MATHEMATICS-ACTUARIAL SCIENCE-FINANCE (BA OR BS)

Admission

This degree is offered through the College of Liberal Arts and Sciences. Admission to the Actuarial Science program will be available only to students who meet the following two requirements. First, the student must have a total grade point average of 3.2 or higher or a grade point average of 3.2 or higher in mathematics. The student must also satisfy one of the following:

- 1. completed MATH 1126Q or MATH 1131Q Calculus I with a grade of at least "B":
- 2. successfully completed an honors calculus course with a grade of at least "C";
- 3. received AP credit for MATH 11310 Calculus I: or
- 4. received a passing score on one or more of the actuarial examinations.

Students not satisfying one or more of the requirements may be admitted into the program by the Mathematics Department Actuarial Committee.

To remain as an Actuarial Science Major, the student is expected to maintain a total grade point average of 3.2 or higher.

Requirements

The requirements for the B.S. or B.A. degree in Mathematics-Actuarial Science-Finance are 40 credits at the 2000 level or above in Mathematics, Statistics, Business, and related areas and 15 credits in Finance. The required courses are:

| Course | Title | Credits | |
|---|--|---------|--|
| Select one of the following: 4 | | | |
| MATH 2110Q | Multivariable Calculus | | |
| MATH 2143Q | Advanced Calculus III | | |
| MATH 2210Q | Applied Linear Algebra | 3 | |
| or MATH 2144Q | Advanced Calculus IV | | |
| MATH 2620 | Financial Mathematics I | 3 | |
| MATH 3160 | Probability | 3 | |
| MATH 3620 | Foundations of Actuarial Science | 3 | |
| MATH 3630 | Long-Term Actuarial Mathematics I | 4 | |
| MATH 3639 | Actuarial Loss Models | 3 | |
| MATH 3640 | Short-Term Insurance Ratemaking | 3 | |
| MATH 3650 | Financial Mathematics II | 3 | |
| MATH 3660 | Advanced Financial Mathematics | 3 | |
| STAT 3375Q | Introduction to Mathematical Statistics I | 3 | |
| STAT 3445 | Introduction to Mathematical Statistics II | 3 | |
| ACCT 2001 | Principles of Financial Accounting | 3 | |
| FNCE 4209 | Applications in Financial Management | 3 | |
| FNCE 4306 | Financial Services | 3 | |
| FNCE 4430 | Mergers and Acquisitions | 3 | |
| Select the remainder of the 15 credits of Finance from the following: | | | |
| FNCE 4302 | Fixed Income Securities | | |

| Total Cre | edits | | 56 |
|-----------|-------|-------------------------------------|----|
| FNCE | 4309 | High Frequency Trading Management | |
| FNCE | 4308 | Introduction to Algorithmic Trading | |
| FNCE | 4307 | Financial Modeling | |
| FNCE | 4305 | Global Financial Management | |
| | | Management | |
| FNCE | 4304 | Financial Derivatives and Risk | |

Total Credits

Writing and Information Literacy Requirements

To satisfy the Writing in the Major and Information Literacy competencies, all students must pass one of the following courses:

| Course | Title | Credits |
|------------|---------------------------------------|---------|
| MATH 2705W | Technical Writing in Mathematics | 1 |
| MATH 2710W | Transition to Advanced Mathematics | 3 |
| MATH 2720W | History of Mathematics | 3 |
| MATH 2794W | Mathematics Writing Seminar | 2 |
| MATH 3670W | Technical Writing for Actuaries | 3 |
| MATH 3710W | Introduction to Mathematical Modeling | 3 |
| MATH 3796W | Senior Thesis in Mathematics | 3 |
| STAT 3494W | Undergraduate Seminar | 1 |