



Course Syllabus

IS397 - Special Topics in Information Systems

Catalog Description: This course is about gaining an understanding of data mining problems and their solutions. This 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 related to the discipline and their 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: IS371

Course Learning Outcomes:

1. Recognize data mining importance, problems, and their solutions.
2. Outline data mining algorithms and its application
3. Create models using commonly used tools and techniques of data mining.
4. Prepare data after pre-processing before application of data mining algorithms.
5. Analyze the results obtained from the data mining algorithms.
6. Function effectively on teams to accomplish a common goal.
7. Present a topic in a compelling manner.

Major Topics:

- Topic 01- Introduction to Data Mining
- Topic 02 - Data Pre-processing
- Topic 03 - Classification - Nearest Neighbor
- Topic 04 - Classification - Naive Bayesian
- Topic 05 - Classification - Decision Trees
- Topic 06 - Classifier Performance
- Topic 07 –Data Mining Tools: Weka
- Topic 08 - ARM - Apriori Algorithm
- Topic 09 - Clustering – k-Means Algorithm
- Topic 10 - Clustering - Hierarchical
- Project Discussions

Text Books: M. Bramer, Principles of Data Mining, 3rd edition, Springer Verlag, 2016
ISBN: 978-1-4471-7307-6



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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
65 - 69 D+ Passing
60 - 64 D Passing
0 - 59 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.

Attendance Policy:

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

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.

**Cheating and
Plagiarism Policy:**

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

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



Information Systems Department

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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.