

DATA 452 - Data Science Capstone II

Fall 2018

I. Catalog Description

DATA 452 Data Science Capstone II (4)

Team-based design, implementation, deployment and delivery of a system or analytical methodology that involves working with and analyzing large quantities of data. Technical management of research and development teams. Technical documentation, quality assurance, integration and systems testing. Design and conduct of empirical studies. Visualization and presentation of results orally and in writing. 2 laboratories. Prerequisite: DATA 451.

II. Required Background and/or Experience

Prerequisite: DATA 451.
Basic knowledge of statistics and the use of computers.

III. Expected Outcomes

The student should:

- A. Implement and deploy a data-analytic system following a specified design
- B. Design and implement an empirical evaluation for a data-analytic system
- C. Effectively contribute to one's own disciplinary knowledge on a team, as well as locate and evaluate new information
- D. Effectively communicate with others in a team, fulfilling one's individual role in the project and in interfacing with customers
- E. Explain the findings of the team's project in writing and orally

IV. Text and References

Recommended Texts: Varies by instructor

V. Minimum Student Materials

USB flash drive.

VI. Minimum University Facilities

Availability of computing facilities.

VII. Expanded Description of Content and Method

Content	Number of lectures
A. Implementation Stage Kick-Off	4
B. Project Management and Evaluation of Results	8
C. Project Implementation	28
Total	40

Method

Largely lecture with computer demonstrations of methods and problems, class discussion, supervised computer lab work and in-class exercises. Material from references and additional problems supplement the text.

VIII. Method of Evaluating Outcome

Problem and programming homework assignments, examinations, and projects.