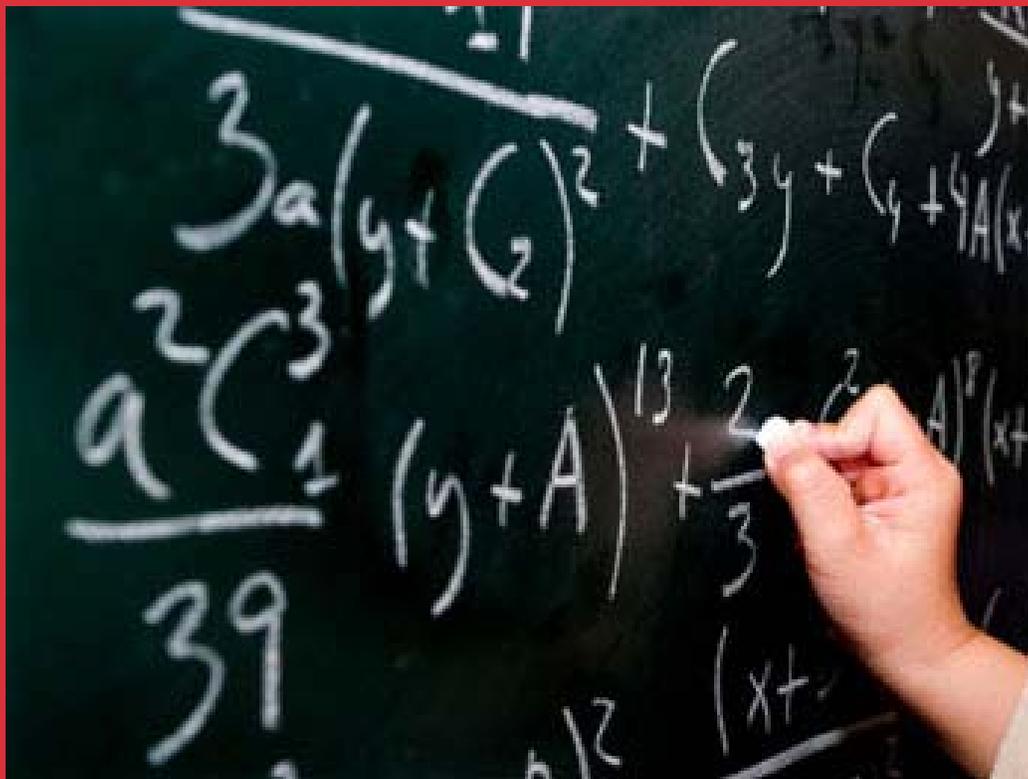


## What Can My Future Hold with a Math Degree?



Careers in Mathematics





# What Can My Future Hold with a Math Degree?

CAREERS IN MATHEMATICS

**WHERE ARE THEY NOW?**  
CURRENT CAREERS OF UNL STUDENTS WHO RECENTLY GRADUATED WITH A BACHELOR'S DEGREE IN MATHEMATICS

- **Actuarial Analyst, Actuarial Resources Corporation**
- **Computer Software Engineer, Fiserv**
- **Credit Analyst, CoBank**
- **Equity Research Analyst, Lehman Brothers**
- **IT Architect/Specialist, IBM**
- **Programmer, MacPractice**
- **2nd Lieutenant Pilot, US Air Force**
- **Software Engineer, Agile Sports Technology**

Source: UNL Career Services, <http://www.unl.edu/careers/careerguide/math.shtml>

## Mathematician: A versatile career

**By Dan Kadlec**

This is a surprisingly versatile job. Lots of mathematicians end up teaching, which isn't a bad gig at all when it comes to work/life balance and security. But many go into risk management (where banks, brokerages and more are beefing up their controls), civil engineering (where stimulus-funded construction projects are creating many new openings) and budget analysis (where companies and governments are keeping a sharp eye on the bottom line). This is



the top-ranked job on a 2009 report by CareerCast.com. The website notes abundant openings, low stress and a generous salary (median annual pay is \$62,804). Mathematicians can also find jobs in industries like

video-game development and health care and as statistical analysts for global corporations. They are needed in all sorts of federal agencies and the military. "The number of graduating math majors has been declining for years, and since 9/11, visas for immigrant mathematicians have been harder to get," says Career-

Cast.com's Lee. "So there is a strong demand here for math skills. If you're a problem solver, this is a great career choice."

