

# MATHEMATICS: ACTUARIAL SCIENCE

Master of Science



Central to Evaluating Risk & Opportunity.

Central's MS in Mathematics: Actuarial Science prepares students for work in life, health, and property casualty insurance as well as consulting firms and government agencies analyzing risk and solving financial problems. Coursework covers a substantial portion of the material on the first four examinations of the Society of Actuaries and the Casualty Actuarial Society.

The program provides a deep understanding of the mathematical foundations of actuarial work and the ability to construct deterministic and stochastic models. Graduates are prepared for the P and FM exam along with partial preparation of IFM, STAM and LTAM. For those that enter with some exams passed there are a large range of courses in statistics and data science that can be taken.

## Program Features

- Starts in January and August
- 30-credit program
- Attend full- or part-time
- Classes offered evenings on-campus and online
- Financial aid is available



### What You'll Gain

- Working knowledge of insurance and financial instruments, including derivatives
- Ability to construct both deterministic and stochastic valuation models
- Estimate both parametric and nonparametric models for frequency and severity and use the models to estimate the distribution of total losses and the probability of ruin

### Applying for Admission

**For consideration, applicants must submit the following:**

1. A completed online application ([ccsu.edu/apply](https://ccsu.edu/apply))
2. Official undergraduate and graduate transcripts from a regionally accredited institution of higher education (GPA of 2.70 or higher)
  - Applicant must have taken 3 semesters of calculus and a calculus-based probability course
  - Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:
    - GRE (math subject area): 600 (45th percentile)
    - GRE (general test quantitative reasoning): 720 (80th percentile)
    - GMAT (quantitative): 50 (95th percentile)

**Official transcripts may be sent directly to the Graduate Recruitment & Admissions Office:**

**By Mail:** Central Connecticut State University  
Graduate Recruitment & Admissions Office  
1615 Stanley Street  
Central Welcome Center  
New Britain, CT 06050

**By Email:** [graduateadmissions@ccsu.edu](mailto:graduateadmissions@ccsu.edu)



### DID YOU KNOW?

The median annual wage for actuaries was \$111k in May 2020. Employment of actuaries is projected to grow 24% from 2020 to 2030, much faster than the average for all occupations.

Source: [bls.gov](https://bls.gov)

### ABOUT CENTRAL:

Central Connecticut State University is the largest university within the Connecticut State Colleges and Universities system. Founded in 1849, Central is also the state's oldest publicly funded university. Our campus is located in New Britain, Connecticut. Central is accredited by the New England Commission of Higher Education (NECHE).

