

Course Syllabus for DS 740: Data Mining

NOTE: This syllabus document contains the basic information of this course. The most current syllabus is available in the full course.

Course Description

Data mining methods and procedures for diagnostic and predictive analytics. Topics include association rules, clustering algorithms, tools for classification, and ensemble methods such as bagging and boosting. Computer implementation and applications will be emphasized.

Course Objectives By the end of this course, you will be able to:

- Compare and decide among methods of data mining.
- Use multiple linear regression for prediction.
- Use k -nearest neighbors for prediction.
- Use methods based on extending linear models for classification.
- Use data to honestly assess predictive ability and precision of data-mining procedures.
- Use trees for classification and prediction.
- Conduct an analysis using unsupervised learning.
- Plan and execute an analysis using data mining.

Grading Policy

Your mastery of course content is assessed using a variety of methods:

Activity	Percentage of Grade
Homework Assignments	60%
Participation in required learning activities (WebWork)	10%
Midterm Project	10%
Final Project	20%
Total	100%

Final grades are assigned using the following scale:

A 90-100%

B 80-89%

C 70-79%

D 60-69%

F At or below 59%