Source: "10 Jobs for the Recession" in the June 2, 2009 issue of Time.

*Mathematics majors have a variety of career options. These include diverse choices such as forensic analyst, urban planner, imaging scientist, and actuary. Turn the pages to learn about the many bright futures available to math students.*

## Math major: A path to further education

*An undergraduate degree in mathematics is excellent preparation for a variety of entrance exams that are necessary for further education.*

### Graduate School

Mathematics majors consistently have some of the highest average GRE scores.

### Business School

Mathematics majors consistently outscore almost every other

major on the GMAT, the graduate business school entrance exam.

### Law School

Math and Physics majors outscore all other majors on the Law School Admission Test, the LSAT.

### Medical School

Students who major in mathematics have one of the highest

acceptance rates into medical school.

Acceptance rates for mathematics students over the last 4 years have averaged 6% higher than for students who majored in biological sciences and 38% higher than for students who majored in health or exercise sciences (2009 article).

Source: <http://weusemath.com>

## Corporate world offers career options

**“Working in industry provides the opportunity to apply mathematics to real world problems and to actually use the results of analysis to resolve difficulties in building a product or delivering a service.”**

**- William Hammers**

Many business professionals need a strong mathematical background to succeed at their jobs. Mathematically intensive careers in the corporate world usually focus on one of three areas. First, companies often need models and forecasts for the future so that they can be prepared. Second, the marketing division of companies collect statistics on clients and use this data to find trends. Finally, financial mathematics and the ability to calculate quickly is essential to various types of stockbrokers.

For a company to be successful, a company must be prepared for the future. To help make important business decisions, most companies create

models to forecast revenue and sales for the coming years. A variety of careers which make forecasts for businesses include cost estimators, risk analysts, inventory control specialists, budget analysts, operations research analysts, economists, and actuaries.

The marketing division of a company identifies the target audience of a business by discovering the characteristics of the most profitable customers. Market research analysts use their mathematical skills to recognize trends in data, and thus help their company have more successful, profitable marketing campaigns.

Stockbrokers must understand

financial mathematics, so they can help their clients make good investment decisions. Financial exchange traders and other types of traders must be able to accurately compute problems involving large sums of money quickly because trading floors are fast-paced environments.

William Hammers, the Chief Financial Officer of Optimal Solutions, told the Mathematical Association of America, “Working in industry provides the opportunity to apply mathematics to real world problems and to actually use the results of analysis to resolve difficulties in building a product or delivering a service.”

### Best Jobs of 2014

1. Mathematician
2. Tenured University Professor
3. Statistician
4. Actuary
5. Audiologist

Source: “Jobs Rated 2014: Ranking 200 Jobs from Best to Worst.” by Career-Cast.com on June 12, 2013

## Actuaries quantify risk

An actuary is a business professional who deals with the financial impact of risk and uncertainty. Actuaries apply mathematical and statistical theories to solve real business problems. Actuaries assemble and analyze data to estimate the probability and likely cost of an event such as death, sickness, injury, disability, or loss of property. They also address financial questions, including those involving the way a company should invest its resources to maximize its return on investments.

Actuaries are in high demand, and they are often highly paid for the services they render.

Actuaries are essential to the insurance industry; to other businesses and corporations, including sponsors of pension plans; and to government agencies, such as the Government Actuary’s Department in the UK or the Social Security Administration in the US.

They are paid well for their services with low-end salaries of \$41,500 per year, median salaries of \$95,980 per year, and high-end salaries of \$160,780 per year.

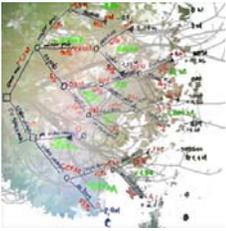
Most actuaries major in either actuarial science or mathematics. Regardless of major, actuaries need a strong foundation

in mathematics, statistics, and general business. They generally have a bachelor’s degree and are required to pass a series of exams in order to become a certified actuary.

