

What can I do with a degree in... Mathematics

The Mathematics Department at Oklahoma State University offers an exciting environment for collegiate study with an award-winning, internationally renowned faculty. Over three quarters of our faculty members have obtained recent research grants and awards from the National Science Foundation and other sources. Small class sizes make it easy to interact with the faculty, and innovative courses such as the project-oriented Math Modeling course and a weekly Problem Solving Seminar enhance the curriculum. The flexibility of our degree programs and the breadth of our course offerings enable all our majors to find their best plan of study. The department web site is: <http://www.math.okstate.edu>

Math majors develop the following skills:

Analytical Skills: You will be trained to recognize problems, distill and define the pertinent issues, determine under exactly what circumstances a solution exists and to find that solution.

Mastering new ideas and skills: Absorb very complex new concepts quickly and to immediately begin the process of discovering the implications and depth of these new ideas

Innovation: The ability to distill the common threads of diverse concepts and techniques into their fundamental principles and then apply these principles in new areas.

Computer Skills: Develop a wide range of computer skills from the mundane to cutting edge tools such as symbolic manipulation & computing theory.

Probability and Statistics: Statistical analysis, sampling techniques and data acquisition as well as a fundamental understanding of the underlying principles

Modeling: Development and use of mathematical models of physical phenomena and understanding the importance and limitations of the predictions based on these models

Research and Presentation Skills: Ability to make and interpret graphs, tables and charts; Library research techniques; Technical writing skills

Depending on your desired career path, additional skills may need to be developed to be competitive in the marketplace upon graduation. Make an appointment with a career consultant to design your individual career development plan.

College of Arts & Sciences Career Success E-Guide

Provided to all new, incoming students as an introduction to career planning process
If you don't have an E-Guide...Get one!!!
Visit the A&S Career Services Office

Questions?

College of Arts & Sciences Career Services
Student Success Center, LSE 2nd Floor
Stillwater, OK 74078-3016
Visit the A&S website to make an appointment to see a Career Consultant @
<http://ascareers.okstate.edu>

Build Skills Beyond the Classroom:

- Join related clubs, professional associations, & organizations
- Athletics/Sports
- Military
- Part-time Employment (Summer/Work Study)
- Internships/Job Shadowing
- Travel/Work Abroad
- Volunteer/Community Service

Job & Internship Web Sites

- American Mathematical Society
<http://www.ams.org/early-careers/>
- American Mathematical Society Job Bulletin
<http://www.ams.org/>
- Be an Actuary
<http://www.beanactuary.org>
- Careers in Math
<http://www.math.com/students/advice/careers.html>
- Institute of Mathematical Statistics
<http://www.imstat.org/jobs/default.htm>
- Society for Industrial and Applied mathematics
http://jobs.siam.org/home/index.cfm?site_id=686
- Mathematical Association of America
<http://www.maa.org/pubs/employ.html>
- Association of Women in Mathematics
<http://www.awm-math.org/career.html>
- American Statistical Association
<http://www.amstat.org>
- Sloan Career Cornerstone Center
<http://www.careercornerstone.org/mathematics/mathematics.htm>
- Careers in Business
<http://www.careers-in-business.com>
- Careers in Finance
<http://www.careers-in-finance.com>
- Office of Science
<http://www.scied.science.doe.gov/>
- Internships at EDS
http://www.eds.com/careers/overview/cr_overview.shtml
- NASA Academy Summer program
<http://www.academy.nasa.gov>
- AMS Internship & Co-op list for Undergraduates
<http://www.ams.org/employment/internships.html>
- United States Office of Personnel Management
<http://www.usajobs.opm.gov/>
- Center for Statistics in Education
<http://www.amstat.org/education/index.cfm?fuseaction=main>

Sample Careers for Mathematics Majors

Potential Career Paths

A bachelor's degree in mathematics will prepare you for jobs in statistics, actuarial sciences, mathematical modeling, and cryptography, mathematics education, as well as for graduate school leading to a research career in engineering, mathematics or statistics.

Mathematical Modeling

In mathematical modeling, you write down equations to describe how a real world system behaves. The "system" might be drawn from many different fields. For example, most financial companies hire mathematicians to study financial models and make predictions based on statistical evidence.

Finance

Wall Street and banking have become a major employer of math majors. Many investment and financial firms consider mathematicians prized hires.

Statistics

The proliferation of statistics in everything ranging from business to government has induced many organizations to seek math majors. One business with an extreme interest in statistics is insurance. The professionals responsible for computing insurance rates are specialist statisticians called actuaries.

Where Mathematics Meets Computer Science

Beyond mere proficiency in computer programming, math majors are trained to address the more fundamental issues, the creation of computer graphics and the compression of video and audio signals (to name a few examples) involve a great deal of deep mathematics, and as a result, many computer companies specifically hire math majors.

Cryptography

One area that is particularly "hot" these days is cryptography - the making and breaking of secret codes. Number theory is the branch of pure mathematics which provides the theoretical underpinnings for much of the recent progress in cryptography.

Biotech

Many biotech companies hire mathematics majors because of the high mathematical content of the field.

Teaching

Every year, roughly half of the positions advertised for secondary school teachers in math go unfilled. Schools are desperate for qualified math majors.

The College of Arts & Sciences
Career Services offers:

**Arts & Sciences 4111
Job Search Strategies Course**
(AS 4111) 1 Credit Course

Arts & Sciences Majors (for Juniors & Seniors only)
For Course description visit the Arts & Sciences
Career Services website: <http://ascareers.okstate.edu>

Sample of Related Occupations

Actuary	Estimator	Mathematician
Appraiser	External Auditor	Numerical Analyst
Benefits Administrator	Financial Aid Director	Operations Research Analyst
Bank Examiner	Financial Manager	Payroll Manager
Budget Analyst	Financial Planner	Production Manager
Claims Adjuster	Foreign-Exchange	Psychometrist
Commodities	Information Scientist	Purchasing Agent
Computer Programmer	Insurance Agent/Broker	Quality Control Analyst
Contract Admin.	Int'l Trade Specialist	Securities Broker
Controller	Inventory Control	Statistician
Cost Estimator	Investment Analyst	Systems Analyst
Loan Officer	Investment Research	Teacher
Cryptologist	IRS Investigator	Technical Writer
Data Base Mgr.	Management Trainee	Treasurer
EDP Auditor	Market Research	Trust Analyst
Engineering Analyst	Mathematical Technician	Underwriter

Types of Employers

Private and Non-Profit Organizations

Aerospace Companies	Market Research Firms
Banks	Mortgage Companies
Education	Pharmaceuticals
Computer Firms	R & D Firms
Economic/Social Science Pollsters	S & L Associations
Engineering/ Manufacturing	Stock Brokerage Houses
Insurance Companies	Test Devel. Corporations
Investment Firms	Utilities

Government Agencies

Bureau of Labor Statistics	State Planning Offices
Capital Budgeting & Planning	NASA
Defense Logistics Agency	Defense Mapping Agency
National Highway Traffic Safety Admin.	National Institute of Standards & Tech.
Drug Enforcement Administration	National Security Agency
Health Care Financing Administration	National Technical Info. Service
Employment & Training Admin.	NOAA
Economics Management	Research Agencies
Housing & Mortgage Finance	Transportation Dept.
Insurance Department	U.S. Customs Service
Justice Department	Weights & Measures
Library of Congress	

For further research on career & employment options, utilize any internet search engine.

The following websites are a great place to begin:

www.monstertrak.com	www.mymajor.com
www.quintcareers.com	www.monster.com
www.careerbuilder.com	www.bls.gov/oco
www.experience.com	www.jobcentral.com