



Information Systems Department

Course Syllabus

IS772- Data Mining and Warehousing

Catalog Description: This course is about gaining an understanding of data warehouses and data mining techniques. It will cover the study of the data warehouses concepts like data marts, data integration... This course will present also data mining techniques to extract knowledge from data warehouses. We will cover some statistical and machine learning techniques for solving some well-known decision problem like clustering and classification ... The course will not only provide the students a comprehension of the benefits of data mining, but also provide them with an understanding of the types of problems and their associated solutions. It will also impart them skills for pre-processing of data and post-processing of results

Credit Hours: **3 Credit hours:** 3 Lectures per week 0 Labs. per week 0 Recitation per week

Prerequisites: None

Course Learning Outcomes:

1. Have knowledge of data warehouses definition, implementation and basic concepts.
2. Understand OLAP processing.
3. Have knowledge of the importance and benefits of data mining.
4. Have knowledge and understanding of data mining problems and their solutions.
5. Have an understanding of data mining algorithms,
6. Have knowledge of the commonly used tools and techniques of data mining.
7. Understand how data has to be pre-processed before application of data mining algorithms
8. Understand how to analyse and use the results obtained from the algorithms

Major Topics:

- Introduction
- Know Your Data
- Data Preprocessing
- Data Warehousing & OLAP
- Data Cube Technology
- Mining Frequent Patterns and Associations: Basic Concepts
- Mining Frequent Patterns, Associations: Advanced Methods
- Classification: Basic Concepts
- Cluster Analysis: Basic Concepts



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Text Books: J. Han and M. Kamber, Data Mining: Concepts and Techniques, 3rd ed. Morgan Kaufman, 2012

Grading:

⊙ The grading scale for this course is:

95 - 100	A+	Passing
90 - 94	A	Passing
85 - 89	B+	Passing
80 - 84	B	Passing
75 - 79	C+	Passing
70 - 74	C	Passing
0 - 69	F	Failing

⊙ Final grades will be determined based on the following components:

- . 60% Semester Work
- . 40% Final Exam

⊙ Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.

⊙ Late submissions will not be accepted for any graded activity for any reason.

⊙ Students have one week to request the re-grading of any semester work.

Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

Attendance Policy:

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded “DN” grade and repeat the course.

The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.

**Cheating and
Plagiarism Policy:**



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When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.

Communications: Registered students will be given access to a section of the Learning Management System (LMS) for this course. LMS will be used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.