

Course Code:	C	A	P	D	2	0	4	Course Title:	FUNDAMENTALS OF DATA STRUCTURES
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WEIGHTAGE		
CA	ETE (Pr.)	ETE (Th.)
20	20	60

COURSE CONTENTS:

Sr. No.	Topics
1.	Introduction & Overview: Concept of data type, definition and brief description of various data structures
2.	Operations on data structures, algorithm complexity, Big O notation, recursion, some illustrative examples of recursive functions.
3.	Arrays: Linear and multi-dimensional arrays and their representation Arrays of Pointers and Dynamic Memory Management: Understanding pointers, usage of pointers, memory management functions, debugging pointers.
4.	Arrays: operations on arrays, sparse matrices and their storage
5.	Linked Lists: Linear linked list, operations on linear linked list, double linked list
6.	Stacks: Sequential and linked representations, operations on stacks, multi stacks Stacks: application of stacks such as parenthesis checker, evaluation of postfix expressions
7.	Queues: Sequential representation of queue, linear queue, circular queue, operations and applications, linked representation of a queue.
8.	Introduction to Trees: Binary Tree Representation, Traversal.
9.	Sorting: Insertion Sort, Selection Sort, Merge Sort, Radix Sort, Hashing.
10.	Searching: Linear and Binary Search.

LABORATORY WORK:

Implementation of Arrays, Linked Lists, Stacks, Queues, Sorting & Searching

TEXT BOOK:

Author: Seymour Lipschutz, Title: Schaum Outline Series, Publishers: Tata McGraw Hill, New Delhi, Year of Publication: 2006

ADDITIONAL READINGS:

1. Kruse, Data Structures & Program design, Prentice Hall of India, New Delhi.
2. Tenenbaum, Augenstein, & Langsam, Data Structures using C and C++, Prentice Hall of India, New Delhi.
3. Sorenson and Tremblay : An Introduction to Data Structures with Algorithms.

Course Code:	C	A	P	D	2	1	4	Course Title:	FUNDAMENTALS OF WEB PROGRAMMING
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WEIGHTAGE		
CA	ETE (Pr.)	ETE (Th.)
20	20	60

COURSE CONTENTS:

Sr. No.	Topics
1.	Basic Internet Concepts: History of Internet, TCP/IP Basic Internet Applications: Applications - Electronic mail, Newsgroups, UUCP, USENET, FTP, Telnet, Search Engines.
2.	World Wide Web : Overview - Hyper Text Markup Language, Uniform Resource Locators – Protocols, MIME Types - Browsers - Plug- ins - Net meeting and chat - Search Engines
3.	HTML: Basic HTML and tags, Language description, usability, static creation of HTML web pages.
4.	Creating tables, forms, links, images and lists, Frames and their usage.
5.	HTML: Using Cascading Style Sheets. Meaning of CSS standards
6.	History of Javascript: Javascript and Web. <script> Tag and browsers compatibility. Data types: Numeric, Text, Boolean, Conversion. Arrays. Decision making and Loops in Javascript.
7.	Object Based: Objects in JavaScript, Native Objects. Understanding DOM Model. Window, history, location, navigator, document object.
8.	HTML Forms: Properties and Methods, Button, Text, TextArea, Checkboxes, select elements. Frame Object. Opening new window. Moving and resizing window.
9.	String Manipulation: Methods, split(), replace(), search(), match() Date Time: Timer in web page. Setting and Getting date object in a web page.
10.	Web Standards: HTML, ECMA Script, XML, DOM. Difference between DOM and BOM. DOM Objects. Properties and Methods.

LABORATORY WORK:

1. Internet Applications
2. Implementation of HTML and JavaScript for the topics taught in theory.

TEXT BOOK:

1. The Internet Complete Reference, Second edition Tata Mcgraw Hill
2. Beginning JavaScript, by Paul Wilton, Jeremy McPeak, Wrox

ADDITIONAL READINGS:

1. How the Internet Works - Preston Gralla, Michael Troller, QUE
2. Author: Harson Word, Title: Internet Marketing & E-commerce, Publishers: Thompson
3. Don Jones, Mark Scott & Rick Villars, "E-Commerce for Dummies" Published by Hungry Minds
4. Black Book HTML, Wiley Publications

Course Code:	M	G	T	D	3	3	3	Course Title:	BASIC FINANCIAL MANAGEMENT
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WEIGHTAGE	
CA	ETE (Th.)
20	80

COURSE CONTENTS:

Sr. No.	Topics
1.	Meaning, Objectives and Scope of Financial Management
2.	Finance Functions - Investment, Financing, Liquidity & Dividend Decisions. Risk & Return Trade off
3.	Source of Finance – Long term, Medium term & short term
4.	Cost of Capital: Concept and its significance, measurement of cost of capital of various sources of funds. Weighted Average cost of capital.
5.	Capital Structure Decision: Understanding debt and equity, Theories of Capital Structure, Optimum Capital Structure
6.	Capital Budgeting :Analytical study of various methods of Capital Budgeting
7.	Working Capital – Concept and Significance, Determining working capital requirements; Basics of receivables, Inventory and cash management.
8.	Dividend Policy; Determinants of dividend policy, Theories of dividend and Forms of dividend

