STATISTICS
What can I do with this major?

**AREAS**

**GOVERNMENT**
Scientific Research:
Design Surveys
Implement Experiments
Collect, Process, and Analyze Data
Interpret Results
Areas Include:
Census
Ecology
Forestry
Government Regulation
Law
National Defense
Public Health
Population Research
Risk Assessment

**BUSINESS AND INDUSTRY**
Quality Control
Reliability
Product Testing
Product Development and Improvement
Management of Assets and Liabilities
Risk Assessment
Financial Planning
Market Research
Management
Research
Engineering Applications
Data Processing Services
Purchasing
Technical Writing

**EMPLOYERS**

Federal government including:
Bureau of Labor Statistics
Centers for Disease Control and Prevention
Census Bureau
Department of Agriculture
Department of Commerce
Department of Energy, Office of Energy Research
Department of Health and Human Services
Environmental Protection Agency
Food and Drug Administration
National Institutes of Health
National Science Foundation
National Institute of Standards and Technology
National Security Agency
Nuclear Regulatory Commission
Office of Naval Research
Army Research Office
State and local government

**STRATEGIES**

Approximately 20% of statisticians work for the federal government, and they are found in nearly all agencies and departments. An additional 10% work in state and local governments.
Plan to earn a master's or doctoral degree to qualify for most "statistician" jobs.
Some positions are available for students with bachelor's degrees in statistics.
Develop a strong background in computers because they are used extensively for statistical applications.
Complete an internship with a government organization.
Learn about the government hiring process and plan to apply early. Research special hiring authorizations to be hired and promoted more quickly.

Manufacturers
Pharmaceutical and biotechnology firms
Communications industry
Consumer marking firms
Consulting firms
Research centers and laboratories
Utility companies
Environmental clean-up firms
Software developers
Engineering firms
Transportation companies
Financial institutions
Insurance companies
Nonprofit organizations

Take a well-rounded selection of business and computer courses.
Plan to earn a master's or doctoral degree for higher level positions.
Gain relevant experience through internships.
Develop a strong background in computers because they are used extensively for statistical applications.
Learn to work well both independently and on interdisciplinary teams.
Develop the ability to communicate statistical aspects of business decisions to a wide array of people.
<table>
<thead>
<tr>
<th><strong>HEALTH AND MEDICINE</strong></th>
<th><strong>EMPLOYERS</strong></th>
<th><strong>STRATEGIES</strong></th>
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<tbody>
<tr>
<td>Biomedical Research</td>
<td>Pharmaceutical companies</td>
<td>Supplement curriculum with courses such as biology, chemistry, biostatistics, and other natural sciences.</td>
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<tr>
<td>Biostatistics</td>
<td>Biotechnology firms</td>
<td>Learn to work well on interdisciplinary teams.</td>
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<td>Clinical Trials</td>
<td>Hospitals</td>
<td>Complete a relevant internship.</td>
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<td>Epidemiology</td>
<td>National laboratories</td>
<td>Develop strong written and verbal communication skills. Statisticians in this field may frequently write technical reports.</td>
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<tr>
<td>Genetics</td>
<td>Government agencies such as:</td>
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<tr>
<td>Pharmacology</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>Public Health</td>
<td>Food and Drug Administration</td>
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<tr>
<td>Animal Health</td>
<td>National Institutes of Health</td>
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<tr>
<td>Health Economics</td>
<td>Research universities</td>
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<tr>
<td>Technical Writing</td>
<td>Animal health industry</td>
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<td></td>
<td>Scientific journals</td>
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<th><strong>INSURANCE</strong></th>
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<tr>
<td>Actuary Science</td>
<td>Insurance carriers</td>
<td>Take additional courses in mathematics and finance.</td>
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<tr>
<td>Risk Management/Assessment</td>
<td>Insurance agents and brokers</td>
<td>Complete an internship with an insurance agency to gain relevant experience.</td>
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<tr>
<td>Loss Management/Control</td>
<td>Professional, scientific, and technical consulting firms</td>
<td>Talk to professionals in the industry to learn more about claims, underwriting, and risk management.</td>
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<tr>
<td>Underwriting</td>
<td>Government agencies</td>
<td>Many entry-level positions exist in these areas.</td>
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</tbody>
</table>

