

CS 822 Data Mining (3. 0)

Pre-requisite: None

Recommended Books:

1. Introduction to Data Mining, Pang-Ning Tan, Michael Steinbach, Anuj Karpatne and Vipin Kumar, 2nd Edition, Pearson, 2018.
2. Principles of Data Mining, 3rd edition, Max Bramer, Springer, 2016.
3. Mining of Massive Datasets, 2nd edition, Jure Leskovec, Anand Rajaraman, Jeffrey David Ullman, Cambridge University Press, 2014

Credit Hours: 3 (3, 0)

Course Objectives:

- To determine whether a particular problem is a data mining problem or not.
- To understand the complete lifecycle of a data mining process such as data preparation, modeling, and evaluation.
- To pose a problem as a data mining problem, implement and evaluate it.

| Topics / Contents | Allocated Periods |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| This course provides both theoretical and practical coverage of all data mining topics. The topics include: Overview of Data Mining, Data Preprocessing, OLAP and data generalization, Data Cube Computation and Multidimensional Data Analysis, Mining Frequent Patterns, Associations, and Correlations, Classification, Cluster Analysis, Outlier Detection, Anomaly Detection; Avoiding False Discoveries. | 45 |