Western Michigan University’s Department of Statistics offers various programs designed for both graduate students in statistics and graduate students in other disciplines.

The Certificate in Biostatistics is designed for those who want to enhance their background in health-related data analysis including physicians, nurses, clinical researchers, health educators and administrators.

The Certificate in Statistics is designed for graduate students in other disciplines who want to improve quantitative research skills for their doctoral dissertations and master’s theses. They will be able to properly design experiments or surveys, collect data and perform analysis using statistical software packages such as SPSS or SAS.

The Master of Science in Statistics (M.S.) offers students a combination of knowledge of statistical techniques, experience with using these techniques in applied situations, and understanding of the theoretical principles behind these techniques. Students receive training for professional employment in industry or government, while obtaining sufficient theoretical background to qualify them to teach elementary statistics or continue to a doctoral program.

A new program starting in fall 2018 is the Master of Science in Data Science (M.S.). This is an interdisciplinary program offered jointly by the Department of Statistics and the Department of Computer Science. Data Science is a rapidly developing discipline, and data scientists are in high demand in the job market. Students will develop a skill set that will allow them to take on complex data challenges.

The Doctor of Philosophy in Statistics (Ph.D.) is prepares students for careers in teaching and research universities, industry or government. Ph.D. students develop facility in theoretical statistics and in multiple areas of application.

Industry Highlights
Graduates typically find jobs working with data in academia, business, government, public health, technology. Employment of statisticians is projected to grow 34 percent from 2014 to 2024 according to the Bureau of Labor Occupational Outlook Handbook. Demand for statisticians is growing, and so are their salaries. The median salary for data scientists with less than three years of experience is $80,000, and $150,000 for those with nine or more years of experience, according to the Burtch Works 2014 report. According to 2016 Forbes.com survey the best master’s degrees are biostatistics (#1) and statistics (#2).
Teaching, Research and Program Focus Areas
Faculty has expertise in linear and nonlinear models, design of experiments, time series, Bayesian, survival, and categorical data analyses, multivariate and nonparametric methods and sample surveys. Students get training in applications, the theoretical foundations to understand statistical applications and statistical computation.

The Statistical Consulting Center is maintained by the Department of Statistics at WMU. It was established to assist faculty and staff needing statistical help in journal submissions and grant preparation. Examples of areas of expertise:
- Biostatistics
- Categorical analysis
- Classification
- Data Science
- Diagnostics for method selection
- Linear and nonlinear models
- Methodology for zero-inflated data
- Nonparametric and robust procedures
- Propensity analysis
- Survival analysis
- Time series

Funding
Graduate assistanships are available on a competitive basis pending budgetary approval. Students may be accepted into the M.S. or Ph.D. programs without being granted an assistantship. The deadline for funding consideration is Feb. 15, 2018.

Admission
Domestic
Applicants for the certificate, M.S. and Ph.D. programs are admitted throughout the year, so students can start in the fall, spring and summer semesters.

International
Fall 2018: April 1, 2018
Spring 2019: Aug. 1, 2018
Summer 2019: Jan. 15, 2019

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