Janet P. Denbleyker, a consulting actuary for Buck Consultants, told the Mathematical Association of America, “My advice to someone interested in the actuarial profession: talk to many actuaries in different areas of the industry to get a feel for what is right for you...A career as an actuary can be very interesting and rewarding.”

Source: <http://weusemath.com>

# Operations research analysts do strategic planning



**Robin Roundy describes his job as “the application of mathematics to business management.”**

Operations research analysts are involved in top-level strategizing, planning, and forecasting. They use advanced techniques from mathematics, science, and engineering to make better decisions and to solve

problems. These analysts help to allocate resources, measure performance, design production facilities and systems, manage the supply chain, set prices, coordinate transportation and distribution, and analyze large databases. They also have been used in wartime for various services including searching for enemy submarines.

Operations research analysts receive low-end salaries of \$40,000

per year, median salaries of \$69,000 per year, and high-end salaries of \$118,130 per year.

Robin Roundy, an operations research analyst, wrote, “I deal with the modeling, mathematical theory and algorithmic aspects of inventory control, production planning, production scheduling, forecasting and capacity management.”

Source: <http://weusemath.com>

## Foreign exchange traders calculate quickly

A foreign exchange trader looks at the various factors that influence local economies and rates of exchange, and then takes advantage of any miscalculations of currencies by buying and selling in different foreign exchange markets.

“It’s the wild west of trading,” one trader told the Princeton Review.

Foreign exchange traders receive low-end salaries of \$69,173 per year, median salaries of \$87,818

per year, and high-end salaries of \$139,517 per year.

Mathematics, economics, and statistics majors have a distinct advantage in applying for positions in this field, as do history majors whose coursework included economics. Any experience in a trading environment is valued, as is any work that demonstrates the ability to work hard, make fast and accurate decisions, and manipulate numbers. Many employers appreciate

study abroad, international work experience or fluency in a foreign language.

Foreign exchange traders must act fast to exploit valuation differences: “You’ve got seconds to decide how millions of dollars should be spent,” said one trader, “so you have to have confidence.” Confidence ranked second right after “guts” in qualities important in new traders.

Source: <http://weusemath.com>

## Market research analysts identify trends

Market researchers gather information about what people think. They help companies understand what types of products people want and at what price. They also help companies market their products to the people most likely to buy them. Gathering statistical data on competitors and examining prices, sales, and methods of marketing and distribution, they analyze

data on past sales to predict future sales.

Market research analysts receive low-end salaries of \$33,770 per year, median salaries of \$70,410 per year, and high-end salaries of \$112,410 per year.

Bob Anastasio, a director of marketing, told the Mathematical Asso-

ciation of America, “If you are interested in this more applied side of mathematics, you should consider taking some business courses (marketing, finance, accounting) in addition to applied mathematical courses like Probability and Statistics, and Operations Research.”

Source: <http://weusemath.com>



**“By applying statistical techniques...I was able to help my employers optimize return on investment in their marketing campaigns.”**

**- Bob Anastasio**

*“5 of the 6 ‘Best Jobs’ in terms of low stress, high compensation, autonomy, and hiring demand in the ‘Job Related Almanac’ by Les Krantz are all math related.”*

-weusemath.com

## Mathematics used in scientific fields

Mathematical skills are vital for most scientists, and for those interested in both science and mathematics, a variety of career options are available in any scientific field.

For those interested in biology, careers for mathematics majors can include biologist, biostatistician, computational biologist, mathematical bio-

physicist, physician, and epidemiologist.

