

Statistics

Curriculum

The Statistics program is an ideal choice for students who desire a broad-based education with a foundation in mathematics, computing and information management. Statisticians have the opportunity to be involved in research in a wide variety of fields and the undergraduate degree program reflects this diversity. The undergraduate program in statistics provides an integrated curriculum ideal for a double major if desired.

Statistics majors

develop the following skills:

- Produce trustworthy data
- Analyze data to make their meaning clear
- Determine the questions/ problems to be addressed and identify data needed
- Determine methods for finding or collecting data
- Design surveys or experiments or opinion polls
- Collect data
- Analyze and interpret data
- Report conclusions from data analyses
- Draw practical conclusions from data
- Absorb very complex concepts
- Discover the implications of new ideas
- Distill the common thread of diverse concepts and techniques into their fundamental principles
- Complete statistical analysis, sampling techniques and data acquisition
- Make and interpret graphs, tables, & charts
- Use library research techniques
- Demonstrate technical writing skills
- Master new technology

Get Involved

Statistics Club
Pi Mu Epsilon (Math Club)

A complete list of student clubs and organizations can be found online at:
<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://www.ams.org/profession/career-info/career-index>
- American Statistical Association
<http://www.amstat.org/careers/index.cfm>
<http://www.amstat.org/education/internships.cfm>
- Be an Actuary
<http://www.beanactuary.org/>
- Bureau of Labor Statistics
<http://www.bls.gov/jobs/>
- Career Cornerstone Center
<http://www.careercornerstone.org/statistics/statistics.htm>
- ESPN
<http://jobs.espn.com/careers/statistics-jobs>
- Federal Government Jobs
<http://federalgovernmentjobs.us/job-group/mathematics-and-statistics.html>
- Global Actuarial & Analytics Recruitment
<http://www.actuaryjobs.com/otherjobs.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
- NASA
<https://intern.nasa.gov/>
- National Opinion Research Center
<http://www.norc.org/WorkingAtNORC/Pages/default.aspx>
<http://www.norc.org/WorkingAtNORC/Pages/internship-programs.aspx>
- New Scientist Jobs
<http://jobs.newscientist.com/jobs/statistics/>
- Stats Careers
<http://www.statscareers.com/>
- The Washington Center
<http://www.twc.edu/>
- Stats Jobs
<http://www.statsjobs.com>
<http://www.stat.ufl.edu/jobs/>
- USDA National Agricultural Statistics Service
http://www.nass.usda.gov/Contact_Us/Opportunities/index.asp

Actuaries study past events to predict future outcomes which can involve the application of probability and statistics to financial affairs. This is most common in insurance, healthcare, pensions and banking. You must pass seven exams to become licensed.

Statisticians use mathematical techniques to analyze and interpret data and draw conclusions. Biostatistics is the application of statistical methods to research in medicine (clinical trials), public health, epidemiology or biology. **Medicine:** Statisticians work with medical teams to design experiments and analyze the complex data they produce.

Environment: Studies of the environment require data on the abundance and location of plants and animals, on the spread of pollution from its sources, and on the possible effects of changes in human activities. The data are often incomplete or uncertain, but statisticians can help uncover their meaning.

Industry: The future of many industries and their employees depends on improvement in the quality of goods and services and the efficiency with which they are produced and delivered. Improvement should be based on data, and more companies are installing elaborate systems to collect and act on data to better serve their customers.

Government Surveys: The government wants data on unemployment, imports, crime and many more issues to guide policy. Government statistics agencies provide them by surveys of households and businesses. Nearly every agency in the federal government employs statisticians.

Market Research: The systematic gathering, recording and analyzing of information relating to the transfer and sale of goods and services from producer to consumer. Combined with systematic problem analysis, model building and fact finding serves the purpose of improved decision making and control in marketing goods and services. Statisticians design the elaborate surveys that gather data for both public and private use.

Manufacturing: Statisticians design experiments for product testing and development. For instance, they help to design experiments to see how car engines perform when exposed to extreme weather conditions. Statisticians also contribute to the design of marketing strategies and prices for final goods.

Potential Job Titles

Actuary
Forensic Statistician
Market Research Statistician
Pharmaceutical Statistician
Sports Statistician
Lecturer/Professor
Environmental Statistician
Government Statistician
Medical Statistician
Statistical Consultant
Biostatistician
Biometrician
Data Analytics Scientist
Operations Research Analyst
Economist
Physical Scientist
Social Scientist
Risk Assessor /Manager
Survey Designer
Market Statistician
Computer Scientist
Research Analyst
Principle Statistician
Statistical Modeler
Retail Price Analyst

Internships

Dept. of Education	Dept. of Interior
Dept. of Transportation	Dept. of Justice
Dept. of Homeland Security	Dept. of Defense
Dept. of Energy	Dept. of Labor
Dept. of Agriculture	Dept. of Commerce
NOAA	NASA
ESPN	USDA
Defense Mapping Agency	Library of Congress
Drug Enforcement Admin.	US Customs Service
National Security Agency	
National Science Foundation	
Social Security Administration	
Dept. of Health & Human Services	
Dept. of Housing & Urban Development	
Institute of Ed. Sciences	Environmental Protection Agency
National Oceanic and Atmospheric Administration	
Centers for disease Control and Prevention	
Consumer Product Safety Commission	
Equal Employment Opportunity Commission	
Institute of Museum and Library Services	
Bureau of Justice Statistics	