- Take additional courses in mathematics and finance.
- Complete an internship with an insurance agency to gain relevant experience.
- Talk to professionals in the industry to learn more about claims, underwriting, and risk management. Many entry-level positions exist in these areas.
- Develop strong communication skills, as many positions require interaction with others and the ability to explain information clearly and concisely.
- Learn how to use statistical analysis software and various computer programming languages.
- More than half of actuaries work for insurance carriers.
- Plan to take a series of actuarial exams to gain licensure from either the Society of Actuaries or the Casualty Actuarial Society. The type of insurance you deal with will determine which path to pursue. Most actuaries take these exams while working full-time, and the process takes several years.
## OPERATIONS MANAGEMENT

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<th>AREAS</th>
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<tbody>
<tr>
<td><strong>Operations Research Analysis:</strong>&lt;br&gt;Business strategy&lt;br&gt;Facilities layout&lt;br&gt;Inventory control&lt;br&gt;Personnel scheduling</td>
<td>Manufacturers&lt;br&gt;Industrial organizations&lt;br&gt;Service organizations</td>
<td>Develop strong analytical skills and a logical approach to problem solving.&lt;br&gt;Take additional courses in management.&lt;br&gt;Acquire skills in budgeting and cost management.&lt;br&gt;Learn to manage multiple situations and problems.&lt;br&gt;Learn to communicate effectively with different types of people in various functional areas.&lt;br&gt;Earn an MBA to reach higher levels of operations management.</td>
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<td><strong>Production Management:</strong>&lt;br&gt;Line supervision&lt;br&gt;Manufacturing management&lt;br&gt;Production planning&lt;br&gt;Quality assurance</td>
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<td><strong>Materials Management:</strong>&lt;br&gt;Purchasing/buying&lt;br&gt;Traffic management&lt;br&gt;Inventory management</td>
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## BANKING AND FINANCE

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<td><strong>Corporate and Consumer Credit Analysis</strong>&lt;br&gt;Commercial Lending&lt;br&gt;Trust Management&lt;br&gt;Capital Services and Mergers and Acquisitions&lt;br&gt;Mortgage Loans&lt;br&gt;Originations and Packaging&lt;br&gt;Branch Management&lt;br&gt;Operations&lt;br&gt;Cash Management&lt;br&gt;Credit Scoring and Risk Management&lt;br&gt;Private Banking&lt;br&gt;Financial Analysis&lt;br&gt;Investment Banking</td>
<td>Commercial banks&lt;br&gt;Credit unions&lt;br&gt;Savings and loan associations&lt;br&gt;Savings banks&lt;br&gt;Mortgage banks&lt;br&gt;Captive finance companies&lt;br&gt;Regulatory agencies including:&lt;br&gt; Federal Reserve&lt;br&gt; Federal Deposit Insurance Corporation (FDIC)&lt;br&gt; Office of the Comptroller of the Currency (OCC)&lt;br&gt; Office of Thrift Supervision (OTS)&lt;br&gt; Brokerage firms</td>
<td>Build a solid background in business including marketing, finance, and accounting.&lt;br&gt;Gain experience through part-time, summer or internship positions in a financial service firm.&lt;br&gt;Develop strong interpersonal and communication skills in order to work well with a diverse clientele.&lt;br&gt;Plan to earn an MBA to enter investment banking.</td>
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Statistics can be used in a wide variety of fields within science, technology, business, health, and social sciences. Gain knowledge in a specific field of interest to pair with skills in statistics, math, and computers.

Most "statistician" and upper level research jobs in either government or industry will require at least a master's degree.

An undergraduate degree in statistics can be used in a variety of business settings if combined with relevant experience and skills. Choose concentrations or minors that will enhance a degree in statistics. Take courses in forecasting and applied time series which are particularly sought after by employers. Plan to complete one or more internships in an area of interest.

Some positions in business, such as sales and management, are open to any major. Seek experiences and build skills that will help you prepare for these jobs.

Strong communication skills are critical in the field of statistics in order to communicate statistical information clearly to people who do not have technical backgrounds.

Get involved with campus organizations to build leadership and teamwork skills.

Conduct informational interviews with professionals in fields of interest to learn more about their work and to build a network of contacts.

To prepare for graduate school, maintain a high grade point average and secure strong faculty recommendations. Statistics can be a good preparation for graduate degrees in other fields such as law, business, or public health.