

BHARATHIAR UNIVERSITY, COIMBATORE.
M. Sc. SOFTWARE ENGINEERING DEGREE COURSE
(Affiliated Colleges)

(Effective from the academic Year 2010-2011)

SCHEME OF EXAMINATIONS – CBCS PATTERN

Sem	Study Components	Course title	Ins. hrs/ week	Exam			Credit	
				Dur.Hrs	CIA	Marks		Total Marks
I	Paper I	Data Structures and algorithm analysis in C++	5	3	25	75	100	4
	Paper II	Database Technology	5	3	25	75	100	4
	Paper III	Operating System and System Software	5	3	25	75	100	4
	Paper IV	Data Communication & Computer Networks	5	3	25	75	100	4
	Practical I	Data Structures Lab using C++	3	3	40	60	100	4
	Practical II	RDBMS Lab	4	3	40	60	100	4
	Paper V	Introduction to Open Source Tools	3	3	25	75	100	4
II	Paper VI	Web Programming	5	3	25	75	100	4
	Paper VII	Programming in JAVA	5	3	25	75	100	4
	Paper VIII	Data Mining & Warehousing	5	3	25	75	100	4
	Elective I		5	3	25	75	100	4
	Practical III	Web Programming Lab	3	3	40	60	100	4
	Practical IV	JAVA Lab	4	3	40	60	100	4
	Paper IX	Introduction to Open Source Environment	3	3	25	75	100	4
III	Paper IX	.Net Technology	5	3	25	75	100	4
	Paper X	Mobile Computing	5	3	25	75	100	4
	Elective II		5	3	25	75	100	4
	Practical V	.Net Programming Lab	5	3	40	60	100	4
	Paper XI	Advanced Programming in Open Source - PHP	5	3	25	75	100	4
	Practical VI	Web Application in PHP Programming-lab	5	3	40	60	100	4
IV	Project work and Viva voce		-	-	-	-	250*	10
Total							2250	90

* Project report - 200 marks; Viva-voce – 50 marks

ELECTIVE – 1

1.1 WAP

1.2 Web Services

1.3 Neural Networks & Fuzzy Logic

ELECTIVE - 2

2.1 Digital Image Processing

2.2 Network Security and Cryptography

2.3 ERP

Note : The Syllabus for the above papers (except Paper VIII - Data Mining & Warehousing) be the same as prescribed for the academic year 2008-09. The syllabus for the Paper VIII - Data Mining & Warehousing are furnished below :

Paper VIII : DATA MINING AND WAREHOUSING

Subject Description

This course presents the Introduction to Mining tasks, classification, clustering and Data Warehousing.

Goals

To enable the students to learn the Data mining tasks& Data warehousing techniques.

Objectives

On Successful completion of the course the students should have:

- Understood the Association rules, Clustering techniques and Data warehousing.

Contents

UNIT I

Basic data mining tasks – data mining versus knowledge discovery in databases – data mining issues – data mining metrics – social implications of data mining – data mining from a database perspective.

Data mining techniques: Introduction – a statistical perspective on data mining – similarity measures – decision trees – neural networks – genetic algorithms.

UNIT II

Classification: Introduction – Statistical – based algorithms - distance – based algorithms – decision tree - based algorithms - neural network – based algorithms –rule - based algorithms – combining techniques.

UNIT III

Clustering: Introduction – Similarity and Distance Measures – Outliers – Hierarchical Algorithms - Partitional Algorithms.

Association rules: Introduction - large item sets - basic algorithms – parallel & distributed algorithms – comparing approaches- incremental rules – advanced association rules techniques – measuring the quality of rules.

UNIT IV

Data warehousing: an introduction - characteristics of a data warehouse – data marts – other aspects of data mart. Online analytical processing: introduction - OLTP & OLAP systems – data modelling –star schema for multidimensional view –data modelling – multifact star schema or snow flake schema – OLAP TOOLS – State of the market – OLAP TOOLS and the internet.

UNIT V

Developing a data WAREHOUSE: why and how to build a data warehouse –data warehouse architectural strategies and organization issues - design consideration – data content – metadata distribution of data – tools for data warehousing – performance considerations – crucial decisions in designing a data warehouse.

Applications of data warehousing and data mining in government: Introduction - national data warehouses – other areas for data warehousing and data mining.

REFERENCE BOOKS

1. Margaret H. Dunham, “Data mining introductory and advanced topics”, Pearson education, 2003.
2. C.S.R. Prabhu, “Data warehousing concepts, techniques, products and a applications”, PHI, Second Edition.
3. Arun K.Pujari, “ Techniques”, Universities Press (India) Pvt. Ltd., 2003.
4. Alex Berson, Stephen J. Smith, “data warehousing, data mining, & OLAP, TMCH, 2001.
5. Jiawei Han & Micheline Kamber, “ Data mining Concepts & Techniques”, 2001, Academic press