ACTUARIAL SCIENCE
Interdisciplinary Major

Co-Directors
Mark Mills and Jessica Schuring

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 one of the major’s co-directors early.

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, and Economics majors and Accounting, Business Management, Economics, Entrepreneurship and Not-for-Profit minors will be taken in residence or on an approved Central College off-campus program. Exceptions to this are allowed with departmental approval.

Major Communication Skills
Students will complete COMM-160 or COMM-270 with a minimum grade of “C”.

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

Actuarial Science Major Requirements (56 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 (4)
   - 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 one of the following courses with a grade of at least a "C":
   COMM 160 Communication in Everyday Life (3)
   COMM 270 Public Speaking (3)

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 312  Microeconomic Theory
   ECON 313  Macroeconomic Theory
   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