DATA ANALYTICS GRADUATE MAJOR (MS)

This program is available at the following location:

- **Ecampus**

The MS in Data Analytics Master's degree, offered through the Department of Statistics, provides advanced training for those seeking expertise and skill in the management, manipulation and analysis of data to address real world problems. The MS in Data Analytics Master's degree does not require an advanced mathematics background and will be attractive to currently employed professionals. This program will help employers meet workforce planning goals and contribute to self-improvement goals of current employees.

The MS in Data Analytics Master's degree is a 45-credit distance, online curriculum via Ecampus although students in residence at OSU may also choose to work toward the degree. The required courses include programming in python and R, one and two sample statistical methods, regression analysis, multivariate and time series analysis, classification methods, ordination and machine learning. Elective courses cover a wide range of data analysis methods including time-to-failure data, methods for large and complex data, data visualization, sampling methods, and methods for genomics data.

The MS in Data Analytics degree is offered as a non-thesis program only. Students have an advisor and graduate committee to review their program of study, provide mentoring and advising and to assess the student via their capstone project and final oral exam.

Major Code: 6160

Upon successful completion of the program, students will meet the following learning outcomes:

- Conduct research or produce some other form of creative work.
  - Accurately summarize and justify statistical methods and results used in the final project.
- Demonstrate mastery of subject material.
  - Recommend appropriate analysis methods for a research question and a specified dataset.
- Conduct scholarly or professional activities in an ethical manner.
  - Recommend ethical approaches to data analysis given a specific situation.

Code	Title	Credits
Prerequisites		
ST 351	INTRODUCTION TO STATISTICAL METHODS	
Mathematics to the level of calculus is recommended but not required		
Statistics Core		
ST 516	FOUNDATIONS OF DATA ANALYTICS	4
ST 517	DATA ANALYTICS I	4
ST 518	DATA ANALYTICS II	4
ST 558	MULTIVARIATE ANALYTICS	3
ST 566	TIME SERIES ANALYTICS	3
ST 595	CAPSTONE PROJECT	3
Computer Science Core		
CS 511	PROGRAMMING AND DATA STRUCTURES	4
CS 512	DATA SCIENCE TOOLS AND PROGRAMMING	4
CS 513	APPLIED MACHINE LEARNING	4
Electives		
Select 12 credits from the following courses:		12
ST 515	DESIGN AND ANALYSIS OF PLANNED EXPERIMENTS	
ST 525	APPLIED SURVIVAL ANALYSIS	
ST 531	SAMPLING METHODS	
ST 536	R PROGRAMMING FOR DATA	
ST 537	DATA VISUALIZATION	
ST 538	MODERN STATISTICAL METHODS FOR LARGE AND COMPLEX DATA SETS	
ST 539	SURVEY METHODS	
ST 591	INTRODUCTION TO QUANTITATIVE GENOMICS	
ST 592	STATISTICAL METHODS FOR GENOMICS RESEARCH	
Total Credits		**45**

Major Code: 6160