


ACTUARIAL SCIENCE

Our Actuarial Science major prepares you to excel in a field that is actively seeking talented, analytically oriented students who understand mathematics and financial theory. Actuaries are highly sought after by companies that analyze large amounts of historical data to assess risk and forecast long-term patterns. You will gain a strong foundation in the discipline through courses that emphasize math, finance and risk management.

The mix of business and traditional actuarial science experience is a valuable skill set for employers. With a Bentley degree in Actuarial Science, you not only will develop excellent analytical skills, but also understand how this important information relates to an organization's broader operations. You also will learn how to communicate these complex issues to all levels of your organization.

In addition, the Actuarial Science major offers preparation for up to four actuarial exams (Exams P, FM,  C and MFE) and all of the necessary VEE (Validation by Educational Experience) credit.

HANDS-ON LEARNING

You can choose to further your classroom knowledge through our hands-on learning programs: corporate partnerships, internships, service-learning and study abroad.

By participating in these opportunities, you will gain valuable real-world experience, learn about diverse people and perspectives, and gain new skills for living and working in a global community.

CAREERS

A number of highly regarded sources, including *U.S. News and World Report* and *CNN Money*, have named an actuarial position as one of the best jobs in America based on career prospects, salary and type of work. Individuals with strong quantitative skills who enjoy problem solving and working with data are positioned very well for success in this industry. Diverse types of organizations regularly employ actuaries, including:

- Banks and investment firms
- Colleges and universities
- Consulting firms
- Government insurance departments
- Insurance companies
- Labor unions
- Public accounting firms
- Rating bureaus

REQUIRED AND ELECTIVE COURSES

MAJOR REQUIREMENTS

Calculus III
Linear Algebra
Mathematical Statistics
Continuous Probability for Risk Management
Actuarial Topics in Probability and Risk Management
AND/OR
Mathematical Theory of Interest
Mathematical Sciences elective
Regression Analysis

FOR YOUR REMAINING COURSE(S), YOU MAY CHOOSE FROM THE FOLLOWING:

Discrete Probability
Financial Calculus and Derivative Pricing
The Mathematics of Discrete Options Pricing

MATHEMATICAL SCIENCES ELECTIVES (PARTIAL LIST)

Probability Models for Business Decision-Making
Models for Financial Economics
 Linear Models for Business Decision-Making
Mathematical Modeling in Environmental Management
 Numerical Methods
 Discrete Mathematics
Mathematical Logic
Game Theory
Mathematics of Sports
 Differential Equations
Data Science
Models for Life Contingencies I and II
 Data Mining

 Additional requirements apply for degree completion

FOR MORE INFORMATION

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BENTLEY
UNIVERSITY

Students pursuing a Bachelor of Science degree in Actuarial Science take the following courses:

GENERAL EDUCATION REQUIREMENTS

Information Technology
Expository Writing I
Expository Writing II
Calculus I
Calculus II
Government
Problems of Philosophy
Principles of Microeconomics
Principles of Macroeconomics
First-Year Seminar (one credit)

For each of the following requirements, you can choose an applicable course from a wide variety of offerings:

Literature/Cinema
Natural Sciences
History
Behavioral Sciences
Humanities/Social Science elective

BUSINESS CORE REQUIREMENTS

Legal and Ethical Environment of Business
Tools and Concepts
in Accounting and Finance
Practice and Applications
in Accounting and Finance
Business Statistics
Marketing-Operations Fundamentals
AND/OR
Human Behavior and Organizations

BUSINESS-RELATED AND UNRESTRICTED ELECTIVES

Choose five courses

ARTS AND SCIENCES ELECTIVES

Choose eight courses

TAKE IT TO THE NEXT LEVEL.

After you've selected a major, what else can you do to make your education work harder? Customize your degree with an optional second major, choose a minor or get a head start on graduate study.

OPTIONAL SECOND MAJORS Students majoring in Actuarial Science can add an optional Liberal Studies or Business Studies major to complement their degree without taking any additional courses. The Business Studies major ensures students leave campus with a strong foundation in the key principles of business including marketing, finance and operations. The Liberal Studies major allows students to choose from one of seven concentrations below and provides a well-rounded perspective that is highly sought after by today's leading employers.

The LSM concentrations are:

- American Studies
- Diversity and Society
- Earth, Environment and Global Sustainability
- Ethics and Social Responsibility
- Global Perspectives
- Health and Industry
- Media Arts and Society

MINORS You can further specialize your studies through one of our minors.

- Accountancy
- Business Economics
- Business Studies
- Computer Information Systems
- Data Technologies
- Earth, Environment and Global Sustainability
- English and Media Studies
- Entrepreneurial Studies
- Finance
- Gender Studies
- Global Management
- Global Studies
- Health and Industry
- History
- Human Resources Management
- Information and Process Management
- Information Design and Corporate Communication
- International Economics
- Law
- Leadership
- Management
- Marketing
- Modern Languages
- Natural and Applied Sciences
- Nonprofit Organizations
- Philosophy
- Politics
- Psychology
- Public Policy
- Sociology
- Sports Business Management
- Supply Chain/Operations Management

FALCON FAST-TRACK PROGRAM The Falcon Fast-Track program is designed for motivated undergraduate students with high academic standing in ANY undergraduate major. Depending on the program of study, master's degree requirements may be completed with one year of additional full-time academic work. Students enrolled in the Falcon Fast-Track Program have the opportunity to pursue one of nine master's programs.

For more information, visit bentley.edu/fast-track.