What Can I Do With a Major In…

Mathematics

http://www.unt.edu/pais/insert/umath.htm
http://math.unt.edu/careers

General information on Careers in the Major:

The world is becoming increasingly quantitative. Mathematics plays a crucial role in deciding policies which affect our lives, policies ranging from health and the environment to multi-million dollar investments. Organizations are depending more and more on quantitative reasoning and complex mathematical models to solve their problems. A degree in mathematics will give you the skills you need to work on important, challenging real-world problems in a broad range of highly paid positions in business, industry, government and education.

With an undergraduate mathematics degree, you may for example:

- develop new models for evaluating stock options and pricing derivatives,
- create state-of-the-art techniques for predicting atmospheric reactions and transport of chemical pollution,
- improve algorithms for computer-aided aircraft design,
- design procedures for DNA and protein sequencing,
- develop image and voice recognition systems,
- help prepare the next generation for the analytically demanding world by teaching mathematics.

Supplement curriculum with courses in business, economics, computer science, or statistics for increased opportunities. Consider earning a graduate degree in a related area such as statistics, computer science, science, or engineering. Some examples of specialties that utilize a background in math combined with study in another field include: bioinformatics, computer animation and digital imaging, climatology, or financial mathematics.

Majoring in Mathematics at UNT

Is your goal to solve famous mathematical paradoxes? Or do you simply enjoy working with numbers, solving puzzles or searching for patterns? More and more, the solutions to important problems— ranging from environmental policy decisions to multimillion-dollar investments — depend on quantitative reasoning and complex mathematical models. The UNT Mathematics curriculum provides you the foundation and analytical skills for a successful career. In addition to
pursuing a bachelor’s degree, you can earn academic certificates in actuarial science, statistics and the mathematics of scientific computation or achieve teacher certification.

The Math Lab offers you a quiet space to complete homework or receive assistance with specific problems. It’s staffed by students with strong math backgrounds.

Many of our faculty members are internationally recognized experts in their fields and have worked as consultants for private companies and government agencies. They’ve also earned degrees from some of the nation’s most respected universities.

Upper-level Math majors frequently work with faculty members on research grants, gaining valuable research experience in preparation for graduate school. Our Research Training Group in Logic and Dynamics conducts high-quality research on the connection between logic and dynamics. Selected by the National Science Foundation, UNT is one of only four universities in the nation participating in the program. Students also have access to our mathematics library, which contains more than 500 mathematics journal subscriptions, most of which are available electronically.

*For more information about specific classes and requirements for students beginning in 2014-2015 follow the links provided below or go to [www.catalog.unt.edu](http://www.catalog.unt.edu).

BA, Non-teacher Certification
BS, Non-teacher Certification
BA, Teachers Certification
BS, Teachers Certification

Additional Certifications:
Actuarial Science Certificate
Mathematics of Scientific Computation Certificate
Statistics Certificate

**Related Career Titles**

**Entry-Level (Bachelor’s Degree):**

Entry Level Government Researcher
Industrial Researcher
Research Assistant/Associate
Actuary Assistant
Statistician
Statistical Clerk/Assistant
Sports Statistician
Mathematical Technician
Operations Research Analyst
Risk Management Specialist
Risk Analyst
Loan Specialist

Loan Analyst
Insurance Underwriter
Insurance Adjuster
Claims Examiner
Claims Adjuster
Claims Analyst
Credit Analyst
Collections Analyst
Credit Risk Analyst
Loan Officer
Pension Consultant
Cost Estimator
Brokerage Clerk
Tax Examiner/Collection Agent
Revenue Agent/Officer
Budget Officer
Budget Analyst
Billing/Cost/Rate Clerk
Financial Examiner
Trust manager
Bank Teller
New Accounts Representative
Financial Services Representative
Loan Processor
Personal Banker
Investment Analyst
Research Assistant
Financial Analyst
Personal Financial Advisor
Investment Product and Platform Developer
Pricing Analyst
Benefits Specialist
Performance Analyst
Quality Control Analyst
Quality Assurance Specialist
Marketing and Sales Consultant
Market Researcher
Planimeter Operator
Sales Associate
Industrial Property Management Specialist
Middle School/High School Teacher
Math Tutor

**Jobs Requiring Additional Experience (Master's, Doctorate, Certifications)**

**Actuary**
Casualty Actuary
Pension Actuary
International Actuary
Long-Term Care Actuary
Risk-Management Actuary
Theoretical Researcher
Director of Quantitative Research
Cryptographer
Cryptographic Vulnerability Analyst
Demographer
Psychometrician

