Statistics

FROM STUDY TO SKILLS

All academic programs offered at UM help students develop valuable transferable skills. Statistics is concerned with the critical reasoning skills needed for understanding our quantitative world. As a central part of a liberal arts education, statistics focuses on the process of learning from data: how to ask the right question, how to collect information effectively, how to summarize information, how to make predictions, and how to draw meaningful inferences from data and understand their limitations. Statistics concentrators gain a foundation in data analysis that may be applied to the social, behavioral, natural, and health sciences, as well as in humanistic research.

Related fields include Mathematics, Computer Science, Economics, Political Science, Program in the Environment, Public Policy, Public Health, Psychology, Sociology, and Survey Methodology.

SKILLS AND ABILITIES

Analytical Skills
Applying methods to solve problems
Projecting from data
Reasoning critically
Categorizing data
Developing theories
Designing systems for processing data
Designing data visualizations

Quantitative Skills
Computer programming
Mathematical modeling
Mathematical analysis
Computer simulations
Using statistical software
Interpreting data from tables/charts

Research and Presentation Skills
Identifying areas for research
Translating theory into research plans
Assessing a data collection plan
Designing questionnaires
Evaluating collected data
Determining cost benefits/offsets
Presenting alternative explanations
Designing graphs/charts
Writing reports

Problem-Solving Skills
Formulating problems
Applying logic to problems
Assessing needs
Distinguishing relevant/extraneous information

BUILDING YOUR SKILLS OUTSIDE THE CLASSROOM

Employers seek out individuals who can demonstrate excellent verbal and written communication skills, teamwork and interpersonal skills, initiative, and a strong work ethic. Student organizations and campus employment offer valuable opportunities to add to the skills you are developing in your classes. Most concentrations sponsor specific student groups like an undergraduate organization or an honor society. Other options include study abroad, off-campus employment or volunteering in the community. Finally, a summer internship may be the best way of all to test out a career field and develop marketable skills.
FROM SKILLS TO CAREER

Statistics concentrators develop both general and technical skills applicable to a wide range of careers. For example, the ability to derive meaningful conclusions from a body of data is equally valuable whether working as a public opinion researcher, an economist, or a legislative researcher.

Analytical Skills
- Economist
- Credit risk modeler
- State disability insurance analyst
- Demographer
- Transportation system statistician
- Investment manager
- Logistics analyst
- Sales forecaster
- Network performance analyst

Quantitative Skills
- Agricultural statistician
- Statistical analyst
- Biostatistician
- Statistical software designer
- Simulation /modeling laboratory manager
- Health intervention analyst
- Actuary
- Opinion pollster
- Gaming statistician

Many concentrators go on to graduate or professional school. The list below is a sample of careers undertaken by Statistics graduates.

Research and Presentation Skills
- Social Security claims reviewer
- Legislative researcher
- College instructor
- K-12 teacher
- Documents librarian
- Operations research analyst

Problem-Solving Skills
- Program specialist for a non-profit
- Employment specialist
- College student services administrator
- Precision quality control officer
- Production manager

= Further Study Required
= Green Job

For more career information, see O*Net at http://online.onetcenter.org/

CONCENTRATION REQUIREMENTS

In addition to three prerequisites (Math 215 and 217, and EECS 182 or 183), the concentration requires a minimum of 30 credit hours (see the LSA Bulletin for more specific information).

NEXT STEPS/RESOURCES


To begin connecting to professionals in fields that interest you, create your own LinkedIn account: www.careercenter.umich.edu/students/networking/linkedin_intro.html

To identify internships or job opportunities, visit Career Center Connector: www.careercenter.umich.edu/c3student/

On campus jobs (work-study and non work-study jobs) are listed at: https://studentemployment.umich.edu/JobX_Home.aspx

Maize Pages list hundreds of organizations for students to get involved in: http://studentorgs.umich.edu/maize

Volunteer Connection lists volunteer opportunities in local organizations: http://volunteer-connection.umich.edu/

The Career Center
3200 Student Activities Building
734-764-7460
www.careercenter.umich.edu
www.facebook.com/careercenter.umich
http://twitter.com/careercenter