

Career Options

- Actuary
- Auditor
- Communications Specialist
- Computer Security
- Data Communications Analyst
- Data Security Analyst
- Database Manager
- Distribution Manager
- End-User Computing Manager
- Engineering Specialist
- Financial Planner
- Information Systems Developer
- Information Technology Manager
- Internet Developer
- Internet Marketing Analyst
- Inventory Control Specialist
- Investment Analyst
- LAN Manager
- Logistics Manager
- Market Research Analyst
- Materials Controller
- Medical Systems Designer
- Mortgage Researcher
- Network Administrator/Manager
- Online Services Manager
- Operating Systems Programmer
- Operations Researcher
- PC Support Specialist
- Plant Manager
- Product Development
- Product Forecaster/Estimator
- Production Line Manager
- Production Scheduler/Planner
- Programmer – Engineering & Purchasing Agent/Manager
- Quality Assurance Analyst
- Risk and Insurance Specialist
- Software Support Technician
- Statistician
- Systems Administrator
- Systems Integrator
- Technology Consultant
- Underwriter
- Urban Planner
- Quality Control Specialist
- Records Management Analyst
- Relocation Analyst
- Risk Analyst
- Software Tester
- Web Master

What is Statistics & Quantitative Modeling?

This major provides students with the basic preparation needed to pursue careers in the decision sciences. The area also provides fundamental quantitative knowledge required by those who major in other business areas. Statistics and Quantitative Modeling majors will develop interdisciplinary skills that will provide them with the technical versatility required to succeed in today's business environment. Emphasis is placed on modeling methods, analysis, and implementation relevant to operational and management planning issues in many business areas, including marketing, production, finance, accounting, and information technology.

Occupational Opportunities

Opportunities for statistics and quantitative modeling majors exist in almost every industry because of the diversity of applications for their work. However, opportunities should be especially good in highly competitive industries, such as manufacturing, transportation, telecommunications, and finance. As businesses and government agencies continue to contract out jobs to cut costs, many statistics and quantitative modeling majors will find opportunities as consultants, either working for a consulting firm or setting up their own practice.

Skills & Abilities

The preferred working style for those in statistics and quantitative modeling is rational, analytical and detail-oriented. Statistics and quantitative modeling careers typically require proficiency in data collection, manipulation and analysis and database management often done with sophisticated computer software programs. Because computers are the most important tools for in-depth analysis, advanced training and experience in computer programming is typically required. High proficiency in mathematics and numerical computation is essential. A list of related skills and abilities follows:

- Copes with constant change
- Analyzes, makes appropriate decisions, and solves problems
- Thinks logically
- Organize

- High proficiency in the understanding and use of computers
- Accurate and detail oriented
- Computational ability (using algebra for technician areas and using calculus for computer science areas)

- Proficient in writing and speaking
- Aptitude for abstract reasoning, keen observation, and intense concentration
- Works with others

- Ability to work under pressure
- Understands and applies information derived from technical manuals and related materials

Career Snapshot: Operations Research Analyst

The duties of the operations research analyst vary according to the structure and management philosophy of the employer or client. Some firms centralize operations research in one department; others use operations research in each division. Operations research analysts help determine better ways to coordinate the use of money, materials, equipment and people by applying analytical methods from mathematics, science, and engineering. They solve problems in different ways and propose alternative solutions to management, which then chooses the course of action that best meets the organization's goals. Because computers are the most important tools for performing in-depth analysis, training and experience in programming are required. Operations research analysts typically need to be proficient in database collection and management, programming, and the development and use of sophisticated software packages. Beginning analysts usually perform routine work under the supervision of more experienced analysts. As the novices gain experience, they are assigned to more complex tasks and given greater autonomy to design models and solve problems.

Operations research analysts advance by assuming positions as technical specialists or supervisors. The skills acquired by operations research analysts are useful for a variety of higher-level management jobs, so experienced analysts may leave the field to assume non-technical managerial or administrative positions. Operations research analysts with significant experience may become consultants, and some may even open their own consulting practice. Operations research analysts generally work regular hours in an office environment. Because they work on projects that are of immediate interest to top management, operations research analysts are often under pressure to meet deadlines and work more than a 40-hour week.

Additional Resources

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

Association for Information Systems
www.aisnet.org

Institute for Operations Research and the Management Sciences
www.informs.org

Institute of Operations Management
www.iomnet.org.uk

American Statistical Association
www.amstat.org

American Mathematical Society
www.ams.org

Society for Industrial and Applied Mathematics
www.siam.org

Institute for the Certification of Computing Professionals
www.iccp.org

Computing Research Association
www.cra.org

Make the Difference
www.makingthedifference.org/federalcareers