

23ES11P3–IT WORKSHOP

(Common to CE,ME,EEE,ECE, and AI&DS)

Course Category:	Engineering Science	Credits:	1
Course Type:	Practical	Lecture - Tutorial - Practical:	0-0-2
Prerequisite:	Basics of Computer	Sessional Evaluation:	30
		Univ.Exam Evaluation:	70
		Total Marks:	100
Objectives	<ul style="list-style-type: none"> • To introduce the internal parts of a computer, peripherals, I/O ports, connecting cables • To demonstrate configuring the system as Dual boot both Windows and other Operating Systems Viz. Linux, BOSS • To teach basic command line interface commands on Linux. • To teach the usage of Internet for productivity and self-paced life-long learning • To introduce Compression, Multimedia and Antivirus tools and Office Tools such as Word processors, spread sheets and Presentation tools. 		

Course Outcomes	At the end of the course, Student will be able to	
	CO1	Perform Hardware troubleshooting
	CO2	Describe Hardware components and inter dependencies.
	CO3	Safeguard computer systems from viruses/worms.
	CO4	Prepare Document/ Presentation.
	CO5	Prepare Document/ Presentation.
Course Content	<u>LIST OF EXPERIMENTS</u>	
	PC Hardware & Software Installation	
	Task 1: Identification of the peripherals of a computer, components in a CPU and its functions.	
	Task 2: Disassembling and assembling of the PC back to working condition.	
	Task 3: Installation of MS windows on the personal computer.	
	Task 4: Installation of Linux on the computer. Dual boot (VMWare) with both Windows and Linux.	
	Task 5: Installation of BOSS on the computer configure as dual boot (VMWare) with both Windows and BOSS.	
	Internet & World Wide Web	
	Task1: Study of different types of Network cables and implement the Cross-Wired Cable and Straight through Cable using Clamping tool. Identify Network Devices and Study basic network commands in Detail.	
	Task2: Orientation & Connectivity Boot Camp:	
	a) Configuration of the TCP/IP setting.	
	b) Demonstration to access the websites and email.	
	c) Simulation of the WWW on the LAN.	

Task 3: Web Browsers:

- a) Surfing the web
- b) Customization of web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers.
- c) Configuration of plug-ins like Macromedia Flash and JRE for applets.

Task 4: Demonstration of using Search Engines & Netiquette

Task 5: Cyber Hygiene:

- a) Configuration of computers to be safe on the internet.
- b) Customization of browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

Task 6: Email Creation: Students should know what how to send e-mails. A few documents/content/different user e-mails would be given to the students for which they need to send – emails. This should be demonstrated to the instructors by the student.

LaTeX and WORD

Task 1 –Orientation of La TeX and Microsoft (MS) office or equivalent (FOSS) tool word

Task 2: Using La TeX and Word to create a project certificate. Features to be covered:- Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in both La TeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge in word.

Excel Orientation:

Task 1:Orientation of MS office or equivalent (FOSS) tool Excel as a Spreadsheet tool.

Task 2: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text

Task 3: Calculating GPA -. Features to be covered:- Cell Referencing, Formulae in excel – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function

LOOKUP/VLOOKUP

Task 4: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting.

	<p>POWER POINT</p> <p>Task 1:Orientation on basic power point presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint.</p> <p>Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.</p> <p>Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.</p> <p>AI TOOLS – ChatGPT</p> <p>Task 1: Prompt Engineering: Experiment with different types of prompts to see how the model responds. Try asking questions, starting conversations, or even providing incomplete sentences to see how the model completes them.</p> <ul style="list-style-type: none"> • Ex: Prompt: "You are a knowledgeable AI. Please answer the following question: What is the capital of France?" <p>Task 2: Creative Writing: Use the model as a writing assistant. Provide the beginning of a story or a description of a scene, and let the model generate the rest of the content. This can be a fun way to brainstorm creative ideas</p> <ul style="list-style-type: none"> • Ex: Prompt: "In a world where gravity suddenly stopped working, people started floating upwards. Write a story about how society adapted to this new reality." <p>Task 3: Language Translation: Experiment with translation tasks by providing a sentence in one language and asking the model to translate it into another language. Compare the output to see how accurate and fluent the translations are.</p> <ul style="list-style-type: none"> • Ex:Prompt: "Translate the following English sentence to French: 'Hello, how are you doing today?'"
<p>Text Books and References</p>	<p>Reference Books:</p> <ol style="list-style-type: none"> 1. Comdex Information Technology course tool kit, Vikas Gupta, WILEY Dream tech, 2003 2. The Complete Computer upgrade and repair book, Cheryl A Schmidt, WILEY Dream tech, 2013, 3rd edition 3. Introduction to Information Technology, ITL Education Solutions limited, Pearson Education, 2012, 2nd edition 4. PC Hardware - A Handbook, Kate J. Chase, PHI (Microsoft) 5. LaTeX Companion, Leslie Lamport, PHI/Pearson. 6. IT Essentials PC Hardware and Software Companion Guide, David Anfinson and Ken Quamme. – CISCO Press, Pearson Education, 3rd edition 7. IT Essentials PC Hardware and Software Labs and Study Guide, Patrick Regan– CISCO Press, Pearson Education, 3rd edition