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.

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

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

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 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

Statistics Undergraduate Program Facebook group: facebook.com/ugrad.stats.umich, and American Statistical Association at amstat.org/careers

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

Maize Pages list hundreds of organizations for students to get involved in: maizepages.umich.edu

Connect to Community lists volunteer opportunities in local organizations: connect2community.umich.edu

The Career Center
3200 Student Activities Building
734-764-7460
careercenter.umich.edu
facebook.com/careercenter.umich
twitter.com/careercenter
linkedin.com/company/the-career-center-at-the-university-of-michigan

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