UNDERGRAD

MATHEMATICS AND STATISTICS
Actuarial Science

SIUe

College of Arts and Sciences • Department of Mathematics and Statistics

Degrees Available at SIUE

- Bachelor of Arts
- Bachelor of Science

Why Actuarial Science?

What are the odds that an earthquake will cause catastrophic damage in a particular area? How should an insurance company determine how much to charge for life insurance? Actuarial science is a focused discipline that uses mathematical and statistical models to assess the financial, economic, and business implications of future events. According to the Society of Actuaries, the "actuary's work combines the skills of a business executive, mathematician, financier, and investment manager." It is an ideal career for those interested in studying risk, whether it is related to economics, finance, or even social issues.

Actuarial Science at SIUE

SIUE's mathematics faculty offer opportunities for close mentoring of mathematics majors. All full-time faculty hold doctorate degrees and many have practical experience that is readily shared with undergraduates. Students are required to take a broad base of mathematics, statistics and finance courses as part of this degree specialization, all designed to maximize the range of career opportunities. Distinguished research professors are actively involved in pure and applied math research projects and regularly work with students. Several faculty members also hold leadership positions in professional organizations. Math majors have access to advanced computers with specialized mathematics software in more than 12 computer labs across the SIUE campus.

Career Outlook

According to the respected Jobs Rated Almanac, which analyzes data from the U.S. Department of Labor Statistics and the Census Bureau, actuaries consistently rank among the top careers in the United States. Most actuaries find rewarding risk-analysis positions within the insurance and finance industry. A smaller percentage of graduates find careers as analysts for various business, management or technical consulting services. The U.S. Bureau of Labor Statistics anticipates a 21 percent growth rate in actuarial positions through 2018, a rate substantially higher than average.

Admission Requirements

Complete MATH 120 and 125, or mathematics courses having these as prerequisites (or equivalent courses at another accredited institution of higher education), have a GPA of 2.0 or higher in all university mathematics courses, and have a GPA of 2.0 or higher in all SIUE courses taken.

Complete in high school seven semesters of university preparatory mathematics courses, including a course in trigonometry, and have no grade lower than a C in those courses. Students who do not qualify for admission into an academic program in the department but hope to seek admission later are encouraged to obtain advice from a faculty member in the department.

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Faculty

Distinguished Research Professors

Krzysztof Jarosz, (Chair), Ph.D.
1982, University of Warsaw

Urszula Ledzewicz, Ph.D.
1984, University of Lodz

Steve E. Rigdon, Ph.D.
1985, University of Missouri-Columbia

Professors

Zenia Agustin, Ph.D.
1997, Bowling Green State University

Chunqing Lu, , Ph.D.
1986, University of New York at Buffalo

Andrew A. Neath, Ph.D.
1994, University of California at Davis

George Pelekanos, Ph.D.
1997, University of Delaware

Edward C. Sewell, Ph.D.
1990, Cornell University

Associate Professors

Marcus Agustin, Ph.D.
1997, Bowling Green State University

Marilyn Hasty, Ph.D.
1986, Southern Illinois University Carbondale

Hee Leem Koung, Ph.D.
2003, University of Iowa

James L. Parish, Ph.D.
1985, University of Chicago

G. Stacey Staples, Ph.D.
2004, Southern Illinois University Carbondale

Tammy M. Voepel, Ph.D.
1997, University of Missouri-Columbia

Assistant Professors

Song Foh Chew, Ph.D.
2005, Purdue University

Myung-Sin Song, Ph.D.
2005, University of Iowa

Cynthia Traub, Ph.D.
2006, Washington University

Adam G. Weyhaupt, Ph.D.
2006, Indiana University

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
COLLEGE OF ARTS & SCIENCES

Sample Four-Year Curriculum- BS

	FALL	SPRING
YEAR 1	**MATH 150** Calculus I (5) **ECON 111** Principles of Macroeconomics (3) General Education (6) Total 14	**MATH 152** Calculus II (5) **CS 140** Introduction to Computing I (4) **ECON 112** Principles of Microeconomics (3) General Education (6) Total 18
YEAR 2	**MATH 250** Calculus III (4) **MATH 223** Logic and Mathematical Reasoning (3) **PHYS 151** University Physics I (4) **PHYS 151L** University Physics I Lab (1) **ACCT 200** Fundamentals of Financial Accounting (3) Total 15	**MATH 305** Differential Equations (3) **MATH 321** Linear Algebra I (3) MATH 350 Introduction to Analysis (3) **ACCT 210** Managerial Accounting (3) General Education (5) Total 17
YEAR 3	MATH 340 Theory of Interest (3) STAT 480a Introduction to Mathematical Statistics (3) MATH 465 Numerical Analysis (3) FIN 320 Finance Management and Decision Making (3) General Education (3) Total 15	STAT 480b Introduction to Mathematical Statistics (3) STAT 486 Actuarial Mathematics (3) Finance elective (3) OR 441 Stochastic Models (3) General Education (3) Total 15
YEAR 4	MATH, STAT, or OR elective 3) MATH 498 Senior Seminar (2) FIN 420 Problems in Corporate Finance (3) General Education (8) Total 16	STAT 482 Regression Analysis (3) MATH, STAT, or OR elective (3) MATH 499 Senior Project (2) General Education (3) Electives (4) Total 15

TRANSFER STUDENTS Maximize your transfer experience - complete the **bolded** courses/requirements pre-transfer **AND** satisfy the Illinois Articulation Initiative (IAI) General Ed Core or receive an AA, AS, or AAT (early childhood, special ed, or math) degree from an IAI community college. If 'Minor' requirements are shown, discuss careful course selection with the academic advising contact listed. Transfer Credit Equivalency Guides are located at ***siue.edu/transfer/***

BA degree requires two semesters of same foreign language.

Exit Requirements

- Complete all specific program requirements.
- Complete all University requirements including:
  - all general education requirements
  - a minimum of 124 credit hours
    - at least 30 of which must be completed at SIUE
    - at least 60 of which must be completed at a regionally accredited 4-year institution
  - A minimum cumulative grade point average of 2.0
  - Bachelor of Arts only: one year of the same foreign language
- File an Application for Graduation by the first day of the term in which you plan to graduate.

Application Deadline

Please refer to SIUE's undergraduate application deadlines.

Academic Advising Information

Brian Hinterscher
College of Arts and Sciences Undergraduate Advising
Campus Box 1609
SIUE
Edwardsville, IL 62026-1609
618.650.5525

Contact Info

SIUE Department of Mathematics and Statistics
Campus Box 1653
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618.650.2250