

Actuarial Science, BS

LAACTBS

Learn to examine risk through the lens of mathematics, and enjoy a career that enables you to devise creative solutions that minimize risk and maximize reward.


Program description

Students in the BS degree program in actuarial science combine tools from mathematics, statistics and finance to measure the impact of risk, resulting in improved forecasting and decision-making.

The degree's core classes prepare students for the required professional actuarial credentialing exams offered by the Society of Actuaries and the Casualty Actuarial Society. The school also offers reimbursements upon completion for the cost of taking these exams. The actuarial science program has a strong partnership with the local insurance industry, leading to many internship and scholarship opportunities for students.

In addition to reviewing the guidelines in the Concurrent Program Options section below, students interested in pursuing concurrent or second baccalaureate degrees in The College of Liberal Arts and Sciences are advised to visit [The College's website](#) for more information and requirements.

At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)
- **Second language requirement:** No
- **First required math course:** MAT 270 - Calculus w/Analytic Geometry I
- **Math intensity:** Substantial 

Required courses (Major Map)

Concurrent program options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

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 plus master's degree](#) with:

[Actuarial Science, MS](#)

Acceptance to the graduate program requires a separate application. Students typically receive approval to pursue the accelerated master's during the junior year of their bachelor's degree program. Interested students can learn about eligibility requirements and [how to apply](#).

Admission requirements

General university admission requirements:

All students are required to meet general university admission requirements.

[First-year](#) | [Transfer](#) | [International](#) | [Readmission](#)

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Change of Major Requirements

Current ASU students who wish to change their major to actuarial science should have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A"), have completed at least MAT 265 Calculus for Engineers I or MAT 270 Calculus with Analytic Geometry I and CIS 105 Computer Applications and Information Technology (or CSE 100 or CSE 110), and have earned a "B" grade or better in all critical classes they have already completed.

Students should visit the [Change of Major form](#) for information about how to change a major to this program.

Transfer options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use [MyPath2ASU®](#) to outline a list of recommended courses to take prior to transfer.

ASU has [transfer partnerships](#) in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Identify the proper mathematical and statistical theories that may be applied to analyze actuarial data and draw analytical conclusions in a professional environment.
- Use mathematical theories to demonstrate mastery of analytical decision making based on both qualitative and quantitative data.
- Use statistical theories to demonstrate mastery of analytical decision making based on both qualitative and quantitative data.

Global opportunities

Global experience

Study abroad students are able to enhance their resumes with the heightened cultural competency, and leadership and critical thinking skills they acquire through this valuable experience.

Each of the more than 300 [Global Education program options](#), whether in a foreign country, in the U.S. or online, provides an opportunity for students to develop a valuable skill set that can give them an advantage in their career as well as personal enrichment. Global Education programs encourage students to build communication skills, challenge them to adapt and persevere, expose them to differences around the world and enhance their ability to work with diverse groups of people.

Career opportunities

Actuary is consistently ranked as one of the best jobs in America. It offers a high income in a low-stress environment, with excellent job security, growth opportunities and work-life balance.

Risk is a part of daily life, and wherever there is risk, there are opportunities for actuarial intervention. Many actuaries work with insurance companies to calculate premiums, determine reserves needed to ensure an organization's financial health, and ensure that organizations conform to stringent, complex legal mandates. Others help companies to establish retirement plans or are employed as consultants.

Graduates with a Bachelor of Science in actuarial science possess skills that are transferable to any industry and any organization that requires risk modeling and management, including:

- colleges and universities
- consulting firms
- energy and environmental companies
- financial services
- government agencies
- insurance companies
- retirement and pension companies
- transportation companies

Example job titles and salaries listed below are not necessarily entry level, and students should take into consideration how years of experience and geographical location may affect pay scales. Some jobs also may require advanced degrees, certifications or state-specific licensure.

Career	*Growth	*Median salary
<u>Actuary (Financial Risk Analyst)</u> ☀	23.2%	\$113,990
<u>Business Intelligence Analyst</u> ☀	35.2%	\$103,500
<u>Compliance Manager</u>	3.3%	\$128,620
<u>Economist</u> ☀	6.3%	\$113,940
<u>Financial Analyst</u> ☀	7.6%	\$95,080
<u>Insurance Claims Investigator</u>		\$72,230
<u>Insurance Underwriter</u>		\$76,230
<u>Investment Fund Manager</u> ☀	16.0%	\$139,790
<u>Loan Officer</u>	2.9%	\$65,740
<u>Statistician</u> ☀	31.6%	\$98,920

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).



Professional licensure

ASU programs that may lead to professional licensure or certification are intended to prepare students for potential licensure or certification in Arizona. Completion of an ASU program may not meet educational requirements for licensure or certification in another state. For more information, students should visit the [ASU professional licensure](#) webpage.

Contact information

[Schedule an advisor appointment](#)

[School of Mathematical and Statistical Sciences](#) | WCLR 216

math@asu.edu | 480-965-7195