

DEPARTMENT OF COMPUTER SCIENCE
VALUE ADDED COURSE

Semester	Course Code	Course Title	Hours
III	21UCSVAC1	DREAMWEAVER	30

Course Outcome

After completing the course, the students are able to

CO1: Understand the concept of Dreamweaver.

CO2: To understand how Dreamweaver is applied in Web pages.

CO3: To impart the knowledge on Cascading Style Sheet.

CO4: Create web pages using predesigned layouts or by creating your own.

CO5: Publish your website to the web.

UNIT I **6 hrs**

Introduction to Dreamweaver CS4, Working with Dreamweaver Websites.

UNIT II **6 hrs**

Working with Web Pages, Working with HTML Tables, Framesets and Frames

UNIT III **6 hrs**

Introduction to Cascading Style Sheets

UNIT IV **6 hrs**

Working with Templates, Working with Flash Contents and HTML Forms

UNIT V **6 hrs**

Working with JavaScript, Finalizing the Site

Text Book

1. Dreamweaver CS4 in Simple Steps, Kogent Learning Solutions Inc, Dreamtech Press, 2010

Semester	Course Code	Course Title	Hours
V	21UCSVAC2	R PROGRAMMING	30

Course Outcome

After completing the course, the students will be able to

CO1: Introduce and develop programming skills using R.

CO2: Learn the R environment and to enable better understanding of using R in simple as well as complex situations.

CO3: Impart the knowledge on control statements in R.

CO4: Understand the features of function and matrices in R.

CO5: Impart the basic knowledge of files, charts and graphs in R.

UNIT-I

6 hrs

Introduction to R Programming: What is R? – Physiognomies of R – Installing and Running R – R Sessions – R Environment – Historical Developments – Advantages of using R – Disadvantages of using R – Hands-on R Coding: Vectors in R – Functions in R.

UNIT-II

6 hrs

R Programming Structures: Constant – Variable – Expressions – Reserved Words in R – Data Types in R – Operators in R: Introduction – R Arithmetic Operations – R Relational Operators – R Logical Operators.

UNIT-III

6 hrs

Control Statements in R: Introduction – Sequential Statements – Branching or Decision - Making Statements, Looping or Iterative Statements – Control Statements.

UNIT-IV

6 hrs

Functions in R: Introduction – Return Value from a Function – Function without Return – Multiple Returns – Recursion. Strings in R: Introduction – Rules for Constructing Strings in R – Rules for Manipulating Strings. Matrices in R: Introduction – Creating Matrices – Accessing Elements of Matrices – Matrix Computations – Matrix Addition and Subtraction – Matrix Multiplication and Division.

UNIT-V

6 hrs

Input/Output in R: Introduction – Accessing the Keyboard and Monitor – Reading and Writing Files – Charts and Graphs in R: Introduction = R Bar Plot – Pie-Chart.

Text Book

Anil Kumar Verma, R Programming, Cengage Learning India Pvt. Ltd, Reprint 2019.

DEPARTMENT OF COMPUTER APPLICATION
VALUE ADDED COURSE

Semester	Course Code	Course Title	Hours
III	21UCAVAC1	WEB DESIGNING	30

Course Outcome

After completing the course, the students will be able to

CO1: Understand the underlying concepts of Hypertext Markup Language.

CO2: Realize the various HTML tags.

CO3: Impart the knowledge on lists and tables in HTML.

CO4: Analyze the classification of DHTML.

CO5: Apply the concept of DHTML in the real world applications.

UNIT I

6 hrs

History of HTML - HTML Documents - Anchor Tag - Hyper Links. Header Section – Title- Prologue - Link

UNIT II

6 hrs

Heading Printing - Aligning the Headings - Horizontal Rule - Paragraph - Tab Settings - Images and pictures - Embedding PNG Format Images

UNIT III

6 hrs

Lists - Unordered Lists- Ordered Lists. Tables - Tables Creation in HTML- Width of the table and cell- Table width and Alignment of Cell elements - Column Specification

UNIT IV

6 hrs

DHTML and Style Sheets: Defining Styles- Elements of Styles- Inline Styles- External Style Sheets - Internal Style Sheets. Frames: Frameset Definition- Frame Definition- Nested Framesets

UNIT V

6 hrs

Forms: Action Attribute- Method Attribute- Enctype Attribute - Drop down List

Text Book

C. Xavier, World Wide Web Design with HTML, Tata McGraw-Hill Publishing, New Delhi, 2007

Semester	Course Code	Course Title	Hours
V	21UCAVACS	PC HARDWARE AND TROUBLESHOOTING	30

Course Outcome

After completing the course, the students will be able to

CO1: Understand the underlying concepts of computer hardware.

CO2: Realize the various memories and keyboard types.

CO3: Impart the knowledge on the BIOS and CMOS.

CO4: Analyze the different types of troubleshooting.

CO5: Experimenting the installing procedures of Operating System.

