

**Bachelor of Arts: Major in MATH
With Certificate in Actuarial Science
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.

Visual and Performing Arts: 3 hours from approved list _____

Humanities: 3 hours from approved list _____

American History: 6 hours

HIST 2610 _____
HIST 2620 _____

Government/Political Science: 6 hours

PSCI 1040 _____
PSCI 1050 _____

Social and Behavior 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 _____
Majors and Laboratory
PHYS 1710 and 1730 Mechanics and Laboratory _____

One Additional Science Course: 3 or 4 hours

See an advisor for an approved list of courses _____

Notes: Equivalent honors courses can be used. Students with a double major or a minor in geography or geology should see an advisor.

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	_____

Breadth and Depth Requirements: 15 hours

Pick two courses from one area and one course from the other three areas. Recommended courses are in bold.

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. **MATH 4650** is recommended.

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	_____

Certificate Requirements

Admission requirements: ECON 1100, ECON 1110, and FINA 3770. See an advisor to enroll in FINA 3770 without first taking ACCT 2010/2020.

Certificate requirements:

ECON 4870	Introduction to Econometrics	_____
FINA 4200	Investments	_____
FINA 4210	Introduction to Derivatives	_____

Plus 3 courses chosen from the following:

FINA 4300, FINA 4310, and FINA 4400	_____
RMIN 2500 or any 4000-level RMIN course	_____
ECON 4030 (recommended), ECON 4180, and ECON 4875	_____

Academic Advising

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

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Updated 3/11/2016