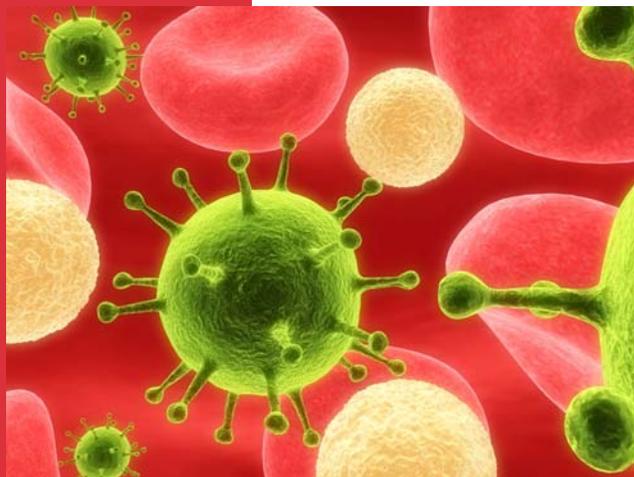
A variety of scientific careers require upper level mathematical backgrounds including research scientists, astronauts, climatologists, forensic analysts, geologists, and environmental mathematicians.

A firm foundation in mathe-

matics can be the stepping stone to great success in a scientific field whether one is pursuing further education or working in industry.

Geologist, Kitty Milliken, Ph.D., said, “Take a lot of math. Math is incredibly important in science. I wish I’d taken even more math in college than I did, and I had a math minor!”

## Biostatisticians design research studies



*“What I do is interesting, I feel that I’m making a contribution, I enjoy working with doctors doing medical research.”*

*-Mike Liebev  
Biostatistician  
Cleveland Clinic  
Foundation*

Biostatisticians design research studies and analyze data related to human health, animals or plants. The healthcare, biomedical, and pharmaceutical fields employ biostatisticians who are responsible for analyzing genetic data, disease occurrence, and medical imaging data. These biostatisticians develop clinical trials to assess drug treatments. Other academic and government biostatisticians analyze data of populations

exposed to environmental chemicals and conditions to understand their risks and effects.

Biostatisticians receive low-end salaries of \$46,000 per year, median salaries of \$99,571 per year, and high-end salaries of \$140,498 per year.

A bachelor's degree is sufficient for entering the field of Biostatistics as an assistant. However, most Biostatisticians have M.S. or Ph.D. degrees in Biostatistics, Statistics, or Applied Mathematics.

Biostatisticians collaborate with researchers as they design studies, helping them find the best approach to data gathering given the question the researchers are trying to answer. These statisticians provide advice on such topics as sample size and data collection (what methods will be used to gather the data).

Once the raw data have been gathered, biostatisticians use statistical software to turn the data into useful information. They use standard statistical procedures and terms to help researchers pinpoint which results were significant and which were inconclusive, warranting further study. Biostatisticians sometimes find themselves cleaning up an imperfect data set to help researchers glean conclusions from it.

Mike Liebev, a biostatistician for Cleveland Clinic Foundation, told the Mathematical Association of America, “I consider myself very fortunate to be doing this kind of work. What I do is interesting, I feel that I’m making a contribution, I enjoy working with doctors doing medical research, and the work is neither stressful nor strenuous.”

Source: <http://weusemath.com>

# Climatologists model future weather patterns

Climatologists study climate conditions averaged over a period of time. They use climate models for a variety of purposes, from the study of the dynamics of the weather and climate system to projections of future climate. In contrast to meteorology, which focuses on short term weather systems lasting up to a few weeks, climatology studies the frequency and trends of those

systems. Climatology considers the past and can help predict future climate change.

Climatologists receive low-end salaries of \$38,990 per year, median salaries of \$81,290 per year, and high-end salaries of \$127,100 per year.

Climatologists need to have a

strong background in mathematics and science. In fact, a bachelor's degree in mathematics provides excellent preparation for graduate study in climatology. Climatologists often pursue higher education by obtaining a master's degree and a Ph.D.

Source: <http://weusemath.com>.



# Forensics analysts help solve crimes

Forensic analysts use scientific techniques to solve criminal cases. They may use traditional methods such as fingerprinting, assisted by computers, in addition, blood analysis, forensic dentistry, voice and speech spectrograms, and genetic fingerprinting. Chemicals, such as poisons and drugs, are analyzed by chromatography and ESDA (electrostatic document analysis) is a technique used for revealing indentations on paper, which helps determine if documents have been tampered with.

