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.

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.
Dr. Jian Guo (Jay) Liu, jgliu@unt.edu
Dr. John Quintanilla, John.Quintanilla@unt.edu
Updated 3/11/2016