Course Syllabus

IS440 – Data Mining

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: IS336

Course Learning Outcomes:

1. Outline data mining importance, problems, and their solutions.
2. Describe 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.
8. Take responsibility for their own learning and continuing personal and professional development.

Major Topics:

- Introduction to Data Mining
- Data Processing (Data Cleaning, Data Integration, Data Reduction, Data Transformation)
- Mining Frequent Patterns, Associations, and Correlations
- Classification Techniques (Decision Tree Induction, Bayes Classification Method, Rule Based Classification)
- Model Evaluation and Selection
- Clustering (Partitioning Methods, Hierarchical Methods, Density Based Method, Grid Based Methods, Models Evaluation)
- Project Discussions

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Text Books:

M. Bramer, Principles of Data Mining,2nd edition,Springer Verlag, 2013, ISBN: 978-1447148838.

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.

Communications:

Registered students will be given access to a section of the Learning Management System (LMS) for this course. LMS will 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.