Forensic analysts receive low-end salaries of \$30,990 per year, median salaries of \$49,286 per year, and high-end salaries of

\$80,330 per year.

A forensic analyst uses bloodstain pattern analysis in order to tell the story of the crime. It turns out that the location where the blood lands, and the shape of the blood on the landing surface, reveal both the direction in which the blood was moving and how much force was used to wound the victim. Analysts use math principles to figure out the location of the victim when the blood was shed and even the type of weapon or impact that caused the victim's injury. Math is also used to establish the range of time of death based on the temperature of the body when it was found and to measure other changes in the body

occurring at the time of death.

On the department of Forensics Science at the University of Nebraska-Lincoln's website, it states, "Some of this science is inherently intriguing and is used as the basis for countless television shows, novels, and movies. The analysis of human remains to estimate sex, age, and stature might fall into this category. In contrast, some forensic science would result in very short-lived television programming. This might include determining the number of insect parts in a can of processed food."

Source: <http://weusemath.com>

**"Some of this science is inherently intriguing and is used as the basis for countless television shows, novels, and movies."  
-UNL, Department of Forensic Science**

# Environmental mathematicians help protect nature

As an environmental mathematician, one works as a member of a team to tackle a specific environmental problem, such as predicting how much gas escapes from storage tanks based on weather conditions. This never-boring job re-

quires both logical and quantitative thinking, and often involves traveling to interesting places.

Kay Strain King, an environmental mathematician with Theta Engineering, Inc, told the Mathematical

Association of America, "I find it fun, exciting, and, I hope, a contribution to our Mother Earth to work with others on environmental assignments."

Source: <http://www.bhsu.edu>

# Math is basis of computer science

**“The top 15 highest-earning college degrees all have one thing in common – math skills. That’s according to a recent survey from the National Association of Colleges and Employers, which tracks college graduates’ job offers.”**

Computer scientists work as theorists, researchers, or inventors. They use innovation to solve complex problems and create or apply new technology. The areas of computer science research range from complex theory to hardware design to programming-language design. Some researchers work on projects such as developing and advancing uses of virtual reality, extending human-computer in-

teraction, or designing robots.

Knowledge of mathematics is necessary for any complex work involving computer science.

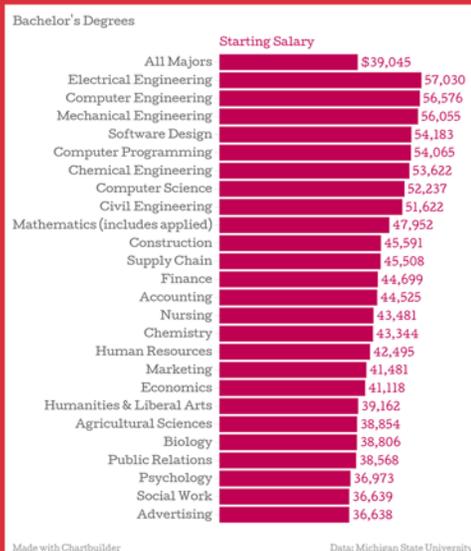
Various careers are open to those interested in pursuing both their passion for mathematics and computer science. These careers include computer scientist, imaging scientist, software engineer, staff sys-

tems analyst, modeling and simulation analysts and system engineer.

Michael Murray, a Java developer, told the Mathematical Association of America, “Without a solid mathematical base, the most talented of programmers can easily get lost when all these numbers start flying around.”

Source: <http://weusemath.com>

## Starting Salaries by Major for the Class of 2015



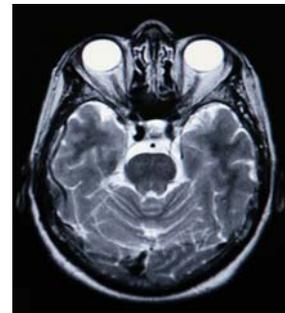
Source: The College Degrees With The Highest Starting Salaries in 2015 by Susan Adams for [forbes.com](http://forbes.com).

## Imaging scientists design graphical software

Imaging scientists write programs that edit and display images.