**Economist**
Biostatistician
Biometrician
Epidemiologist
Accountant
Treasurer/Controller
Lead Simulation Modeling Engineer
Mathematical Software Programmer/Analyst
Agent Based Modeler
Applied Researcher
College/University Professor
Community College Professor

**Possible Work Settings**

Federal and State Governmental Agencies
Department of Defense
NASA
National Security Agency (NSA)
Central Security Office
Department of Homeland Security
Governmental Labs
Social Security Administration
US Census Bureau
Local Government
Consulting Firms
Transportation Service Providers
Academic Institutions

Communications Firms
Insurance Carriers
Insurance Agents/Brokers
Marketing Firms
Commercial Banks
Credit Unions
Mortgage Banks
Regulatory Agencies (ex: FDIC, Federal Reserve)
Brokerage Firms
Financial Services and Investment Management Firms
Consumer Product Companies
Engineering research labs
Chemical or Pharmaceutical Companies
Energy Companies
Airlines/Airports
Computer Service Companies
Internet Related Companies
Software Publishers
Environmental Management Firms
Hospitals
Wholesalers
Manufacturers

**Examples of Employers Recruiting UNT International Studies Majors**

Allen Independent School District
Amarillo ISD
American Financial & Automotive Services, Inc.
Aon Corporation
Ardmore City Schools I-19
Aveeva Inc.
Azle ISD
Benefit Partners, Inc.
Blue Ridge ISD
Clovis Municipal Schools
Crown Appraisal Group
Denton Independent School District
Department of the Treasury
DeSoto ISD
DOI/Minerals Management Service
Encana Oil & Gas
Fidelity
Federal Reserve Bank of Dallas
Fort Worth Independent School
GE Commercial Finance
General Services Administration
Grayson County College
HHS, OIG, Office of Investigations
Irving ISD
JPMorgan Chase
KATZEN, MARSHALL & ASSOCIATES, INC.
Killeen Independent School District
Math for America/Newton Fellowship Program
Milliman INC.
North Star Consultants of Texas
Northwestern State University
Overton ISD
PCI The Data Company
Pleasant Grove Independent School District
Preston D International, LLC
Prime Source Building Products
Principal Financial Group
Providence Christian School of Texas
Royse City ISD
Social Security Administration
Southwestern Investments
Spectrum Financial Group
Tarrant County College NW Campus
The Menta Group
The Reynolds Co.
Tolleson Wealth Management
U. S. Office of Personnel Management
U.S. Bankruptcy Court
U.S. Immigration and Customs Enforcement
U.S. Senator John Cornyn
University of Oklahoma
US Commercial Service
USAA
Zions Bancorporation

**Student Organizations at UNT- (Learn more at UNT ORGSYNC)**

**Websites for Exploring Math Careers**
Mathematical Association of America, [http://www.maa.org/careers](http://www.maa.org/careers)
We Use Math, [http://weusemath.com/](http://weusemath.com/)
Women in Math (Careers), [https://sites.google.com/site/awmmath/awm-resources/career](https://sites.google.com/site/awmmath/awm-resources/career)

**Student Internships**

Research Experience, [http://www.ams.org/programs/students/undergrad/emp-reu](http://www.ams.org/programs/students/undergrad/emp-reu)
List of Internships, [http://www.ams.org/programs/students/undergrad/emp-internships](http://www.ams.org/programs/students/undergrad/emp-internships)

**Job Search Websites**

UNT Eagle Network, [http://careercenter.unt.edu/eagle_network.html](http://careercenter.unt.edu/eagle_network.html)
Actuarial Jobs, [http://www.actuary.com](http://www.actuary.com)
Math Jobs, [Http://mathjobs.org/jobs](Http://mathjobs.org/jobs)
Government Jobs, [WWW.USAJobs.gov](WWW.USAJobs.gov)

**Skills and Abilities Developed by Math Majors**

- Problem Solving
- Active Learning
- Critical Thinking
- Writing
- Complex Problem Solving
- Science
- Systemizing Skills
- Advanced Quantitative Skills
- Efficiency
- Mathematical Reasoning
- Number Facility
- Deductive & Inductive Reasoning
- Written & Oral Comprehension
- Fluency of Ideas
- Memorization