A. Course Description

Credits: 4

Prerequisites: STAT 201 Statistics I

Lab Hours/Weeks: Corequisites: None

Lecture Hours/Week: MnTC Goals: None

An introduction to methods and techniques commonly used in data science. This course will provide hands-on practice of the methods, procedures, and tools used to summarize and visualize data, preparing students to use data in their field of study and in their work, and to effectively communicate quantitative findings. Topics will include visualizations to transform data into information in a variety of contexts, relational databases, ethical issues with the use of data, and using the statistical programming language R for data analysis. Students will complete a data science project.

B. Course Effective Dates: 05/03/2018 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Describe the types of information systems employed in business environments
2. Extract and assemble data from a variety of sources
3. Apply effective visualization concepts and principles
4. Clean and prepare data for an analysis using R
5. Conduct basic analyses of data using R
6. Work cooperatively as a team member
7. Describe the types of analytics done at operational, managerial, and governance levels of organizations
8. Discuss the ethical aspects and implications of using data to make decisions
9. Provide a written and oral report to the audience at an appropriate level.

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

Note: Students whose prerequisites are not identified by the system would contact the Math and Statistics Department for an override at MATH@metrostate.edu. First day attendance required except by instructor permission.