Mathematics is needed to write these complex programs. For example, linear algebra provides tools to flip and rotate graphics in three-dimensional perspective, the basis for countless computer games. Physics and optics opens the door to use the computer as a virtual camera, taking color snapshots of imaginary landscapes and panoramas.

Some areas of work include image-processing, fractal geometry, 3D raytracing, color theory and optics.



**SRC employs imaging scientists to create technology that can take pictures like the one above.**

Also, medical imaging software is created by imaging scientists. Mathematicians develop methods for constructing images from information recorded by CAT scans, PET scans, and MRI's. They also do research in

trying to build better imaging devices.

Benjamin Weiss, an imaging scientist, told the Mathematical Association of America how he became interested in computer science, “I’ve always been interested in math and science, and in my childhood I was no less fascinated by video games and computer graphics. So it seemed quite natural that I would develop a talent for writing my own computer software, as a sideline of my progression through the world of mathematics.”

Source: <http://www.maa.org/careers/>

# Electrical engineers develop electrical equipment

Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment. Some of this equipment includes electric motors; machinery controls, lighting, and wiring in buildings; automobiles; aircraft; radar and navigation systems; and power generation, control, and transmission

devices used by electric utilities.

Electrical engineers receive low-end salaries of \$56,256 per year, median salaries of \$89,268 per year, and high-end salaries of \$93,933 per year.

Electrical engineers use laws of

nature that are mathematical expressions such as Maxwell's equations for electromagnetics and Kirchhoff's Rules for circuit analysis.

Source: <http://weusemath.com>



## Engineering covers diverse fields

Aspiring engineers have diverse options when choosing what type of engineering major they wish to pursue.

For example, the University of Nebraska-Lincoln offers undergraduate majors in architectural engineering, agricultural engineering, biological systems engineering, chemical engineering, civil engineering, computer engineering, construction engineering, electrical engineering, electronics engineer-

ing, industrial engineering, and mechanical engineering. There are more options for careers beyond these such as petroleum engineering and applications systems engineering.

For those interested in pursuing a career in engineering, the BYU Mathematics Department lists the following required education, "Engineers typically enter the occupation with a bachelor's degree in mathematics or an engineering

specialty, but some basic research positions may require a graduate degree. Most engineering programs involve a concentration of study in an engineering specialty, along with courses in both mathematics and the physical and life sciences. Engineers offering their services directly to the public must be licensed. Continuing education to keep current with rapidly changing technology is important for engineers."

**"Among the top 10 most sought after college graduates by companies right now are electrical engineers, mechanical engineers, computer engineers and civil engineers."**  
**-UNL, Department of Engineering webpage**

# Mechanical engineers create machines

Mechanical engineers research, design, develop, manufacture, and test tools, engines, machines, and other mechanical devices. Mechanical engineering is one of the broadest engineering disciplines. Engineers in this discipline work on power-producing machines such as electric generators, internal combustion engines, and steam and gas turbines. They also work on power-using machines such as refrigeration and air-conditioning equipment, machine tools, material handling systems, elevators and escalators,

industrial production equipment, and robots used in manufacturing.

Mechanical engineers receive low-end salaries of \$52,456 per year, median salaries of \$66,555 per year, and high-end salaries of \$87,611 per year.



According to the University of Nebraska-Lincoln's Department of Engineering's website, "Mechanical engineers deal with a wide realm of motion, all forms of energy conversion and transmission; the flow of fluids and

heat; the development, design and operation of machinery and equipment; material structure and properties; and transportation processes."

Source: <http://weusemath.com>

## Mathematics is vital to many careers

*"It's a lot more than just some boring subject that everybody has to take in school... It's the science of problem-solving."*

*-Jennifer Courter*

A major in mathematics prepares students for a wide variety of careers. Besides the wealth of opportunities in business, science, computer science, and engineering, mathematics majors have a diverse group of options.

Possible careers include air

traffic controller, animator, architect, attorney, cartographer, cryptanalyst, geographer, national security analyst, political scientist, psychometrician, statistician, technical writer, urban planner, and teacher.

