THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Introduction to Data Mining

CSE 5243

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Knowledge discovery, data mining, data preprocessing, data transformations; clustering, classification, frequent pattern mining, anomaly detection, graph and network analysis; applications.

Prerequisites and Co-requisites:
Prereq: 3241 or 5241; and 2331, 5331, Stat 3301, or ISE 3200; and enrollment in CSE, CIS, ECE, Data Analytics, or ISE major.

Course Goals / Objectives:
- Be competent with anomaly detection algorithms and graph/network analysis algorithms
- Master the knowledge discovery process
- Be competent with simple data preprocessing and data transformation techniques
- Master key classification and clustering algorithms
- Master major frequent pattern mining algorithms

Course Topics:
- Knowledge Discovery Process and Background
- Elements of Data Preprocessing and Data Transformations
- Data Clustering
- Data Classification
- Frequent Pattern Mining
- Analyzing Graphs and Networks
- Anomaly Detection
- Applications (Bioinformatics, Social Networks)

Designation:
Elective