

**Bachelor of Arts: Major in MATH
2016-2017 Catalog Year**

**BA in MATH Requirements
With teacher certification**

- 120 Total Semester Hours
 - 42 Advanced Hours
 - 24 Advanced Hours must be completed at UNT, including 12 advanced hours in your major
 - A minimum of 30 Hours must be completed at UNT
- An overall GPA of 2.75
A GPA of 2.75 in all UNT courses
A GPA of 2.75 in all MATH courses
A GPA of 2.0 in MATH courses numbered 3350 and above

University Core Requirements

- English:** 6 hours
ENGL 1310/1313, **TECM 1700** _____
ENGL 1320/1323, **TECM 2700** (recommended) _____
Math: Will be completed by completing the major
Laboratory Sciences: See below for approved courses.
Creative Arts: 3 hours from approved list _____
Language, Philosophy, and Culture: Satisfied by completing the minor
American History: 6 hours HIST 2610 _____
HIST 2620 _____
Government/Political Science: 6 hours PSCI 1040 _____
PSCI 1050 _____
Social and Behavior Sciences: 3 hours from approved list _____
Note: ECON 1100 and 1100 have greater mathematical content and are required for the actuarial certificate.
Component Area Option: Will be completed by completing the major and Laboratory Science requirements below.

Laboratory Science Requirements

- One Science Course with Laboratory:** 4 or 5 hours, chosen from
BIOL 1710 and 1760 _____
CHEM 1410 and 1430 _____
CHEM 1420 and 1440 _____
PHYS 1710 and 1730 _____
PHYS 2220 and 2240 _____
Physical Sciences: 4 hours, chosen from
CHEM 1410 and 1430 General Chemistry for Science _____
Majors and Laboratory
PHYS 1710 and 1730 Mechanics and Laboratory _____
One Additional Science Course with Laboratory: 3 or 4 hours
See an advisor for a list of approved courses _____
Notes: Equivalent honors courses can be used. Students with a double major or a minor in geography or geology should see an advisor.
Students seeking certification in both math and physics are required to take PHYS 1710/1730, PHYS 2220/2240, and PHYS 3010/3030.

Arts and Sciences Requirements

- Foreign Language:** 6 hours in one language. Prerequisites for 2040 and 2050 courses are LANG 1010 and 1020 courses or placement (Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language)
- 2040 _____ 2050 _____
See attached handout for College of Arts and Sciences Requirements approved course list. Students intending to pursue a graduate degree in mathematics are encouraged to study French, German or Russian.

Major Requirements

- Mathematics Core:** 16 hours
MATH 1710 Calculus I _____
MATH 1720 Calculus II _____
MATH 2700 Linear Algebra and Vector Geometry _____
MATH 2730 Calculus III _____
MATH 3000 Real Analysis I _____
Secondary Teacher Preparation: 21 hours
MATH 2000 Discrete Mathematics _____
MATH 2100 Functions and Modeling for Secondary Mathematics Instruction _____
MATH 3680 Applied Statistics _____
MATH 3850 Mathematical Modeling _____
MATH 4050 Advanced Study of the Secondary Mathematics Curriculum _____
MATH 4060 Foundations of Geometry _____
TNTX 3100 Conceptual Algebra and Geometry _____
Analysis: 3 hours chosen from the following
MATH 3350 Introduction to Numerical Analysis _____
MATH 3410 Differential Equations I _____
MATH 3420 Differential Equations II _____
MATH 3610 Real Analysis II _____
MATH 3740 Vector Calculus _____
MATH 4100 Fourier Analysis _____
MATH 4200 Dynamical Systems _____
MATH 4520 Introduction to Functions of a Complex Variable _____
Algebra: 3 hours chosen from the following
MATH 3400 Number Theory _____
MATH 3510 Introduction to Abstract Algebra I _____
MATH 4430 Introduction to Graph Theory _____
MATH 4450 Introduction to the Theory of Matrices _____
MATH 4510 Abstract Algebra II _____
Theory Requirement
At least one of MATH 3510 and 3610 must be chosen above.
Computer Programming: 3 or 4 hours chosen from
CSCE 1010 Introduction to Computer Science _____
CSCE 1020 Program Development _____
CSCE 1030 Computer Science I _____

Minor Requirements

- A minor in Mathematics and Science Secondary Teaching is required.
TNTX 1100 Secondary Teacher Preparation I _____
TNTX 1200 Secondary Teacher Preparation II _____
PHIL 2600 Ethics in Science _____
EDSE 3500 Knowing and Learning in Mathematics and Science _____
EDSE 4000 Classroom Interactions _____
EDSE 4500 Project-Based Instruction in Math, Science and Computer Science _____
EDSE 4608/4618 Student Teaching I/II in Mathematics and Science _____
EDSE 4628 Student Teaching Seminar in Math & Science _____
For eligible students, TNTX 1300 may be substituted for both TNTX 1100 and TNTX 1200.

Academic Advising

To schedule an appointment with a faculty advisor, please e-mail MathAdvising@unt.edu.

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