

SE601: BUSINESS INTELLIGENCE AND DATA MINING

No of credits: 03

COURSE OBJECTIVES:

- To learn how to create the necessary infrastructure for data mining
- To familiarize students with core data mining techniques
- Learn to apply the data mining techniques in business for improved marketing, sales, Human Resource, customer support, and finance related decisions in the organization by analyzing and understanding the KPI (Key Performance Indicators).

COURSE OVERVIEW:

Data mining is very crucial for managers basically because it has lots of tools and techniques which can act as aids for Managerial Decision making. It helps them to study the changing business trends and patterns and devise strategies accordingly. to reap higher profits in business. It has applications in all fields like marketing, finance, HR, CRM etc

PREREQUISITES FOR THE COURSE:

The students should have studied Database Management Systems (DBMS).

PEDAGOGY:

Case based teaching, Assignments and project work

COURSE OUTLINE:

Module -1 Introduction

Introduction to Data Mining, Uses, Origin Growth of Data Mining, Terminologies

Module II Introduction to data mining process

Core Ideas in Data Mining, Classification, Prediction, Association Rules, Predictive Analytics Data Reduction, Data Exploration, Data Visualization, Supervised and Unsupervised Learning, The Steps in Data Mining, Preliminary Steps, Organization of Datasets, Sampling from a Database, Oversampling Rare Events, Pre-processing and Cleaning the Data, Use and Creation of Partitions, Building a Model - An Example with Linear Regression, The Boston Housing Data, The modeling process

Module III

Evaluating Classification and Predictive Performance, Judging Classification, Performance, Accuracy Measures, Cutoff for Classification, Performance in Unequal

Importance of Classes, Asymmetric Misclassification Costs, Over sampling and Asymmetric Costs, Classification Using a Triage Strategy, Evaluating Predictive Performance

Module IV

Applications of data mining in various fields like CRM, marketing etc, study and analysis of various data mining tools present in the market. Data ware housing, OLAP

Module V

Project work

EVALUATION PLAN:

Components	Weightage
Attendance	10%
Mid-term	20%
End -term	40%
Project	20%
Assignment	10%

RECOMMENDED TEXTBOOK:

Berson, Smith, and Thearling / 1999, Building Data Mining Applications for CRM

Publisher: McGraw-Hill Companies (December 22, 1999)

SUGGESTED READINGS:

1)Hand, Mannila, and Smyth / Hardcover / 2001 Principles of Data Mining

Publisher:

The MIT Press (August 1, 2001)

2). Berthold and Hand / Hardcover / 2003 (Second Edition) , Intelligent Data Analysis:An Introduction Springer (September 1, 1999)

3)Adriaans, Pieter & Dolf Zantinge (1996). Data Mining . Addison-Wesley.

4. Berry, Michael J. A. & Gordon S. Linoff (2000). Mastering Data Mining . John Wiley

5. Data Mining: Concepts and Techniques by Jiawei Han, Micheline Kamber

Publisher:Morgan Kaufmann; 1st edition (August, 2000)

SE602: M & E - COMMERCE

No. of credits: 03

COURSE OBJECTIVES:

- To provide a comprehensive overview of the electronic commerce phenomenon currently sweeping through the global economy. The course introduces contemporary management philosophies as they have come to be used for the marketing, selling, and distribution of goods and services through the Internet, World-Wide-Web, mobile technology and other electronic media
- To understand how electronic commerce can be used to create a strategic competitive advantage for an enterprise and analyze the best practices in Ecommerce that are currently available to managers.

COURSE OVERVIEW:

The objective of the Program is to provide in-depth knowledge on e-business to acquire better practices and skills accordingly to meet the tremendous change of industry through mobile and web technology.

PREREQUISITES FOR THE COURSE:

They are also expected to have working knowledge of computers & business models with ethics.

