Actuarial Science, MS

Do you want to make the most of your talents in math and predictive analysis? Become an expert in finding ways to assess, calculate and manage risk and participate in high-level business decision-making through this degree in actuarial science.

Program Description

Degree Awarded: MS Actuarial Science

The MS program in actuarial science is designed to allow students to advance their knowledge base by applying mathematical and statistical concepts and data analytics to the disciplines of risk management, finance and insurance. It also includes a new focused set of professional learning outcomes aligned with the needs of the ever-evolving insurance industry, while keeping the core technical learning outcomes in place. These guide students' development of professional competencies through coursework, independent projects and opportunities outside of the classroom, while remaining firmly based on a strong foundation of scholarly technical work in actuarial science. The program emphasizes broad awareness and appreciation of current issues faced by insurance industry practitioners as well as innovative resolutions provided by actuaries.

Actuaries must pass a series of intensive professional exams to become credentialed. This degree program not only prepares graduates for the examinations required to become credentialed professionals by the Society of Actuaries or Casualty Actuarial Society, but also will make them competitive employees in the insurance and finance industries.

At a Glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe campus
Accelerated Program Options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's and master's degree with:

Actuarial Science, BS

Acceptance to the graduate program requires a separate application. During their junior year, eligible students will be advised by their academic departments to apply.

Degree Requirements

30 credit hours including an applied project (ACT 593)

Required Core (6 credit hours)
ACT 560 Advanced Data Analytics in Insurance I (3)
ACT 561 Advanced Data analytics in Insurance II (3)

Electives or Research (21 credit hours)

Culminating Experience (3 credit hours)
ACT 593 Applied Project (3)

Additional Curriculum Information
For electives and research, students select seven courses from an approved list. Students should see the academic unit for the approved course list. Other courses may be used with approval of the academic unit.

Only six credit hours of 400-level coursework is allowed on the plan of study per Graduate College policy.

Admission Requirements

An applicant must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's degree (or equivalent) or master's degree from a regionally accredited college or university in a related field such as mathematics, statistics, business, economics and predictive analytics.
Applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. letter of intent or written statement
4. GRE scores
5. two letters of recommendation
6. professional resume
7. proof of English proficiency

Additional Application Information

An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency.

Applicants should have completed the following courses with a "B" or better (scale is 4.00 = "A"). ASU equivalents are given in parenthesis. Courses may be substituted with approval of the academic unit:
Linear Algebra (MAT 342 or MAT 343)
Calculus Sequence 1-3 (MAT 270, 271, and MAT 272)
Applied Statistics (STP 420)
Advanced Calculus (MAT 370 or MAT 371)

Contact Information

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