Bachelor of Arts with a major in Mathematics  
2022 - 2023 Degree Requirements Checklist

College of Science Admission Requirement
Students must demonstrate proficiency in College Algebra by placing into Math Level 2 or higher through the UNT Math Placement Exam OR completing College Algebra or higher with a grade of C or higher.

Math Foundation Requirements
- MATH 1710: Calculus I (4hrs) (C or higher)
- MATH 1720: Calculus I (3hrs) (C or higher)
- MATH 2000: Discrete Math (3hrs) (C or higher)
- MATH 2700: Linear Algebra and Vector Geometry
- MATH 2730: Multivariable Calculus (3hrs)
- MATH 3000: Real Analysis I (3hrs)
- MATH 3510: Intro. to Abstract Algebra I (3hrs) or MATH 3610: Real Analysis II (3hrs) (can double-dip with depth or breadth course)

Major Depth Requirements
Students must complete two courses from one of the following areas
- Analysis area
  - MATH 3350: Intro. to Numerical Analysis (3hrs)
  - MATH 3410: Differential Equations I (3hrs)
  - MATH 3420: Differential Equations II (3hrs)
  - MATH 3610: Real Analysis II (3hrs)
  - MATH 3740: Vector Calculus (3hrs)
  - MATH 4080: Differential Geometry (3hrs)
  - MATH 4100: Fourier Analysis (3hrs)
  - MATH 4200: Dynamical Systems (3hrs)
  - MATH 4520: Intro. to Functions of a Complex Variable (3hrs)
- Algebra area
  - MATH 3400: Number Theory (3hrs)
  - MATH 3510: Intro. to Abstract Algebra I (3hrs)
  - MATH 4010: Intro. to Metamathematics (3hrs)
  - MATH 4430: Intro. to Graph Theory (3hrs)
  - MATH 4450: Intro. to the Theory of Matrices (3hrs)
  - MATH 4510: Abstract Algebra II (3hrs)
- Probability & Statistics area
  - MATH 3680: Applied Statistics (3hrs)
  - MATH 4610: Probability (3hrs)
  - MATH 4650: Statistics (3hrs)
- Geometry & Topology area
  - MATH 3740: Vector Calculus (3hrs)
  - MATH 4060: Foundations of Geometry (3hrs)
  - MATH 4080: Differential Geometry (3hrs)
  - MATH 4500: Intro. to Topology (3hrs)

Major Breadth Requirements
Students must complete one course in each of the three areas above not used to satisfy the depth requirement. (5hrs)

Other Major Requirements
- Three hours of advanced math electives numbered 3350 or above
- Minimum of 2.0 GPA in math courses numbered 3350 or above

Other Required Courses for Degree
- One physical science course with lab intended for science majors (4hrs)

- One life or physical science course with lab intended for science majors (4-5hrs)
- One additional lab science course that meets the university core requirement (3-5hrs)
- Six hours of technical writing courses or six hours of a foreign language
- CSCE 1010: Discovering Computer Science (3hrs) or CSCE 1030: Computer Science I (4hrs)

Minor Requirements
- One of the following is required:
  - minor of at least 18 hours; cannot minor in Statistics
  - Completion of a second major in addition to Mathematics
  - Completion of the Actuarial Science, Data Analytics, or Secondary Teaching certificate

College Requirements
- One of the following:
  - COS Breadth – Students can complete 12 hours from any subject outside of the College of Science. (May not also apply to University Core)
  - Foreign Language – Students must demonstrate proficiency through the 2050 level in one language: Arabic, Chinese, French, German, Italian, Japanese, Latin, Russian, Spanish, or American Sign Language

University Core Requirements
Communication – English Composition and Rhetoric (6hrs total)  
C or higher required for English core
- ENGL 1310: First-Year Writing I (3hrs)
- ENGL 1320: First-Year Writing II (3hrs) or TECM 2700: Technical Writing (3hrs)
Mathematics (at least 3hrs total)
- Double-dips with major requirement Laboratory Sciences (at least 6hrs total)
- Double-dips with major requirement Creative Arts (3hrs total)
- See catalog or online degree audit for acceptable options Language, Philosophy, & Culture (3hrs total)
- See catalog or online degree audit for acceptable options American History (6hrs total)
- HIST 2610: US History to 1865 (3hrs)
- HIST 2620: US History since 1865 (3hrs)
Government/Political Science (6hrs total)
- PSCI 2305: (3hrs)
- PSCI 2306: (3hrs)
Social & Behavioral Sciences (3hrs total)
- See catalog or online degree audit for acceptable options Component Area Option (6hrs total)
- Double-dips with major requirement

Additional University Requirements
- Minimum of 120 total hours
- Minimum of 36 advanced hours
  - Elective requirements vary by path
  - Minimum 2.000 UNT GPA and Overall GPA

College of Science Advising Center; Hickory Hall 283; (940) 369-8606; COSAdvising@unt.edu
This is an unofficial simplified checklist effective Fall 2022. Degree requirements and pre-requisites are subject to change, please check with an advisor for any updates. Online catalog - http://catalog.unt.edu/