. Through connections with industry leaders, the University of Wisconsin–Madison Actuarial Science program offers opportunities for students to learn from practicing actuaries and other professionals. Learning opportunities include presentations by industry experts, Co-Curricular Learning Board events and Actuarial Club events. Employers recruit UW–Madison’s actuarial science graduates extensively and the demand for actuaries is consistently strong and resilient to economic factors. Students have many resources, such as the Risk and Insurance Career Fair, to connect them with prospective employers so they can begin their actuarial career. Further detail is provided at the School of Business website (https://wsb.wisc.edu/programs-degrees/certificates/capstone/actuarial-science-capstone/).

### HOW TO GET IN

**ADMISSION**

Applicants must possess a baccalaureate degree in a discipline other than actuarial science. Applications are accepted for both fall and spring semesters. All application materials must be received by the deadline (https://bus.wisc.edu/degrees-programs/certificates/capstone/actuarial-science/#application) posted on the program website.

**APPLICATION STEPS**

A complete application includes the following information:

1. An online application for admission (http://continuingstudies.wisc.edu/advising/apply.htm) as a University Special student, selecting UNCS Capstone Certificate and the program: Actuarial Science
2. The following program-specific application materials can be submitted electronically to jodi.wortsman@wisc.edu or by US Mail to the Wisconsin School of Business, Attn: Capstone

### REQUIREMENTS

- Must have a minimum GPA of 2.000
- Must complete 15 credits of coursework from the courses listed below. Students can elect to take courses that meet the SOA/CAS Validation by Educational Experience (VEE) requirements with approval from the capstone director.

The Capstone Certificate coursework requires that students have background in mathematical probability. Applicants who do not have this background are encouraged to apply and will be expected to study mathematical probability within the first semester of the program.

**Code** | **Required Classes** | **Title** | **Credits**
---|---|---|---
ACT SCI 303 | Theory of Interest | 3
ACT SCI 650 | Actuarial Mathematics I | 3
ACT SCI 652 | Loss Models I | 3

**Specialization Core**

Choose at least one of:

- ACT SCI 651 | Actuarial Mathematics II | 3
- ACT SCI 653 | Loss Models II | 3

Choose at least one of:

- ACT SCI 654 | Regression and Time Series for Actuaries | 3
- ACT SCI 655 | Health Analytics | 3
- GEN BUS 656 | Machine Learning for Business Analytics | 3

See the capstone program website (https://bus.wisc.edu/degrees-programs/certificates/capstone/actuarial-science/#about) for more information.

**ENROLLMENT**

Once admitted, candidates will receive a formal letter of admission to UW–Madison from Adult Career and Special Student Services along with enrollment instructions and information about tuition and deadlines. The capstone certificate coordinator also will send specific information pertaining to enrollment in and completion of the capstone program.

Additional detail is provided on the ACSSS enrollment page (https://acsss.wisc.edu/enrollment/).
### OPTIONAL SUPPORTING COURSES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH/STAT 431</td>
<td>Introduction to the Theory of Probability</td>
<td>3</td>
</tr>
<tr>
<td>MATH/STAT 309</td>
<td>Introduction to Probability and Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>STAT 311</td>
<td>Introduction to Theory and Methods of Mathematical Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>MATH/STAT 310</td>
<td>Introduction to Probability and Mathematical Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>STAT 312</td>
<td>Introduction to Theory and Methods of Mathematical Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Principles of Microeconomics</td>
<td>4</td>
</tr>
<tr>
<td>ECON 102</td>
<td>Principles of Macroeconomics</td>
<td>3-4</td>
</tr>
<tr>
<td>ECON 111</td>
<td>Principles of Economics-Accelerated Treatment</td>
<td>4</td>
</tr>
<tr>
<td>FINANCE/ECON 300</td>
<td>Introduction to Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINANCE/ECON 320</td>
<td>Investment Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

### Review courses for actuarial examinations:
- ACT SCI 300 Actuarial Science Methods I 1
- ACT SCI 301 Actuarial Science Methods II 1

### LEARNING OUTCOMES

1. Recognize and explain the concept of risk, and apply the knowledge to the development of insurance products that are used to manage risk for the consumer as well as the risk of those products on the insurance organization.

2. Describe the actuarial profession, including the major professional organizations, the professional obligations of being an actuary, and the requirements to obtain and maintain a professional actuarial designation.

3. Demonstrate skills in critical thinking, quantitative analysis, and communication, as well as to develop an appreciation for actuarial theory, research, and the link to practical application.

4. Demonstrate the soft skills of being a professional.

5. Communicate their experiences and inspire others across the WSOB learning community.