

# MATHEMATICS AND STATISTICS

## Statistics



College of Arts and Sciences • Department of Mathematics and Statistics

### Degrees Available at SIUE

- Bachelor of Arts
- Bachelor of Science

### Why Statistics?

Election polls; economic trends; product design; market research; social behaviors — statistics is an ideal profession for those interested in analysis and interpretation of data as a fundamental process in decision-making. It uses the scientific application of mathematics to collect and analyze information in such a way that a conclusion can be developed. The relevance of statistics cannot be understated — it touches virtually every career field. From developing consumer surveys or studying purchasing behaviors to measuring the cost of living or analyzing market trends for potential business growth, statistics are used in a variety of diverse fields.

### Statistics at SIUE

All full-time faculty members in the Department of Mathematics and Statistics hold doctorate degrees within their area of specialization. SIUE offers small class sizes and close mentoring by mathematics and statistics faculty as well as opportunities for research. Because many of the statistical problems addressed require complex equations, the university has an extensive network of computer labs across the campus containing more than 500 computers equipped with specialized mathematics software.

### Career Outlook

Good news for those graduating with a degree in statistics: The respected Jobs Rated Almanac, which analyzes data from the U.S. Department of Labor Statistics and the U.S. Census Bureau, ranks statistician among the top 3 jobs in America. Because the collection and analysis of data applies to virtually every field, those with a degree in statistics can apply their skills in a wide array of professions, including those in business, government, defense, and science, among many others. One-third of statisticians work for federal, state or local governments, although many independent businesses employ statisticians to analyze current market trends.

### 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 Koug, 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

|        | FALL  | SPRING   |
|--------|---|--|
| YEAR 1 | <b>MATH 150</b> Calculus I (5)<br>General Education (9)<br>Total 14   | <b>MATH 152</b> Calculus II (5)<br><b>CS 140</b> Introduction to Computing I (4)<br>General Education (9)<br>Total 18                                  |
| YEAR 2 | <b>MATH 250</b> Calculus III (4)<br><b>PHYS 151</b> University Physics I (INSM) (4)<br><b>PHYS 151L</b> University Physics I Lab (1)<br><b>MATH 223</b> Logic and Mathematical Reasoning (3)<br>General Education (4)<br>Total 16 | <b>MATH 321</b> Linear Algebra I (3)<br>MATH 350 Introduction to Analysis (3)<br>Supporting Courses (3)<br>General Education (3)<br>Total 17           |
| YEAR 3 | STAT 480a Introduction to Mathematical Statistics (3)<br>MATH, STAT, or OR elective (3)<br>Supporting Course (3)<br>General Education (4)<br>Total 16   | STAT 480b Introduction to Mathematical Statistics (3)<br>MATH, STAT, or OR elective (3)<br>Supporting Courses (6)<br>General Education (3)<br>Total 15 |
| YEAR 4 | MATH 498 Senior Seminar (2)<br>MATH, STAT, or OR elective (3)<br>Supporting Courses (3)<br>General Education (3)<br>Electives (4)<br>Total 15   | STAT 482 Regression Analysis (3)<br>Supporting Course (3)<br>MATH 499 Senior Project (2)<br>General Education (3)<br>Electives (4)<br>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/](http://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

Department of Mathematics and Statistics  
 Campus Box 1653  
 SIUE  
 Edwardsville, IL 62026-1653  
 618.650.2250

