Bachelor of Science in Mathematics (Teaching Certification)

About This Program

The Bachelor of Science in Mathematics with Teaching Certification is intended for students desiring to teach mathematics at the secondary school level. It is offered in coordination with UT Arlington's UTeach program.

Students interested in this pathway should consult an UTeach advisor to understand current certification requirements.

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 gain the knowledge and skills to teach mathematics at the secondary level.
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 Life & Physical Science select one sequence from the following:		
PHYS 1443 & PHYS 1444	GENERAL TECHNICAL PHYSICS I and GENERAL TECHNICAL PHYSICS II	
CHEM 1441 & CHEM 1442	GENERAL CHEMISTRY I and GENERAL CHEMISTRY II	
BIOL 1441 & BIOL 1442	BIOLOGY I FOR SCIENCE MAJORS: CELL AND MOLECULAR BIOLOGY and BIOLOGY II FOR SCIENCE MAJORS: ECOLOGY AND EVOLUTION	
GEOL 1301 & GEOL 1302	EARTH SYSTEMS and EARTH HISTORY	
For Mathematics select:		
MATH 1426	CALCULUS I	
MATH 2425	CALCULUS II	
Mathematics Foundations		
Additional hours required in core from Calculus core sequence.		2
Select one additional science course from the list above or one that uses a course in this list as a prerequisite.		3
UNIV 1131	STUDENT SUCCESS	1
PHIL 2314	PERSPECTIVES ON SCIENCE AND MATHEMATICS	3
Select one of the following in computer programming:		3
DATA 3401	PYTHON FOR DATA SCIENCE 1	
CSE 1310	INTRODUCTION TO COMPUTERS & PROGRAMMING	
MAE 2360	NUMERICAL ANALYSIS & PROGRAMMING	
Four hours in Modern or Classical Languages or course(s) closely related to the major.		4
Mathematics Specialization		
MATH 2326	CALCULUS III	3
MATH 2330	FUNCTIONS AND MODELING	3
MATH 3300	INTRODUCTION TO PROOFS (satisfies Oral Communication Competency)	3
MATH 3301	FOUNDATIONS OF GEOMETRY	3
MATH 3307	ELEMENTARY NUMBER THEORY	3
MATH 3314	DISCRETE MATHEMATICS	3

MATH 3316	STATISTICAL INFERENCE	3
MATH 3321	ABSTRACT ALGEBRA I	3
MATH 3330	INTRODUCTION TO LINEAR ALGEBRA AND VECTOR SPACES	3
MATH 3335	ANALYSIS I	3
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	
Select 3 additional hours in MATH courses numbered 3302 or above (except MATH 4350 and MATH 4351).		3
Education Specialization		
SCIE 1201	STEP 1: INQUIRY APPROACHES TO TEACHING	2
SCIE 1202	STEP 2: INQUIRY-BASED LESSON DESIGN	2
SCIE 4331	KNOWING AND LEARNING IN STEM	3
SCIE 4332	CLASSROOM INTERACTIONS	3
SCIE 4333	MULTIPLE TEACHING PRACTICES	3
Select one from the following:		3
BIOL 4343	RESEARCH METHODS - UTEACH	
CHEM 4343	RESEARCH METHODS - UTEACH	
GEOL 4343	RESEARCH METHODS - UTEACH	
PHYS 4343	RESEARCH METHODS - UTEACH	
SCIE 4607	CAPSTONE TEACHING EXPERIENCE FOR STEM SECONDARY GRADES	6
SCIE 4107	CAPSTONE TEACHING EXPERIENCE SEMINAR	1
Total Hours		**120**

MATH SEQUENCES

All students seeking a bachelor's degree in mathematics must take at least two mathematics sequences. A sequence is defined as a 3300-level course followed by a 4300-level course in the same general area of mathematics. Each of the two sequences must build from distinct 3300-level courses.

It is strongly recommended that mathematics majors take MATH 3330 INTRODUCTION TO LINEAR ALGEBRA AND VECTOR SPACES and MATH 3300 INTRODUCTION TO PROOFS as early as possible, since these courses are prerequisites for many other 3000/4000-level courses. It is suggested to take MATH 3330 simultaneously with Calculus III. Mathematics majors must pass MATH 3300 before attempting the required courses MATH 3321 ABSTRACT ALGEBRA I and MATH 3335 ANALYSIS I. It is strongly recommended that mathematics majors with little or no computer programming experience satisfy the computer programming requirement as early as possible with CSE 1310 INTRODUCTION TO COMPUTERS & PROGRAMMING, CSE 1311 INTRODUCTION TO PROGRAMMING FOR ENGINEERS, CSE 1320 INTERMEDIATE PROGRAMMING, CSE 1325 OBJECT-ORIENTED PROGRAMMING, or MAE 2360 NUMERICAL ANALYSIS & PROGRAMMING.

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/)