

# MAJOR TO CAREER GUIDE

## B.S. Mathematics with an Actuarial Science Concentration

College of Sciences

### Mission of the College of Sciences

The College of Sciences offers programs in life sciences, chemistry, geoscience, mathematical sciences, physics and astronomy, and water management. The college has created a well-rounded curriculum by combining practical and empirical knowledge with scientific fundamentals and principles, which provides a solid foundation for a successful career in the sciences and other professional programs. The student-faculty relationship, hands-on research, and community service help ensure that students who graduate are prepared for whatever path they choose.

[www.unlv.edu/sciences](http://www.unlv.edu/sciences)

### About the Mathematics Degree

Mathematics is a powerful tool for solving practical problems and a highly creative field of study, combining logic and precision with intuition and imagination. The basic goal of mathematics is to reveal and explain patterns---whether the pattern appears as electrical impulses in an animal's nervous system, as fluctuations in stock market prices, or as fine detail of an abstract geometric figure. With today's powerful computers, mathematics is being used in science and engineering in unprecedented ways: to plan the path of a robot arm, to model oil reservoirs under the surface of the earth, to make and break secret codes. Actuarial science is the discipline that applies mathematical and statistical methods to assess risk in insurance, finance and other industries and professions. Actuaries need a bachelor's degree and must pass a series of exams to become certified professionals. They must have a strong background in mathematics, statistics, and business.

### Value of B.A. Mathematics Major

Majoring in mathematics opens up a whole world full of career opportunities. Employers value the skills that the study of math instills in students. Actuaries analyze the financial costs of risk and uncertainty. Actuaries use mathematics, statistics, and financial theory to assess the risk that an event will occur and to help businesses and clients develop policies that minimize the cost of that risk. Most actuaries work full time in an office setting. Actuaries who work as consultants often work longer hours and frequently travel to meet with clients.

### UNLV Academic Advising for Science Majors:

*Academic Advisors who are eager to meet with students about their academic goals and to assist in constructing a plan for graduation. Advisors can also help students understand how their experiences at UNLV can lead to a career in their desired field.*

College of Sciences Advising Center  
Phone: 702-895-2077  
Campus Location: MPE-A 130  
[www.unlv.edu/sciences/advising](http://www.unlv.edu/sciences/advising)

### Actuarial Science Career Options

- Life, health, and property/casualty insurance companies
- Large Corporations and Public Accounting Firms
- US Federal Government
- State and Local Governments
- Consultants for insurance companies, corporations, hospitals, labor unions, joint labor-management trustees, state and local governments, federal government agencies and attorneys
- Banks and Investment Firms
- Educational Institutions

### Professional and Student Organizations

*Students are encouraged to get involved with these societies and groups early on!*

UNLV Math Conference

<http://math.unlv.edu/MSCC.html>

CAOS <http://math.unlv.edu/CAOS1.html>

CAMS <http://math.unlv.edu/cams/index.html>

MATH Competitions

[http://math.unlv.edu/math\\_comps.html](http://math.unlv.edu/math_comps.html)

UNLV Math Problem Solving Workshop/Competitions

Pi Mu Epsilon Honor Society

<http://math.unlv.edu/pme/index.html>

*Websites for professional math organizations:*

**National Science Foundation (NSF)**

<http://www.nsf.gov/>

**National Security Agency** <http://www.nsa.gov/>

**Mathworld**, <http://mathworld.wolfram.com/>

**SIAM- History of Numerical Analysis** ,

<http://history.siam.org/>

### Graduate Program: Mathematics M.S. and PhD

Our Graduate program consists of both masters of science and doctoral degrees. The department has four emphases within the department's Mathematics degree that in MS students may choose from: Math, Applied Math, Statistics, and Teaching Math. PhD students also have four emphases: Pure Math, Applied Math, Statistics, and Computational Math.

[http://math.unlv.edu/study\\_grad.html](http://math.unlv.edu/study_grad.html)

# Helpful Career Information

## Employers rate candidate soft skills/qualities in order of importance

- 1 Ability to verbally communicate with persons inside and outside the organization
- 2 Ability to work in a team structure
- 3 Ability to make decisions and solve problems
- 4 Ability to plan, organize and prioritize work
- 5 Ability to obtain and process information
- 6 Ability to analyze quantitative data
- 7 Technical knowledge related to the job
- 8 Proficiency with computer software programs
- 9 Ability to create and/or edit written reports
- 10 Ability to sell or influence others

Source: Job Outlook 2013

Courtesy of the National Association of Colleges and Employers

Visit the Career Occupational Handbook to learn more about a specific occupation:

<http://www.bls.gov/ooh/>

The OCH covers hundreds of occupations and describes: What They Do, Work Environment, How to Become One, Pay, and more. Each profile also includes BLS employment projections for the 2010–20 decade.

### Career Exploration/Planning

**FOCUS 2:** UNLV's computerized assessment that profiles your interests, abilities, and values and helps you find a career that's right for you.

<http://hire.unlv.edu/careerAssessment.html>

**Myers-Briggs Type Indicator (MBTI):** Assessment designed to identify how you are energized, how you take in information, how you make decisions, and how you approach life.

<http://hire.unlv.edu/careerAssessmentMBTI.html>

**Strong Interest Inventory:** Generates an in-depth assessment of your interests among a broad range of occupations, work and leisure activities, and educational subjects.

<http://hire.unlv.edu/careerAssessmentStrong.html>

### UNLV Career Services

Career Services encourages ALL UNLV students to take advantage of their services, which include:

- Assistance with developing a career plan and choosing a major
- Career counseling and guidance on building a RESUME
- Preparing for an interview, assistance with job searching and networking.

Phone: 702-895-3495

Campus Location: SSC-A 2<sup>nd</sup> Floor

<http://hire.unlv.edu/>

### Internship Opportunities

UNLV's **Hire a Rebel** is a free, online recruiting system that helps students, alumni, and employers connect in a variety of ways.

Students can use **Hire a Rebel** to search for: job and internship listings, on-campus recruiting interviews, employer information sessions, resume book database, & dates for career fairs.

<http://hire.unlv.edu/careerLink.html>

## MEDIAN SALARIES BY DISCIPLINE 2010-2012

Career	Salary Range	Median Salary
Actuary	\$50,826 - \$156,670	\$85,700
Senior Actuary	\$81,707 - \$412,197	\$182,100
Actuarial Analyst	\$49,822 - \$80,347	\$61,100
Actuarial Consultant	\$64,595 - \$129,081	\$93,800

[www.payscale.com](http://www.payscale.com)

**UNLV** | ACADEMIC  
ADVISING  
*Collaborate to Graduate*