

Bachelor of Arts with a major in Mathematics  
College of Science Advising Center  
Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

### University Core Requirements

#### Communication (English Composition):

- ENGL 1310: College Writing I
- ENGL 1320: College Writing II or TECM 2700: Technical Writing

#### Creative Arts:

- Choose from approved list

#### Language, Philosophy, & Culture:

- Choose from approved list

#### American History to 1865:

- HIST 2610

#### American History since 1865:

- HIST 2620

#### Federal Government/Political Science:

- PSCI 2305

#### State Government/Political Science:

- PSCI 2306

#### Social & Behavioral Sciences:

- Choose from approved list

### College of Science Requirements

#### Algebra Proficiency

To be admitted into the College of Science, students must complete College Algebra with a grade of C or higher, or demonstrate proficiency through a math placement exam.

#### COS Breadth

Students must complete 12 hours from subjects outside of the College of Science. (*May not also apply to University Core.*)

### Major Requirements

- MATH 1710: Calculus 1
- MATH 1720: Calculus 2
- MATH 2000: Discrete Math
- MATH 2700: Linear Algebra and Vector Geometry
- MATH 2730: Multivariable Calculus
- MATH 3000: Real Analysis
- MATH 3510: Introduction to Abstract Algebra I or  
MATH 3610: Real Analysis II (can be applied to breadth/depth)

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

#### 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

### Major Requirements (continued)

#### 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

#### Probability/Statistics:

- MATH 3680: Applied Statistics
- MATH 4610: Probability
- MATH 4650: Statistics

#### Geometry/Topology:

- MATH 3740: Vector Calculus
- MATH 4060: Foundations of Geometry
- MATH 4500: Introduction to Topology

- 3 additional hours of advanced math from MATH 3350 or higher.

### 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.

### Required Courses for Degree

- Foreign Language Requirement Options:

6 hours in one language – Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

#### OR

6 hours chosen from technical writing courses – TECM 2700, 4180, 4190, or 4250

- CSCE 1010: Introduction to Computer science or CSCE 1030: Computer Science I

- Three lab sciences; see advisor for guidance on best options

CHEM 1410 & 1430: General Chemistry I with Laboratory  
CHEM 1420 & 1440: General Chemistry II with Laboratory  
PHYS 1710 & 1730: Mechanics with Laboratory  
PHYS 2220 & 2240: Electricity & Magnetism with Laboratory  
BIOL 1710 & 1760: Biology for Science Majors I with Laboratory

# Bachelor of Science in Mathematics

College of Science Advising Center

Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu

## University Core Requirements

### Communication (English Composition):

- ENGL 1310: College Writing I
- ENGL 1320: College Writing II or TECM 2700: Technical Writing

### Creative Arts:

- Choose from approved list

### Language, Philosophy, & Culture:

- Choose from approved list

### American History to 1865:

- HIST 2610

### American History since 1865:

- HIST 2620

### Federal Government/Political Science:

- PSCI 2305

### State Government/Political Science:

- PSCI 2306

### Social & Behavioral Sciences:

- Choose from approved list

## College of Science Requirements

- Algebra Proficiency**  
To be admitted into the College of Science, students must complete College Algebra with a grade of C or higher, or demonstrate proficiency through a math placement exam.
- COS Breadth**  
Students must complete 12 hours from subjects outside of the College of Science. (*May not also apply to University Core.*)

## Major Requirements

- MATH 1710: Calculus 1
- MATH 1720: Calculus 2
- MATH 2000: Discrete Math
- MATH 2700: Linear Algebra and Vector Geometry
- MATH 2730: Multivariable Calculus
- MATH 3000: Real Analysis
- MATH 3510: Introduction to Abstract Algebra I or MATH 3610: Real Analysis II (can be applied to breadth/depth)

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

- Analysis: (MATH 3610 required if chosen for depth)*  
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

## Major Requirements (continued)

- Algebra: (MATH 3510 required if chosen for depth)*  
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
- Probability/Statistics:*  
MATH 3680: Applied Statistics  
MATH 4610: Probability  
MATH 4650: Statistics
- Geometry/Topology:*  
MATH 3740: Vector Calculus  
MATH 4060: Foundations of Geometry  
MATH 4500: Introduction to Topology
- 6 additional hours of advanced math from MATH 3350 or higher.

## 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.

## Required Courses for Degree

- Foreign Language Requirement Options:  
6 hours in one language – Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language
- OR  
6 hours chosen from technical writing courses – TECM 2700, 4180, 4190, or 4250
- CSCE 1010: Introduction to Computer science or CSCE 1030: Computer Science I
- One of the following laboratory science options; see advisor for guidance on best options  
CHEM 1410 & 1430: General Chemistry I with Laboratory  
CHEM 1420 & 1440: General Chemistry II with Laboratory  
Any laboratory science
- OR  
PHYS 1710 & 1730: Mechanics with Laboratory  
PHYS 2220 & 2240: Electricity & Magnetism with Laboratory  
Any laboratory science
- OR  
BIOL 1710: Biology for Science Majors I  
BIOL 1720: Biology for Science Majors II  
BIOL 1760: Biology for Science Majors Laboratory  
Any laboratory science