UNDERGRAD

MATHEMATICAL STUDIES
Actuarial Science Specialization

SIUe

College of Arts and Sciences • Department of Mathematics and Statistics

Degrees Available at SIUE

- Bachelor of Arts or Bachelor of Science in Mathematical Studies, Actuarial Science Specialization

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, financial 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. 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.

Continued ...

Faculty

Distinguished Research Professors

Krzysztof Jarosz, Ph.D.
1982, University of Warsaw

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

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

Professors

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

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

Associate Professors

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

Koung Hee Leem, 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

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

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

Adam G. Weyhaupt (Chair), Ph.D.
2006, Indiana University

Assistant Professors

Vincent Keiftenbold
2010, University of North Texas

Cynthia Traub, Ph.D.
2006, Washington University

Faculty listing current as of October 2012

SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE
COLLEGE OF ARTS & SCIENCES

Sample Four-Year Curriculum- Bachelor of Science, Mathematical Studies - Actuarial Science Specialization

	FALL 2012		SPRING 2013	
YEAR 1	**MATH 150** – Calculus I (BPS)	5	**MATH 152** – Calculus II (BPS)	5
	ECON 111 – Principles of Macroeconomics (BSS)	3	**CS 140** – Introduction to Computing I	4
	ENG 101 - English Composition I	3	**ECON 112** – Principles of Microeconomics (BSS)	3
	SPC 103 - Interpersonal Communication (EUSC)	3	**ENG 102** - English Composition II	3
	Total	14	PHIL 106 or MATH 106	3
			Total	18
YEAR 2	**MATH 250** – Calculus III (BPS)	4	**MATH 305** – Differential Equations	3
	MATH 223 – Logic and Mathematical Reasoning	3	**MATH 321** – Linear Algebra I	3
	PHYS 151 – University Physics I (BPS)	4	MATH 350 – Introduction to Analysis	3
	PHYS 151L – University Physics I Lab (EL)	1	**ACCT 210** – Managerial Accounting	3
	ACCT 200 – Fundamentals of Financial Accounting	3	Fine & Performing Arts (BFPA)	3
	Total	15	Humanities (BHUM)/Global Cultures (EGC)	3
			Total	18
YEAR 3	MATH 340 – Theory of Interest	3	STAT 480b – Introduction to Mathematical Statistics	3
	STAT 480a – Introduction to Mathematical Statistics	3	STAT 486 – Actuarial Mathematics	3
	MATH 465 – Numerical Analysis	3	Finance elective	3
	FIN 320 – Finance Management and Decision Making	3	OR 441 – Stochastic Models	3
	Life Science with a lab (BLS) (EL)	4	Interdisciplinary Studies (IS)	3
	Total	16	Total	15
YEAR 4	MATH, STAT, or OR elective	3	STAT 482 – Regression Analysis	3
	MATH 498 – Senior Seminar	2	MATH, STAT, or OR elective	3
	FIN 420 – Problems in Corporate Finance	3	MATH 499 – Senior Project	2
	Information & Communication in Society (BICS)	3	Health Experience (EH)	3
	Elective	3	Electives	3
	Total	14	Total	14

Bachelor of Arts requires completion of eight courses in fine and performing arts or humanities including two semesters of the same foreign language. Bachelor of Science requires completion of eight lectures courses in life, physical or social science including two with labs (EL).
Check the Course Equivalency Guides at siue.edu/transfer for approved courses.

TRANSFER STUDENTS Maximize your transfer experience - complete the **bolded** courses/requirements pre-transfer **AND** satisfy either 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***

Admission Requirements

- Complete MATH 120 and 125, or mathematics courses having these as prerequisites (or equivalent courses at another accredited institution of higher education)
- Maintain 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.

Graduation 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
- File an Application for Graduation by the first day of the term in which you plan to graduate.

Contact Information

Department of Mathematics and Statistics
College of Arts and sciences
618.650.2382

This information is concurrent with the 2012 - 2013 academic catalog. Courses are subject to change at any time.

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