Mathematical Sciences

Contact Information

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- Mathematical Sciences Minor

The Mathematical Sciences Department is designed to meet the ever-increasing demands for diverse quantitative skills.

By making different choices from technical electives, students can tailor their degrees to prepare for these various careers. Those who plan to teach mathematics, work in engineering, or work in the physical sciences should choose mathematics courses. Those who wish to apply mathematical methods to life sciences, social sciences, actuarial sciences, or business fields should choose statistics courses. Any of these choices provide excellent preparation for graduate work in fields that need quantitative skills.

The Bachelor's Degree

The B.A. in Mathematical Sciences is designed to prepare students for careers using mathematics, operations research, and statistics in the fields of teaching, research, industry, insurance, and management or for graduate study in mathematical sciences or related areas.

Advising

Students should consult with academic advisors in the major for specific guidance regarding completion of general education requirements.

Grading Policy

Required core and elective MAT courses must be numbered 330 or higher, and must be taken for a letter grade. With the exception of MAT 330 and MAT 491, the CR/NC option is not acceptable. Transfer credit for upper-division course work is evaluated on a case-by-case basis through a Student Petition.

Mathematics Placement

All mathematics courses have prerequisites to assure appropriate placement. For mathematics courses at or below 100-level, students may meet prerequisites by having an appropriate standardized test score (ACT Math Score or SAT Math Score) or by earning an appropriate score on the placement test (ACCUPLACER Math test). Details can be found at the website of the Department of Mathematical Sciences.

Program Learning Outcomes

- Apply algorithms, check the reasonableness of solutions, and communicate the reasoning and results in coherent English.

- Formulate mathematical models, or apply mathematical theorems, check the reasonableness of solutions, and communicate the reasoning and results in coherent English.

- Apply mathematical reasoning to solve problems, test conjectures and examine the validity of the arguments involved.

- Able to represent and describe random phenomena through mathematical models and make statistical decisions.

Requirements

Required Courses

MAT 330	Entrance Assessment	0
Core Courses		
MAT 332	Linear Algebra	4
MAT 415	Advanced Calculus	4
MAT 431	Mathematical Statistics I	4
MAT 444	Operations Research Methods	4
MAT 491	Exit Assessment	0
Select from one of the following two clusters:		16
Cluster A		
MAT 403	Abstract Algebra	
MAT 404	Geometry	
Two MAT elective courses (8 hours)		
Cluster B		
MAT 421	Statistical Methods	
MAT 432	Mathematical Statistics II	
Two MAT elective courses (8 hours)		
Total Hours		**32**

Minors

A minor in mathematical sciences augments a student's background in mathematics by increasing knowledge of mathematics, operations research, or statistics -- knowledge that is useful in careers in teaching, research, industry, or management.

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Online

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