PEDAGOGY:

- **Class conduction methodology:** The main aim of the curriculum is to illustrate how the existing tools and techniques can be used effectively to ensure success in managing software requirements in terms of customer needs and expectations As far as possible case based learning

will be used to demonstrate the application of conceptual frameworks to real life examples

- **Assignments & project work:** Since the subject involves a large number of concepts integrated into it, students will be asked to work on a lot of assignments to cover even the intricate details of the concepts involved. They will also be expected to undertake a project work which involves meeting a client ,gathering requirements ,preparing an SRS as well as a project layout to ensure that they get a practical exposure to the theoretical concepts covered in the curriculum with a practical hands on experience in the IT Lab.

COURSE OUTLINE:

MODULE 1

Introduction to E-Commerce, Benefits, Impact of E-Commerce, Classification of E-Commerce, Application of E-Commerce Technology, Business Models, Framework of E-Commerce., Business to Business, Business to Customer, Customer to Customer

MODULE 2

Network Infrastructure - LAN, Ethernet (IEEE 802.3), WAN, Internet, TCP/IP reference model, Domain names, Internet Industry Structure, FTP applications, Electronic Mail, WWW.

MODULE 3

HTTP, Web Browsers, HTML, Simple exercises in HTML, Common Gateway Interface, Multimedia Objects

MODULE 4

Securing Business on Network: Security Policy, Procedures and Practices, Site Security, Firewalls, Securing Web Service, Transaction Security, Cryptology,

Cryptological Algorithms, Public Key algorithms, Authentication Protocols, Digital Signatures, Security protocols for Web Commerce

MODULE 5

Electronic Payment Systems: Online Electronic Payment Systems, Prepaid and Post Paid Electronic Payment Systems Information Directories and Search Engines

MODULE 6

Internet Advertising, Models of Internet advertising, Sponsoring Content, Corporate Website, Weaknesses in Internet advertising, Web Auctions.

MODULE 7

Launching Your E business- Marketing an E-Business, Search Engines and Directories, Public Relations, Consumer Communication, News Groups & Forums, Exchanging Links, Web Rings, E-Business Back end systems, Business Record Maintenance, Back up procedures and disaster Recovery plans

MODULE 8

Building a Corporate Website: Practical issues on servers and Application Software. Management issues related to Web Server Setup. Case Study discussion on a Corporate Web Site. E-Commerce legal issues and Cyber laws.

IT LAB SESSIONS IN M & E - COMMERCE:

1. Simple exercises using HTML
2. Create a Web Site with minimum Details
3. List out the Web sites dealing with E-Commerce
4. Log on to Web Sites dealing with E- Commerce and list out the facilities available.
5. Log on to a trade web site and make a trial order for purchase of an item.

(Assignments can be on live case studies in various facets of E-Commerce.)

EVALUATION PLAN:

Components	Weightage
Attendance	10%
Mid term	20%
Final Exam	40%
Project Work	20%
Assignments	10%

RECOMMENDED TEXT BOOK:

1. Electronic Commerce -Framework, technologies and Applications - Bharat Bhasker -TMH Publications
2. World Wide Web Design with HTML : C Xavier
3. Creating a winning E-Business: Napier, Judd, Rivers, Wagner- Course Technology - Thomson Learning, 2001

REFERENCE BOOKS:

1. E-Commerce - Cutting Edge of Business- Kamlesh K Bajaj, Debjani Nag - Tata McGraw Hill, 1/e, 2003
2. Global Electronic Commerce- Theory and Case Studies J Christopher Westland, Theodore H K Clark- University Press
3. E-Commerce - an Indian perspective - P T Joseph - Prentice Hall, 2/e, 2005
4. E-Commerce concepts, Models, Strategies - C S V Moorthy - Himalaya Publications
5. Electronic Commerce - Gari P Schneider - Thomson Course Technology, 4/e, 2004
6. Strategic Management of e-Business Stephen Chen John Wiley & Co.

