



Course Information

- ECE 59500 Introduction to Data Mining
- 3 Credits
- **Time and Location:** 3:30pm-4:20pm MWF, WANG 2599
- **Prerequisites:** Probability and statistics, linear algebra, Python programming.
- **Textbook:** Introduction to Data Mining, Second Edition, Pearson.
- **Instructor:** Prof. Jing Gao
<https://engineering.purdue.edu/~jinggao/>

Course Description

This course introduces fundamental techniques in data mining, i.e., the techniques that extract useful knowledge from a large amount of data.

Topics to be covered

- Data preprocessing and exploration.
- Association analysis—finding interesting relationships in items.
- Clustering—grouping similar objects.
- Classification—predicting the category of a record.
- Link Analysis—assigning importance scores to nodes in a graph.
- Recommendation—recommending new things to users based on user ratings.
- Anomaly Detection—detecting data points that deviate from normal behavior.

Course outcome and assessment

- Upon completion of this course, students are able to formulate problems in real world applications into data mining tasks and find suitable solutions based on data mining techniques.
- Assessment: Quizzes (multi-choice questions), programming assignments (Python), final exam and project.