"It's a lot more than just some boring subject that everybody has to take in school," says

Jennifer Courter, a research mathematician at mental images Inc., a maker of 3D-visualization software in San Francisco, quoted in the article, *Doing the Math to find the Good Jobs*, by Sarah Needleman, which appeared in the Wall Street Journal on January 6, 2009. "It's the science of problem-solving."

## Air traffic controllers direct pilots



Air traffic controllers coordinate the movement of air traffic to make certain that planes stay a safe distance apart. Their immediate concern is safety, but controllers also must direct planes efficiently to minimize delays. Some regulate airport traffic through designated airspaces; others regulate airport arrivals and departures.

Air traffic controllers receive low-end salaries of \$45,020 per year, median salaries of \$111,870 per year, and high-

end salaries of \$161,010 per year.

A degree in mathematics is a great way to start a career as an air traffic controller. To become an air traffic controller, a person must also complete an FAA-approved education program; pass a pre-employment test; receive a school recommendation; meet the basic qualification requirements in accordance with Federal law; and achieve a qualifying score on the FAA-authorized pre-employment test.

Air traffic controller uses math in order to be able to understand distances and measurements at a moment's notice. They also must be able to do mental math quickly and accurately. Part of their job is directing aircraft at what altitude and speed to fly. An error in these directions could be fatal so a strong math background is important. In addition, gaining computer skills is essential in order to work with special computer programs and automated instruments.

Source: <http://weusemath.com>

*"I thoroughly enjoy the career I've chosen, and I have no question that I wouldn't be here if I had not started my training with a degree in mathematics. The analytical problem-solving skills one develops working through a mathematics curriculum are highly valuable and transferable to any future aspiration."*

*-Marla Prenger  
Associate Scientist  
Proctor and Gamble*

## Urban planners design cities

Urban planners develop long- and short-term plans for the use of land and the growth of urban, suburban, and rural communities and the region in which they are located. They help local officials by recommending locations for roads, schools, and other infrastructure and suggesting zoning regulations for private proper-

ty. This work includes forecasting the future needs of the population.

Urban planners receive low-end salaries of \$37,960 per year, median salaries of \$59,810 per year, and high-end salaries of \$91,520 per year.

Urban designers use math as

they design the arrangement, appearance, and functionality of towns and cities, and in particular, the shaping and uses of safe public space. Also, urban designers use mathematical models to forecast the future needs of a group of people.

Source: <http://weusemath.com>

# Psychometricians write standardized tests

A psychometrician is a person who practices the science of measurement, or psychometrics. The term psychometrics refers to the measurement of an individual's psychological attributes, including the knowledge, skills, and abilities a professional might need to work in a particular job or profession. Also, psychometricians write exams such as the MCAT, LSAT, GMAT, SAT, ACT, and Advance Placement test.

Typically, many psychometricians work for testing organizations.

They initially determine the abilities, skills and knowledge needed to do the job and create the specifications of the test. They then write test questions and determine the passing score. They may also perform data analyses on the test results as well as conducting validity and reliability studies. College Board, the company that writes the SAT and Advance Placement tests, employ psychometricians.

Psychometricians receive low-end salaries of \$50,000 per year, medi-

an salaries of \$59,440 per year, and high-end salaries of \$200,000 per year.

The minimum requirements for the position of a psychometrician are a Master's degree in educational measurement, industrial/organizational psychology, mathematics, or related area with relevant experience and training. A Ph.D. in a relevant field is highly desirable.

Source: <http://weusemath.com>

**“Cryptanalysis is one of the core technical disciplines necessary for the NSA to accomplish its mission and provide critical intelligence to the Nation’s leaders.”**

**-www.nsa.gov**

# Cryptanalysts develop coding systems

Cryptanalysts design, implement, and analyze algorithms for solving problems. They analyze and decipher secret coding systems and decode messages for military, political, or law enforcement agencies or organizations. They help provide privacy for people and corporations, and keep hackers out of important data systems. They are constantly working on new ways to encrypt information.

Cryptanalysts receive low-end salaries of \$38,930 per year, median salaries of \$79,470 per year, and high-end salaries of \$112,780 per year.

