Mizzou
University of Missouri

BA in Mathematics

Degree Program Description

Mathematics is part of the foundation of all the sciences, engineering, statistics, and many social sciences. A degree in mathematics provides one with both the applied mathematics knowledge necessary to engage in these disciplines, and formal reasoning skills that can be applied in any area. The major is well suited for those interested in mathematics alone, or for those looking to supplement another major. Our students go on to jobs or further study in all the above disciplines, as well as many others (medical school or law school, for instance).

Major Program Requirements

Arts and Science Breadth and Depth requirements (for the BA) must be satisfied, in addition to the Department Level Requirements (http://catalog.missouri.edu/collegeofartsandscience/mathematics/department-level-requirements-mathematics/). The foreign language requirement must be satisfied either by taking a foreign language for 4 years in high school or by completing a language sequence at MU. In addition to University (http://catalog.missouri.edu/academicdegreerequirements/universityrequirements/), general education (http://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/), and College of Arts and Science (http://catalog.missouri.edu/collegeofartsandscience/#undergraduatetext) requirements, students must also meet the following major program requirements. All major requirements in the College of Arts and Science must be completed with grades of C- or higher unless otherwise indicated.

Students may apply to be Math majors upon meeting the following criteria:

- Completion of ENGLSH 1000 and MATH 2300
- Both cumulative GPA and GPA in Math courses numbered 1500 and above (expect for 2100) of 2.5 or above.

All math courses required for the degree must be passed with a grade of C- or above.

Core Math Requirements for all Math degrees (24 credits)

MATH 1500	Analytic Geometry and Calculus I	5
MATH 1700	Calculus II	5
MATH 2300	Calculus III	3
MATH 3000	Introduction to Advanced Mathematics	3
MATH 4100	Differential Equations	3
MATH 4140	Matrix Theory	3
INFOTC 1040	Introduction to Problem Solving and Programming	3
or CMP_SC 1050	Algorithm Design and Programming I	
Total Credits		**25**

Additional requirements for the BA degree

- MATH 4700 Advanced Calculus of One Real Variable I
- MATH 4720 Introduction to Abstract Algebra I
- Four approved 4000 level Math electives

Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

First Year

Fall	CR	Spring	CR
MATH 1500	5	MATH 1700	5
Humanities/Fine Arts Course	3	Second language I	4-6
ENGLSH 1000	3	Humanities/Fine Arts Course	3
HIST 1100, 1200, or POL_SC 1100	3	Biological/Physical/Mathematical Science Course (Not taught by the Math Department)	4
Elective Course			
	14		**16-18**

Second Year

Fall	CR	Spring	CR
MATH 2300	3	MATH 4100	3
INFOTC 1040	3	MATH 4140	3
Second language II	4-6	Second language III	3-4
Humanities/Fine Arts Course	3	Biological/Physical/Mathematical Science Course (Not taught by the Math Department)	3
Elective Course	3	BIO SC course	3
	16-18		**15-16**

Third Year

Fall	CR	Spring	CR
MATH 3000	3	MATH 4700	3
4000-level MATH elective	3	4000-level MATH elective	3
4000-level MATH elective	3	Social Science Course (in a field different from the History or Political Science Course taken in Fall I)	3
Biological/Physical/Mathematical Science Course (Not taught by the Math Department)	3	Elective Course	3
Elective Course	3	Elective Course	3
	15		**15**

Fourth Year

Fall	CR	Spring	CR
MATH 4720	3	4000-level Math Elective	3
Behavioral Science Course 2000-level	3	Humanities/Fine Arts Course 2000-level	3
Humanities/Fine Arts Course	3	Social Science Course	3
Social Science Course	3	Elective Course	3
Elective Course	3		
	15		**12**

Total Credits: 118-123