UNIT – I 6 hrs

Introduction to Computer Hardware – Main System Unit - The Motherboard - Motherboard Components – The Chipsets - Chipset Types - Connectors on the Motherboard – Processor – Processor types - Processor/ CPU Architecture – SMPS – Scanner – Monitors – Ports and cables

UNIT – II 6 hrs

Memory: Memory–Primary Memory–Secondary Memory–Bits & Bytes–RAM–ROM–Parity–ECC Memory–Motherboard Memory Capacity–BIOS–Keyboard–Keyboard Switch–Keyboard Organization–Keyboard Type–Mouse–Mouse Type–Mouse Resolution

UNIT – III 6 hrs

BIOS Upgrade Troubleshooting - CMOS Maintenance and Troubleshooting- Troubleshooting CPU Problems-Troubleshooting Cooling Problems

UNIT – IV 6 hrs

Keyboard Maintenance and Troubleshooting - Memory Troubleshooting – Motherboard Troubleshooting

UNIT – V 6 hrs

Installing Speakers/Headphones - Installing the Operating System - Removal and Replacement Procedures- Installing PC Peripherals-Installing Network/Modem Connections

Text Book

1. Manohar Lotia, Pradeep Nair, Payal Lotia, Modern Computer Hardware Course, BPB Publications, Second Revised Edition, 2006

2. Stephen J. Bigelow, PC Troubleshooting & Repair-The Ultimate Reference, Dreamtech, Second Edition, Reprint, 2004

DEPARTMENT OF INFORMATION TECHNOLOGY
VALUE ADDED COURSE

Semester	Course Code	Course Title	Hours
III	21UITVAC1	OFFICE AUTOMATION	30

Course Outcome

After completing the course, the students will be able to

CO1: Understand the basics of document preparation using MS Word

CO2: Perform data manipulation and analysis using MS Excel

CO3: Gain the knowledge of presentation using MS PowerPoint

CO4: Understand the features of graphs, charts and Animations

CO5: Impart the basic knowledge of database concepts using MS-Access

UNIT I

6 hrs

MS-Word: Introduction to MS-Office–Word Basics – Formatting features- Menu: File Menu, Edit Menu, View Menu, Insert Menu, Format Menu, Tool Menu, Table Menu- Toolbars and their Icons-Word Formatting Toolbar- Creating Template and Tables- Mail Merge – Macros.

UNIT II

6 hrs

MS-Excel: Introduction-Entering and Editing Text, Entering Number and Formulas – Entering Date and Alignment – Menus-Commands-Toolbars-Icons – Formatting cells – Inserting rows and columns –Formula- Functions.

Unit III

6 hrs

MS-PowerPoint: Introduction – Menu- Toolbar-Creating New Presentation – Select, Copy, delete Slides- Slide Numbering-Changing Font, Font Size and Bold – Moving the Frame and Inserting ClipArt – Inserting Pictures- Copying Picture from previous Slides-Text Styling – Slide Masters –Slide Views.

Unit IV

6 hrs

Graphs, Transition and Animation: Line graph, Bar diagrams, pie charts, Area, - Building Line Diagrams, Histograms, Scatter plots -Frequency Graphs - Copying Graphs from Excel – Format Slide-Transition and Animation.

Unit V

6 hrs

MS-Access: Introduction – What is database? - Staring Microsoft Access - Creating a new database – Creating a database through Table Wizard – Creating new table – Relationships – Creating Table through Design View – Query-Form – Reports

Text Books:

1. Sanjay Saxena , MS Office 2000 for every one, Vikas Publishing House Pvt. Ltd, 2001.
2. Stephen Copestake, OFFICE XP in easy steps, Dreamtech Press, 2008

Semester	Course Code	Course Title	Hours
V	21UITVAC2	BASICS OF INTERNET OF THINGS (IoT)	30

Course Outcome

After completing the course, the students will be able to
 CO1: Understand the underlying concepts of Internet of Things.
 CO2: Realize the various IoT enabling technologies.
 CO3: Impart the knowledge on the devices of IoT.
 CO4: Analyze the classification of different IoT protocols.
 CO5: Apply the concept of IoT in the real world scenarios.

UNIT – I 6 hrs

Introduction: What is IoT – IoT terms and Basic Definitions – Disambiguation of IoT vs IoE vs M2M vs Others - Characteristics of IoT. **IoT Ecosystem:** What is an IoT Ecosystem – Enabling Technologies in IoT – Applications of IoT – Marketplace of IoT – Vision of IoT

UNIT – II 6 hrs

IoT Reference Model: Physical Devices and Controllers – Connectivity – Edge (Fog) Computing – Data Accumulation – Data Abstraction – Application – Collaboration and Processes – Security in IoT.

UNIT –III 6 hrs

Transducers, Sensors and Actuators: Definitions – Introduction to Transducers – Introduction to Sensors – Introduction to Actuators – Interfacing concepts to Embedded Systems.

UNIT –IV 6 hrs

IoT Protocols: Protocol Classification – XMPP – DDS – AMQP – Representational State Transfer (REST).

UNIT – V 6 hrs

Domain Specific IoT: Home automation – Smart Cities – Environment – Retail – Logistics – Agriculture – Health and Lifestyle.

Text Book

1. K.G. Srinivasa, G.M. Siddesh and R. Hanumantha Raju, “*Internet of Things*”, Cengage Learning India Pvt. Ltd, 1st Edition, 2017.