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

BA in MATH Requirements
Without 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
  - 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: 3 hours from approved list

American History: 6 hours
HIST 2610
HIST 2620

Government/Political Science: 6 hours
PSCI 1040
PSCI 1050

Social and Behavioral Sciences: Completed by finishing certificate.

Component Area Option:
Category 1: MATH 2000 is recommended
Category 2: Will be completed by completing the Laboratory Science requirements below.

Laboratory Science Requirements

Natural and Life Sciences: 5 hours
BIOL 1710 and 1760 Biology for Science Majors I and Lab

Physical Sciences: 4 hours, chosen from
CHEM 1410 and 1430 General Chemistry for Science
PHYS 1710 and 1730 Mechanics and Laboratory

One Additional Science Course: 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.

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

Breadth and Depth Requirements: 15 hours
Pick two courses from one area and one course from the other three areas.

1. Analysis
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

2. Algebra
MATH 3400 Number Theory
MATH 3510 Introduction to Abstract Algebra I
MATH 4010 Introduction to Mathematics
MATH 4430 Introduction to Graph Theory
MATH 4450 Introduction to the Theory of Matrices
MATH 4510 Abstract Algebra II

3. Probability/Statistics
MATH 3680 Applied Statistics
MATH 4610 Probability
MATH 4650 Statistics

4. Geometry/Topology
MATH 3740 Vector Calculus
MATH 4060 Foundations of Geometry
MATH 4500 Introduction to Topology

Mathematics Elective Requirement: 6 hours
Two additional mathematics courses chosen from among MATH 2000 or MATH 3350 or higher.

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
One of the following is required:
- A minor of 18 hours (6 advanced). A minor in statistics does not fulfill this requirement.
- Completion of a second major in addition to mathematics.
- Completion of the Actuarial Science certificate. See separate advising sheet for details.

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.

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

Dr. Jianguo (Jay) Liu, jgliu@unt.edu
Dr. John Quintanilla, John.Quintanilla@unt.edu

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