Cryptanalysts use math to perform many tasks including studying and testing ideas and alternative theories, following mathematical theories, encoding and encrypting systems and databases, performing

cryptic computations and applying methods of numerical analysis, devising systems for companies to help keep hackers out and to protect the company and consumer, using computers to make graphs, tables and charts of data, acting as consultant to research staff concerning cryptical and mathematical methods and applications.

Source: <http://weusemath.com>

# Technical writers need superior writing skills

A technical writer is a professional writer who designs, writes, creates, maintains, and updates technical documentation—including online help, user guides, white papers, design specifications, system manuals, and other documents.

Technical writers work for book, magazine, or newspaper publishers, or they may be employed in other

industries. Technical writers who work for the federal government write the pamphlets that are published by the Government Printing Office. These pamphlets cover many different fields, including the activities of various government agencies and the developments in research in such areas as medicine, education, and agriculture. Some technical writers work for colleges

or universities or for the publishers of professional journals. Others work for advertising agencies.

Technical writers receive low-end salaries of \$36,500 per year, median salaries of \$61,620 per year, and high-end salaries of \$97,460 per year.

Source: <http://weusemath.com>



# ALL GIRLS MATH

## All Girls/All Math Summer Camp

251 Avery Hall  
University of Nebraska-Lincoln  
Lincoln, NE 68588-0131

Phone: 402.472.8965

Fax: 402.472.9311

E-mail: [agam@unl.edu](mailto:agam@unl.edu)

Explore the Unknown World of Mathematics  
& What Your Future May Hold

At the University of Nebraska-Lincoln, you can major in mathematics or in a host of mathematics-related fields. At [www.unl.edu](http://www.unl.edu), you can explore the different majors available at UNL as well as learn about the specifics of various majors that are offered.

If you are interested in learning more about mathematics-related careers, you should check out the following websites, which include information about careers, career profiles, and links for more information.

- Mathematics of Association of America  
- <http://www.maa.org/careers/>
- BYU Mathematics Department  
- <http://www.weusemath.com>

## AGAM prepares girls for success in college

### By Amy Been

California native Claire Schirle is a storm chaser at heart. In high school, she enjoyed math and was searching for a way to have an even deeper experience. For Claire, the University of Nebraska-Lincoln's All Girls/All Math Camp was the perfect solution.

"I loved being around other girls who liked math!" Schirle said, remembering her summer spent at camp. "In high school I was just about the only one of my friends who liked math, so it was just cool to have an instant connection with the girls. Also, I loved all the positive attitudes they had toward math."

As an AGAM participant in 2010, Claire met with a professor in the Meteorology Department to discuss her goal of attending the University of Nebraska-Lincoln. Two years later, Claire's dream became reality.

"Honestly, I am pretty sure AGAM was the number one reason I ended up choosing to go to school at UNL.

I loved the atmosphere, many of the people I met, the dorms, the food, the campus...everything!" Schirle said.

Schirle will be a senior meteorology and mathematics dual major at UNL in the Fall of 2015. She is involved on campus in the American Meteorology Society's student chapter and the Storm Chase Team. She also is a member of the Honors Program. Claire served as the Undergraduate Coordinator for AGAM in the Summer of 2014. She gives some credit to her experience at AGAM for her success in college so far.

"I was concerned on the first day of camp that I might not have as much math background as the other girls at camp did, but by the end I realized that if I put my mind to it, I would succeed in any classroom-type setting, no matter how new or challenging the material is," Schirle said. "This skill helped me in college with many of my math

and science classes." She reflected on how All Girls/All Math changed her perception of mathematics, and how it could actually be fun:

"My experience at camp itself was extremely eye-opening. I had no idea that math was anything more than just the practice problems I had been solving from textbooks for years and years. I realized there was a bigger picture to math," she said. "Camp was also a blast! The excursions we went on to go along with the lessons, such as aerodynamics, were so fun and educational too."

Schirle offers her advice and encouragement to girls who are considering majoring in math.

"Don't be afraid to pursue what you want. It may seem challenging at first, but the challenge is worth it and it can be fun along the way! There are so many doors that are opened when a person is willing to spend the time to learn about math and its applications, so if it interests you then go for it!!!"