Bachelor of Science Degree in Mathematics

About This Program

The Bachelor of Science in Mathematics is a flexible option primarily intended for students wishing to pursue graduate work in mathematics.

Competencies

1. The student will gain knowledge and skills in a wide range of mathematical fields, including abstract algebra, analysis, and statistics.
2. The student will a gain a deep knowledge of mathematics that will prepare them for graduate school.
3. The student will gain knowledge and understanding of definitions and theorems on abstract mathematical concepts.
4. The student will gain knowledge and skills in solving problems and writing proofs about abstract mathematical concepts.

Curriculum

Foundations		
General Core Requirements (https://catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/)		42
Students must complete specific courses in certain core areas		
For Communication select:		
ENGL 1301	RHETORIC AND COMPOSITION I	
ENGL 1302	RHETORIC AND COMPOSITION II	
For Mathematics select:		
MATH 1426	CALCULUS I	
MATH 2425	CALCULUS II	
For Life & Physical Science select one of the following sequences:		
BIOL 1441 & BIOL 1442	BIOLOGY I FOR SCIENCE MAJORS: CELL AND MOLECULAR BIOLOGY and BIOLOGY II FOR SCIENCE MAJORS: ECOLOGY AND EVOLUTION	
CHEM 1441 & CHEM 1442	GENERAL CHEMISTRY I and GENERAL CHEMISTRY II	
GEOL 1301 & GEOL 1302	EARTH SYSTEMS and EARTH HISTORY	
PHYS 1443 & PHYS 1444	GENERAL TECHNICAL PHYSICS I and GENERAL TECHNICAL PHYSICS II	
Mathematics Foundations		
Additional hours required in core from Calculus core sequence above.		2
UNIV 1131	STUDENT SUCCESS	1
or UNIV 1101	CAREER PREPARATION AND STUDENT SUCCESS	
Select one of the following in computer programming:		3
CSE 1310	INTRODUCTION TO COMPUTERS & PROGRAMMING	
DATA 3401	PYTHON FOR DATA SCIENCE 1	
MAE 2360	NUMERICAL ANALYSIS & PROGRAMMING	
Select two courses in Life & Physical Science approved for the core and not previously taken.		6
Mathematics Specialization		
MATH 2326	CALCULUS III	3
MATH 3300	INTRODUCTION TO PROOFS (satisfies Oral Communication Competency)	3
MATH 3316	STATISTICAL INFERENCE	3
MATH 3318	DIFFERENTIAL EQUATIONS	3
MATH 3321	ABSTRACT ALGEBRA I	3
MATH 3330	INTRODUCTION TO LINEAR ALGEBRA AND VECTOR SPACES	3
MATH 3335	ANALYSIS I	3
MATH 3345	NUMERICAL ANALYSIS AND COMPUTER APPLICATIONS	3
Additional advanced hours in mathematics		18
Additional advanced hours (MATH 3301 or above, except for capstone mathematics courses specifically for prospective middle or secondary grades mathematics teachers)		
Select any two from separate groups:		6

Group 1		
MATH 4321	ABSTRACT ALGEBRA II	
Group 2		
MATH 4334	ADVANCED MULTIVARIABLE CALCULUS	
MATH 4335	ANALYSIS II	
Group 3		
MATH 4311	STOCHASTIC MODELS AND SIMULATION	
MATH 4312	ACTUARIAL RISK ANALYSIS	
MATH 4313	MATHEMATICAL STATISTICS	
MATH 4314	ADVANCED DISCRETE MATHEMATICS	
MATH 4324	INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS	
MATH 4330	ADVANCED LINEAR ALGEBRA	
MATH 4345	NUMERICAL ANALYSIS & COMPUTER APPLICATIONS II	
Minor		18
Total Hours		**120**

Capstone mathematics courses specifically for prospective middle grade mathematics teachers do not count toward a degree in mathematics. Capstone mathematics courses for secondary mathematics teachers will count only for those working on the BS in Mathematics with Secondary Teaching Pathway.

SUGGESTED COURSE SEQUENCE

First Year

First Semester	Hours	Second Semester	Hours
MATH 1426	4	MATH 2425	4
Life and Physical Science (Additional Science Requirement)	3-4	MATH 3316	3
ENGL 1301	3	Life and Physical Science (Additional Science Requirement)	3-4
Creative Arts	3	Communication	3
UNIV 1131 (or UNIV 1101)	1	Computer Programming Elective	3-4
	14-15		**16-18**

Second Year

First Semester	Hours	Second Semester	Hours
MATH 2326	3	MATH 3318	3
MATH 3300	3	MATH 3321	3
MATH 3330	3	Social and Behavioral Science	3
Language, Philosophy and Culture	3	Component Area	3
Minor	3	Minor	3
	15		**15**

Third Year

First Semester	Hours	Second Semester	Hours
MATH 3345	3	MATH 33XX (Math Elective)	3
MATH 3335	3	MATH 33XX (Math Elective)	3
MATH 33XX (Math Elective)	3	MATH 33XX (Math Elective)	3
Select one of the following:	3	Select one of the following:	3
HIST 1301, HIST 1302, HIST 1331 or HIST 1332		HIST 1301, HIST 1302, HIST 1331 or HIST 1332	
Minor	3	Minor	3
	15		**15**

Fourth Year

First Semester	Hours	Second Semester	Hours
MATH 33XX (Math elective)	3	Mathematics Sequence (Select two and must be from separate Groups)	6
MATH 33XX (Math Elective)	3	Group 1	
Select one of the following:	3	MATH 4321	
POLS 2311 or POLS 2312		Group 2	
Life and Physical Science (Sequence)	3-4	MATH 4334	

Minor	3	MATH 4335	
		Group 3	
		MATH 4311	
		MATH 4312	
		MATH 4313	
		MATH 4314	
		MATH 4324	
		MATH 4330	
		MATH 4345	
		Select one of the following:	3
		POLS 2311 or POLS 2312	
		Life and Physical Science (Sequence)	3-4
		Minor	3
	15-16		**15-16**

Total Hours: 120-125

Advising Resources

First-time-in-college students should plan to speak to the math advisor when starting their second year. Transfer students should contact the math advisor after acceptance at UTA to create a degree plan and enroll in classes.

Location:

PKH 489

Email:

math.advising@uta.edu

Phone:

817-272-9688

Web:

Contact Information and Scheduling (https://www.uta.edu/academics/schools-colleges/science/departments/mathematics/advising/)