Bachelor of Science: Major in MATH With Certificate in Actuarial Science
2016-2017 Catalog Year

BSM 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

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 the 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

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.

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)

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

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: 18 hours
Pick three courses from one area and one course from the others.
Recommended courses are in bold.

1. 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 __________

2. 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 __________

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: 9 hours
Three additional mathematics courses chosen from among MATH 2000 or MATH 3350 or higher. MATH 3350 and either MATH 3850 or MATH 3870 are 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 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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