

University of Computer Studies (Thaton)
2025-2026 Academic Year
Fifth Year (B.C.Sc.)
Lecture Plan

CST-5123(B) Data Mining

First Semester

Text Book : Data Mining Concepts and Techniques, Third Edition
 By Jiawei Han, Micheline Kamber, Jian Pei

Prerequisite : Advanced Database System (CS – 4125)

Credit Unit : 3 ACUs

Period : 64 periods for 16 Weeks including Practices (60 minutes for 1 period)

No.	Chapter	Page	Period	Remark
1	1 Introduction	1-34	5	
	1.1 Why Data Mining?			
	1.2 What is Data Mining?			
	1.3 What Kinds of Data Can Be Mined?			
	1.4 What Kinds of Patterns Can Be Mined?			
	1.5 Which Technologies Are Used?			
	1.6 Which Kinds of Applications Are Targeted?			
	1.7 Major Issues in Data Mining			
	1.8 Summary			
	1.9 Exercises			
2	2 Getting to Know Your Data	39-79	15	
	2.1 Data Objects and Attributes Types			
	2.2 Basic Statistical Description of Data			
	2.3 Data Visualization			
	2.4 Measuring Data Similarity and Dissimilarity			
	2.5 Summary			
	2.6 Exercises			
3	3 Data Preprocessing	83-121	12	
	3.1 Data Preprocessing: An Overview			
	3.2 Data Cleaning			
	3.3 Data Integration			
	3.4 Data Reduction			
	3.5 Data Transformation and Data Discretization			
	3.6 Summary			
	3.7 Exercises			
4	6 Mining Frequent Patterns, Associations, and Correlation: Basic Concepts and Methods	243-273	8	

No.	Chapter	Page	Period	Remark
	6.1 Basic Concepts			
	6.2 Frequent Itemset Mining Methods			
	6.3 Which Patterns Are Interesting? Pattern Evaluation Methods			
	6.4 Summary			
	6.5 Exercises			
5	8 Classification : Basic Concepts	327-386	14	
	8.1 Basic Concepts			
	8.2 Decision Tree Induction			
	8.3 Bayes Classification Methods			
	8.4 Rule-Based Classification			
	8.5 Model Evaluation and Selection			
	8.6 Techniques to Improve Classification Accuracy			
	8.7 Summary			
	8.8 Exercises			
6	10 Cluster Analysis: Basic Concepts and Methods	443-491	10	
	10.1 Cluster Analysis			
	10.2 Partitioning Methods			
	10.3 Hierarchical Methods			
	10.4 Density-Based Methods			
	10.5 Grid-Based Methods			
	10.6 Evaluation of Clustering			
	10.7 Summary			
	10.8 Exercises			

Assessment Plan

Exam Paper	60%
Tutorials/Test (at least 3 times)	10%
Project /Presentation	10%
Assignment/Attendance (5+5)	10%
Quiz/Discussion (at least 6 times)	10%

Text Book Image

