

ACTUARIAL SCIENCE

Interdisciplinary Major

Faculty

Mark Mills (director)

Statement of philosophy

The actuarial science major is specifically designed to prepare students for a career as an actuary. However, combined with the Central liberal arts education, students completing this major have a broad foundation that will prepare them for many different business-oriented careers.

Because an actuary must have both mathematical/technical skills and more general business skills, the major combines components from mathematics and business. Students completing the actuarial science major will have a good foundation in the material for the actuarial industry's Exam P (Probability), will have some background in the material for Exam FM (Financial Mathematics), and will have completed the actuarial industry's Validation by Educational Experience (VEE) requirements in Economics, Corporate Finance, and Applied Statistical Methods (Regression). In addition, students may fulfill the VEE requirement in Applied Statistical Methods (Time Series) by taking three additional economics courses not contained in the actuarial science major. (See Additional recommended courses section below.)

Internships are strongly recommended. They may be obtained through local or regional businesses and organizations, or potentially through one of Central's international program sites or the Chicago Metropolitan Center. This experience provides the student with rich learning opportunities and puts course work into practice.

Actuarial Science majors are encouraged to consider the study abroad experience during the spring of their second or third year, depending upon their progression in the major. Some schedule adjustments will need to be made in order to accommodate a semester abroad, so it is important to plan ahead and speak with the major's director early.

Major/minor restrictions

Actuarial Science majors cannot also declare a major in mathematics/computer science or a major or a minor in either business management or mathematics.

Transfer Policy for the Actuarial Science Major

All 300 – 400 level courses offered by the Economics/Accounting/Management (EAM) Department to fulfill requirements for Accounting, Actuarial Science, Business Management, Economics, and International Management majors and Accounting, Business Management, Economics, Entrepreneurship, Not-for-Profit, and International Management minors will be taken in residence or on an approved Central College off-campus program. Exceptions to this are allowed only with departmental approval.

Actuarial Science Major Requirements (52 s.h.)

1. Complete all of the following:

ACCT 241	Introduction to Financial Accounting (3)
ACCT 242	Introduction to Management Accounting (3)
BMGT 311	Principles of Management (3)
BMGT 361	Corporate Finance (3)
BMGT 362	Principles of Investment (3)
COSC 110	Introduction to Computer Science (3)
ECON 112	Principles of Microeconomics (3)
ECON 113	Principles of Macroeconomics (3)
ECON 281	Quantitative Methods for Business and Economics (3)
MATH 131	Calculus I (4)
MATH 132	Calculus II (4)
MATH 215	Applied Statistics (4)
MATH 231	Multivariable Calculus (3)
MATH 240	Linear Algebra (4)
MATH 330	Mathematical Modeling (3)
MATH 341	Probability (3)

2. Complete all requirements listed below for the Communication Skills Endorsement.

Communication skills endorsement

The major's communication skills requirement has three components: reading and writing, speaking, and professional development. The following are the requirements in each area.

Reading and Writing

Students satisfy the reading and writing requirements by completing ENGL 201 Technical Writing with a grade of at least “C”.

Speaking

Students must complete one of the following courses with a grade of at least “C”:

COMM 160 Fundamentals of Human Communication

COMM 270 Public Speaking

or complete a significant communication experience approved by the program’s faculty

Professional development

Students must successfully complete all of the following sessions in the professional development series, offered by the career services office:

1. Job Search Success
2. Resume/Cover Letter Writing
3. Interviewing Strategies
4. Dress for Success
5. Dining Etiquette

It is recommended that students complete the professional development series by the end of their third year.

Final communication skills approval

Successful completion of the aforementioned requirements does not guarantee program approval of a student’s communication skills requirements. The program’s faculty members retain the right to continuously monitor every student’s progress and make appropriate referral(s) to the Tutoring & Writing Center or elsewhere for additional work.

Additional recommended courses

Students pursuing the Actuarial Science major are encouraged to take three additional economics courses to fulfill the VEE requirement in Applied Statistical Methods (Time Series). These courses are:

ECON 212 Intermediate Microeconomics

ECON 213 Intermediate Macroeconomics

ECON 485 Economics Research Seminar

In addition, students are encouraged to take additional courses as their schedules allow. While the courses below are not required for the major, having them will better prepare students for future actuarial exams and job experiences.

BMGT 331 Business Law I

BMGT 332 Business Law II

BMGT 363 Advanced Financial Management

COSC 130 Data Structures

ECON 324 Monetary Theory and the Financial System

MATH 342 Statistics

MATH 370 Numerical Analysis