SEMESTER - CORE - PART -	22PCSCO17-1: FUNDAMENTALS OF COMPUTER APPLICATION OPEN ELECTIVE – 1(A)	CREDITS: 3 HOURS:

COURSE OBJECTIVES

LO1   To know about computer and basic applications of computer.

LO2   To get knowledge about operating system

LO3   To aim at imparting a basic level appreciation Programme

LO4   To Understand word processing

LO5   To develop Word spread sheet and power point Presentation

UNIT I: KNOWING COMPUTER

What is Computer - Basic Applications of Computer - Components of Computer System -Central Processing Unit (CPU) – VDU -Keyboard and Mouse - Other input/output Devices -Computer Memory - Concepts of Hardware and Software - Concept of Computing - Data and Information; Applications of IECT - Connecting keyboard – mouse - monitor and printer to CPU and checking power supply.

UNIT II: OPERATING COMPUTER USING GUI BASED OPERATING SYSTEM

What is an Operating System - Basics of Popular Operating Systems - The User Interface -Using Mouse - Using right Button of the Mouse and Moving Icons on the screen - Use of Common Icons - Status Bar - Using Menu and Menu – selection - Running an Application -Viewing of File - Folders and Directories - Creating and Renaming of files and folders -Opening and closing of different Windows - Using help - Creating Short cuts - Basics of OS Setup- Common utilities.

UNIT III: UNDERSTANDING WORD PROCESSING

Word Processing Basics-Opening and Closing of documents-Text creation and Manipulation-Formatting of text-Table handling-Spell check-language setting and thesaurus-Printing of word document.

UNIT IV: USING SPREADSHEET

Basics of Spreadsheet - Manipulation of cells - Formulas and Functions - Editing of SpreadSheet – printing of SpreadSheet.

UNIT V: MAKING SMALL PRESENTATION

Basics of presentation software – Creating Presentation – Preparation and Presentation of Slides-SlideShow-Taking printouts of presentation / handouts.

Text Books

1. Introduction to Computer Applications , TNAU , TamilNadu
   https://www.agrimoon.com/introduction-to-computer-applications-pdf-book/

Web References

1) https://homepage.cs.uri.edu/faculty/wolfe/book/Readings/Reading0
2) https://peda.net/kenya/ass/subjects2/computer-studies/form-1/itc2

Course Outcomes

CO1 Students are able to know about computer and basic applications of computer.

CO2 Students are able to get knowledge about operating system

CO3 Students are able to aim at imparting a basic level appreciation Programme

CO4 Students can able to make spread sheets and its styles

CO5 Students get knowledge about Power point presentation.

OUTCOME MAPPING

COs/POs	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	3	1
CO2	2	3	3	1	2
CO3	2	2	3	2	2
CO4	2	2	3	2	2
CO5	2	2	1	3	1

SEMESTER - CORE - PART -	22PCSCO17-2: IOT AND ITS APPLICATIONS OPEN ELECTIVE – 1(B)	CREDITS: 3 HOURS:

COURSE OBJECTIVES

LO1 To get familiar with the evolution of IOT with its design principles

LO2 To outline the functionalities and protocols of internet communication

LO3 To analyze the hardware and software components needed to construct IOT applications

LO4 To identify the appropriate protocol for API construction and writing embedded code

LO5 To realize various business models and ethics in Internet of Things

UNIT I

The Internet of Things: An Overview –The Internet of Things – The Technology of the Internet of Things-Enchanted objects. **Design Principles for Connected Devices**: Calm and Ambient Technology–metaphor–Privacy–Web thinking for connected Devices.

UNIT–II

Internet Principles: Internet Communications overview – IP – TCP – TCP/IP UDP. IP Addresses: DNS–Static and Dynamic IP Address Assignment–MAC Addresses – TCP and UDP Ports – Application Layer Protocols. **Thinking about Prototyping:** Sketching – Familiarity – Prototypes and Production – Open Source versus Closed Source.

UNIT–III

Prototyping Embedded Devices: Electronics- Embedded Computing Basics–Arduino-Raspberry Pi- Beagle Bone Black-Electric Imp. **Prototyping the Physical Design:** Non digital Methods - Laser Cutting - 3D printing – CNC Milling-Repurposing/Recycling.

UNIT–IV

Prototyping Online Components: Getting started with an API - Writing New API-Real-Time Reactions - Other Protocols. **Techniques for Writing Embedded Code:** Memory Management – Performance and Battery Life–Libraries- Debugging.

SEMESTER - CORE - PART –	22PCSCO17-3: MULTIMEDIA AND ITS APPLICATIONS OPEN ELECTIVE – 1(C)	CREDITS: 3 HOURS:

COURSE OBJECTIVES

LO1 To understand the standards available for different audio, video and text applications

LO2 To learn various multimedia authoring systems in multimedia production Team

LO3 To learn an create a image

LO4 To understand principles of animation in Multimedia

LO5 To know the stages of various Multimedia Projects

Unit I

Multimedia Definition - Use Of Multimedia - Delivering Multimedia - Text: About Fonts and Faces - Using Text in Multimedia - Computers and Text - Font Editing and Design Tools –Hypermedia and Hypertext.

Unit II

Images: Plan Approach - Organize Tools - Configure Computer Workspace - Making Still Images - Color - Image File Formats. Sound: The Power of Sound - Digital Audio - Midi Audio -Midi vs. Digital Audio - Multimedia System Sounds - Audio File Formats -Vaughan's Law of Multimedia Minimums-Adding Sound to Multimedia Project.

Unit III

Animation: The Power of Motion- Principles of Animation- Animation by Computer-Making Animations that Work. Video: Using Video - Working with Video and Displays – Digital Video Containers- Obtaining Video Clips-Shooting and Editing Video.

Unit IV

Making Multimedia: The Stage of Multimedia Project-The Intangible Needs-The Hardware Needs - The Software Needs – An Authoring Systems Needs- Multimedia Production Team.

Unit V

Planning and Costing: The Process of Making Multimedia - Scheduling - Estimating – RFPs and Bid Proposals. Designing and Producing –Content and Talent: Acquiring Content-Ownership of Content Created for Project-Acquiring Talent.

Text Book

1.TayVaughan, "Multimedia: MakingItWork", 8thEdition, Osborne/McGraw-Hill, (2001).

Supplementary Readings

1. Ralf Steinmetz &KlaraNahrstedt"Multimedia Computing, Communication & Applications ", Pearson Education, (2012).

Course Outcomes

CO1   Work on multimedia.
CO2   Handle various multimedia software
CO3   Develop multimedia projects.
CO4   Deploy multimedia projects.
CO5   To Develop planning techniques for cost Estimation

OUTCOME MAPPING

COs/POs	PO1	PO2	PO3	PO4	PO5
CO1	3	2	3	2	2
CO2	3	2	3	1	3
CO3	3	3	3	2	2
CO4	3	3	2	2	2
CO5	3	2	3	3	2