Bachelor of Science in Mathematics (Pure Mathematics)

About This Program

The Bachelor of Science in Mathematics with an emphasis on Pure Mathematics is intended primarily for students wishing to pursue graduate work in mathematics.

Competencies

1. The student will gain knowledge and skills in mathematics that is both broad and deep, providing a strong preparation for graduate school.
2. The student will gain knowledge and skills in a wide range of mathematical fields, including abstract algebra, analysis, and statistics.
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 within certain core areas		
For Communication, select:		
ENGL 1301 & ENGL 1302	RHETORIC AND COMPOSITION I and RHETORIC AND COMPOSITION II	
For Mathematics, select:		
MATH 1426	CALCULUS I	
MATH 2425	CALCULUS II	
For Life & Physical Sciences, 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.		2
UNIV 1131	STUDENT SUCCESS	1
or UNIV 1101	CAREER PREPARATION AND STUDENT SUCCESS	
Select two courses in Life & Physical Science approved for the core and not previously taken.		6
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	
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
MATH 4321	ABSTRACT ALGEBRA II	3

MATH 4322	INTRODUCTION TO COMPLEX VARIABLES	3
MATH 4335	ANALYSIS II	3
Select addtional advanced hours in mathematics except for capstone mathematics courses specifically for prospective middle grades or secondary grades mathematics teachers.		33
Total Hours		**120**

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 (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	MATH 33XX	3
MATH 33XX	3	MATH 33XX	3
Language, Philosophy, and Culture	3	Social and Behavioral Science	3
	15		**15**

Third Year

First Semester	Hours	Second Semester	Hours
MATH 3345	3	MATH 4321	3
MATH 4322	3	MATH 4335	3
MATH 3335	3	MATH 33XX	3
MATH 33XX	3	MATH 33XX	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	
	15		**15**

Fourth Year

First Semester	Hours	Second Semester	Hours
MATH 33XX	3	MATH 33XX	3
MATH 33XX	3	MATH 33XX	3
Component Area	3	MATH 33XX	3
Select on of the following:	3	Select on of the following:	3
POLS 2311 or POLS 2312		POLS 2311 or POLS 2312	
Life and Physical Science (Sequence)	3-4	Life and Physical Science (Sequence)	3-4
	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/)