# Bachelor of Science in Mathematics

## 2016-17 Catalog Year

### BSM 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:** Will be completed by 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

**Option 1, Biology Emphasis:**

- BIOL 1710 and 1720 Biology for Science Majors I and II
- BIOL 1760 Biology for Science Majors Laboratory

Either CHEM 1410/1430 or PHYS 1710/1730

**Option 2, Chemistry Emphasis:**

- CHEM 1410 and 1430 General Chemistry for Science
  - Majors and Laboratory
- CHEM 1420 and 1440 General Chemistry for Science
  - Majors and Laboratory

Additional Laboratory Science

**Option 3, Physics Emphasis:**

- PHYS 1710 and 1730 Mechanics and Laboratory
- PHYS 2220 and 2240 Electricity & Magnetism (& Lab)

Additional Laboratory Science

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

Complete either option to satisfy the CAS foreign language requirement.

**Option 1:** 6 hours in one language. (Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language)

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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.

**Option 2:** Complete 6 hours of technical writing courses chosen from TECM 2700, 4180, 4190, 4250, and 4700.

### 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
  - MATH 3680 Applied Statistics
  - MATH 3850 Mathematical Modeling
  - MATH 4050 Advanced Study of the Secondary

### Mathematics Elective Requirement:

- 6 hours
  - Two additional mathematics course numbered 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

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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