# 20CS31P1 - DATA WAREHOUSING AND MINING LABORATORY

|  |  |  |  |
| --- | --- | --- | --- |
| Course Category: | Professional Core | Credits: | 1.5 |
| Course Type: | Practical | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | Knowledge in Fundamental concepts of Data Warehouse and Data Mining. | Sessional Evaluation:  Univ. Exam Evaluation:  Total Marks: | 40  60  100 |
| Objectives: | * The course is designed to provide knowledge on Data Warehouse and Data Mining algorithms. | | |

|  |  |  |
| --- | --- | --- |
| Course Outcomes | Upon successful completion of the course, the students will be able to: | |
| CO1 | acquire knowledge on Data Warehouse and Data Mining algorithms. |
| Course Content | 1. To create data in .csv format 2. To create data in .arff format 3. Preprocessing in Weka 4. Data Reduction Strategy – Dimensionality Reduction or Attribute Removal 5. Data Normalization 6. Classification in Weka Using Decision Trees 7. Decision Tree Induction Using J48 Classifier 8. Classification using Multilayer Perceptron 9. Classification using Naïve Bayes Classifier 10. Evaluating the Performance of IBK Classifier 11. Clustering using k-means algorithm 12. Association Rule Generation using Apriori 13. Data Discretization – To convert numeric data to categorical. 14. Weka Experiment Environment Using Simple Mode | |
| Text Books &  Reference  Books | **TEXT BOOKS:**   1. The Data Warehouse Toolkit, Ralph Kimball Margy Ross, Third Edition. 2. Data Mining: Concepts and Techniques, Jiawei Han and Micheline Kamber, Morgan Kaufmann Publishers, Elsevier, Third Edition, 2012.   **REFERENCE BOOKS:**   1. Introduction to Data Mining – Pang-Ning Tan, Michael Steinbach and Vipin Kumar, Pearson Education. 2. Data Warehousing in the Real World, Sam Aanhory & Dennis Murray Pearson | |
| E-Resources | 1. <https://aatinegar.com/wp-content/uploads/2016/05/Kimball_The-Data-Warehouse-Toolkit-3rd-Edition.pdf> 2. <http://myweb.sabanciuniv.edu/rdehkharghani/files/2016/02/The-Morgan-Kaufmann-Series-in-Data-Management-Systems-Jiawei-Han-Micheline-Kamber-Jian-Pei-Data-Mining.-Concepts-and-Techniques-3rd-Edition-Morgan-Kaufmann-2011.pdf> 3. <https://freevideolectures.com/university/iitm> | |

**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 2 | 2 | 2 | - | - | - | - | - | 2 | 2 | 2 | - |