

Mathematics

Curriculum

The Mathematics department offers an exciting environment for collegiate study with many faculty who are involved in research including awards and grants from the National Science Foundation and other sources. Small class sizes make it easy to interact with the faculty and innovative courses enhance the curriculum. The flexibility of our degree programs and the breadth of the course offerings enable all math majors to find their best plan of study.

Mathematics 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 solutions exist, and how to find those solutions.

Mastering new ideas and skills: Quickly absorb very complex new concepts and immediately begin the process of discovering the implications and depth of these new ideas.

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

Computer Skills: Develop skills including symbolic manipulation & computing theory, statistical analysis, sampling techniques, and data acquisition.

Modeling: Development and use of the mathematical model 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, and use technical writing.

- Develop methods of creative thinking
- Enhance problem solving skills
- Put ideas into action

Get Involved

Statistics Club
Pi Mu Epsilon (Math Club)
Mathematics Graduate Student Society

<https://campuslink.okstate.edu>

College of Arts & Sciences Career Services

213 Life Science East
Tel: 405 744 5658

For appointments and resources:
<http://cascareers.okstate.edu>

Job and Internship Websites

- American Mathematical Society
<http://eims.ams.org/jobseekers/>
<http://www.ams.org/programs/students/undergrad/emp-reu>
- American Statistical Association
<http://www.amstat.org/careers/index.cfm>
<http://www.amstat.org/education/internships.cfm>
- U.S. Army
<http://www.goarmy.com/careers-and-jobs/about-army-stem/math-jobs.html>
- Association of Women in Mathematics
<http://www.awm-math.org/career.html>
- Be an Actuary
<http://www.beanactuary.org>
- Career Cornerstone Center
<http://www.careercornerstone.org/math/mathemploy.htm>
- Careers in Statistics
<http://www.careersinstatistics.co.uk/>
- Cryptography Research
<http://www.cryptography.com/careers.html>
- icrunchdata
<http://www.icrunchdata.com>
- Institute of Education Sciences
<http://ies.ed.gov/>
- Institute of Mathematical Statistics
http://jobs.imstat.org/home/index.cfm?site_id=1847
- Jobs Math
<http://jobsmath.com/>
- Mathematical Association of America
<http://www.maa.org/careers>
- NASA
<https://intern.nasa.gov/>
- National Security Agency
http://www.nsa.gov/careers/opportunities_4_u/students/graduate/npsc.shtml
- New Scientist Jobs
<http://jobs.newscientist.com/jobs/math-and-it/>
- Society for Industrial and Applied Mathematics
<http://www.siam.org/careers/>
<http://www.siam.org/careers/internships.php>
- USA Jobs
<https://www.usajobs.gov/>
- Qualcomm
<http://www.qualcomm.com/careers>

Mathematics Career Paths...

Accounting and Finance: Occupations in this area include financial analysis and engineering, the preparation and verification of financial reports and taxes, and work with systems that provide information about financial institutions and markets. People in this field construct trading models for Wall Street firms, design mathematical tools to assess risk, and forecast cost estimates for government projects.

Computer Science: Computer science is the study of the theoretical foundations of information and computation and their implementation and application in computer systems. Mathematicians, with their training in logical and precise thinking, are highly prized in this field.

Sales and Marketing: Occupations in this area are driven by research related to the promotion of products or services. Market researchers design surveys, perform analysis on the data from surveys, and report on their results and recommendations.

Cryptography: Cryptography is the practice and study of hiding information and is a branch of both mathematics and computer science. Cryptography applications include the security of ATM cards and passwords.

Actuarial: Actuaries build and run mathematical models, and collect and analyze data to answer risk-based questions by putting a financial value on future events.

Computer Systems Analysis: Analysts implement the means for computer technology to meet the individual needs of a product or organization. They study scientific and engineering data processing problems and design new solutions.

Statistics: Statistics is the collection, analysis, and presentation of numerical data. Statisticians design surveys and experiments, then collect the resulting information or data. In some companies statisticians help other scientists design their experiments and train managers how to use statistical tools in decision making.

Teaching: Secondary schools hire teachers for math and colleges and universities hire mathematics majors to teach and complete research.

Mathematics / Operations Research / Modeling: Mathematicians solve economic, scientific, engineering, and business problems using mathematical knowledge and computational tools. Operations Research (OR) analysts help organizations coordinate and operate in the most efficient manner by applying scientific methods and mathematical principles to problems.

Job Titles

Actuarial Scientist	Architect
Air Pollution Meteorologist	Consultant
Contractor / Programmer	Biostatistician
Cryptologic Mathematician	Business Analyst
Customer Support Manager	Cost Estimator
Data Processing Consultant	Research Scientist
Management Consultant	Financial Engineer
Manager of Financial Analysis	Developer
Market Strategy Analyst	Statistician
Mathematical Statistician	Mathematician
Member of Technical Staff	Media Specialist
Operations Research Analyst	Network Analyst
Performance Analyst	Pre-Sales Consultant
Technical Consultant	Purchasing Agent
Research Mathematician	Research Assistant
Software Designer/Analyst	Support Scientist
Systems Engineer /Analyst	Project Scientist
Database Specialist	
Mathematical Software Programmer / Analyst	
Field Inventory Asset Specialist	
Intelligence Application Officer	

Types of Employers

Qualcomm	Highway Traffic Safety
Boeing	Administration
Google	Drug Enforcement
US Government Depts.	Administration
Intel	National Technical Info Service
Edward Jones	Transportation Agencies
McKinsye & Company	US Customs Service
Boston Consulting Group	NASA
Genetech	Defense Mapping Agency
US Navy	Institute of Standards and
National Security Agency	Technology
Bureau of Labor Statistics	NOAA
Capitol Budgeting and	Justice Department
Planning	Library of Congress