

## Career Options

- Accountant/Auditor
- Actuary
- Bank Officer
- Bookkeeper
- Financial Analyst
- Financial Planner
- Investment Banker
- Manager
- Psychologist
- Researcher
- Statistician

## What is Statistics?

Statistics is the practical science of dealing with data—information in the form of numbers, often from many sources. In this major, you study the most efficient ways to collect data and to analyze and interpret it. Statistics, which forms the backbone of all research methods, includes the study of experimental design, regression analysis (the relationships between measurements), probability, and sampling theory. A statistician's primary tools are mathematics and computers. Science and logic underlie their thinking.

At the Weissman School of Arts and Sciences, three specializations are offered: Psychometrics, Sociometrics, and Statistical Theory.

## Occupational Opportunities

Statisticians work in a wide variety of areas, including manufacturing, pharmaceuticals, insurance, government agencies, consulting firms, and agricultural research. Statistics majors also find jobs in actuarial science, statistical programming, operations research, and mathematical analysis. A graduate degree can increase your career opportunities.

## Skills & Abilities

Good communication skills are important for statisticians who seek a job in private industry, because these statisticians often need to explain technical matters to persons without statistical expertise. An understanding of business and the economy also is valuable for those who plan to work in private industry. Beginning statisticians generally are supervised by an experienced statistician. With experience, they may advance to positions with more technical responsibility and, in some cases, supervisory duties. Opportunities for promotion are greater for people with advanced degrees. Master's and Ph.D. degree holders usually enjoy independence in their work and may engage in research, develop statistical methods, or, after a number of years of experience in a particular area, become statistical consultants. Advancements in technology have made a great impact on statistics. Continuing education is important for statisticians, who need to stay abreast of emerging technologies to perform well. Related major skills and characteristics are:

- Numerical computation
- Analyzes and interprets data
- Critical thinking
- Computer literacy
- Systemizing skills
- Efficient and accurate
- Works independently or in teams
- Logical thinking
- Problem solver
- Organize and detail oriented
- Strong oral and written communication
- Possesses integrity, honesty, and thoroughness
- Commits to professional ethics

## Career Snapshot: Statistician

### Two Years

Individuals with only undergraduate degrees enter data, perform simple analysis, and summarize internal reports. These tasks involve limited responsibility and are done under rigorous supervision. Satisfaction is lowest in the early years, and the hours can be long for individuals who keep up with professional reading and continue to educate themselves about their field. Individuals with graduate degrees are more likely to be assigned interesting tasks, but these first two years can be a time of menial tasks for all.

### Five Years

Many statisticians spend five or more years at a single firm learning their profession. By this time, they usually have graduate degrees, and many of them plan and supervise projects. A majority of statisticians supervise researchers, analyze data, and write reports. They concentrate on producing quality work and getting published in professional or academic journals. Professional education is important during this period and includes attending conferences or lectures during people's free time. Satisfaction is high; salaries increase significantly.

### Ten Years

Ten-year veterans have a good deal of job mobility and begin seeking new positions that make use of their now-substantial skills. Many statisticians move from smaller companies to larger ones or from statistician to executive positions. Many of them plan and direct research projects. Satisfaction is high, and salaries increase, particularly in the private sector.

## Additional Resources

U.S. Government's Occupational Outlook Handbook  
<http://bls.gov/oco>

Make the Difference  
[www.makingthedifference.org/federalcareers](http://www.makingthedifference.org/federalcareers)

American Statistical Association  
[www.amstat.org](http://www.amstat.org)

Icrunchdata.com – a website containing a wealth of information for those interesting in statistical careers.  
[www.icrunchdata.com](http://www.icrunchdata.com)

Statistics.com – online professional development courses in statistics and contains a job bank as well.  
[www.statistics.com](http://www.statistics.com)