TEXT BOOK:

Pandey, I. M. Financial Management, Vikas Publication House

ADDITIONAL READINGS:

1. Khan, M Y and P K Jain, Financial Management, Tata McGraw Hill.
2. James C . Van Horne & John M. Wachowicz, Jr , Fundamentals of Financial Management, Prentice Hall of India Pvt. Ltd, New Delhi

Course Code:	C	A	P	D	3	0	3	Course Title:	MANAGEMENT SUPPORT SYSTEMS
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WEIGHTAGE	
CA	ETE (Th.)
20	80

COURSE CONTENTS:

Sr. No.	Topics
1.	Support Systems: Changing Business Environment, Managerial Decision Making. Computerised Support. Concept of Decision Support Systems. Major Tools and Techniques for Management Support System.
2.	Transforming Data into Information: Data, Information, Knowledge & Wisdom, Producing Business Information, Information Presentation, Quality of Information
3.	System & IS Technologies: What is System, Elements of System, Systems Concept, Overview of IS Technologies – H/W, S/W, N/W & Telecommunications & databases
4.	Classification & Types of Information Systems: TPS, OAS, MIS, DSS, EIS, ESS etc. Organisation and Structure of information system,
5.	Decision Support Systems: Definition, Characteristics, Components of DSS: Dialogue Management, Data Management and Model Management for DSS.
6.	Decision Support System Development: Introduction to DSS development, Traditional System Development Life cycle, Alternate Development Methodologies
7.	DSS Technology Levels, Tools and development Platforms, Design of interfaces in DSS, Examples of different types of DSS
8.	Data Warehousing Data Warehousing, Access, Analysis, Data Mining, Data Visualization, Geographical Information Systems and Virtual Reality
9.	Modeling and Analysis: Modeling for MSS, Static and dynamic models, MSS Modeling in Spreadsheets, Algorithms, Heuristics, Simulation, Optimization via Mathematical Programming
10.	Enterprise Decision Support Systems: Concepts and definitions, Evolution of executive and enterprise information systems, Executive's roles and their information needs, comparing and integrating EIS and DSS
11.	Knowledge-Based Decision Support: Concepts and Definitions of Artificial Intelligence and Expert Systems, Benefits, Problems and limitations, Success factors
12.	Introduction to ERP : Evaluation of ERP, Integrated management, Supply-chain management and Resource management, Benefits of ERP. ERP implementation, Generalised model, Role vendors, Consultants and users. Future of ERP applications, Marketing of ERP

TEXT BOOK:

Turban E., Aronson J.E. "Decision Support Systems and Intelligent Systems" Pearson Education

ADDITIONAL READINGS:

1. Jean Paul Van Balle, Mike Eccles, Jane Nash, "Discovering Information Systems", for Free Educational Use under "Creative Commons Attribution-NonCommercial-NoDerivs 2.5 Licence
2. Mallach E.G. "Decision Support and Data Warehouse Systems" Tata McGraw-Hill.
3. Gupta U.G. " Management Information Systems: A Managerial Perspective" Galgotia Publications Pvt. Ltd.
4. Marakas G.M. "Decision Support Systems in 21st Century" Pearson Education

Course Code:	C	A	P	D	1	0	2	Course Title:	WORKSHOP ON COMPUTER H/W AND N/W
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WEIGHTAGE		
CA	ETE (Pr.)	ETE (Th.)
30	70	0

COURSE CONTENTS:

Sr. No.	Topics
1.	Introduction of Hardware and Software/components of computer
2.	Mother boards, Chipsets & Microprocessor concept & latest available in market. Basics & types of Floppy drive/HDD/DVD/RAM /SMPS/ /BIOS etc
3.	Handling & Holding sensitive equipments, Installing Motherboards, Choosing Cabinet & Cooling considerations, Installing CPU.
4.	Assembling of different parts of computers. Knowing ports, wires attached in the pc. Knowing SATA slots, IDE Slots, Jumper settings
5.	CMOS. Setting BIOS configurations.
6.	Installation of OS (Linux/Windows) and application/utility software, Handling Viruses
7.	Networking Basics: Different Wires, Switches, Hubs, Connectors. Punching/Crimping Tools. I/O Sockets.
8.	Creation of Cross Wires and Direct Cables.
9.	IP & Setting up a computer on LAN
10.	Intro to Wireless N/Ws (Wi-Fi & Bluetooth). Exposure to Gadgets like PDAs, Win Mobiles, Gismos, iPhones, etc & interfacing the same with computer. Making CDs and DVDs.

TEXT BOOKS:

Author:Robert Bruce Thompson & Barbara Fritchman Thompson,Title:P C Hardware in a nutshell,Publishers:O'REILLY,Year of Publication: 2004

ADDITIONAL READINGS:

1. Author: Peterson: PC Assembling, TMG
2. Author: Steve Rackley ,Title:Networking in Easy Steps,Publishers: Wiley,Year of Publication: 2008