

## 1/4 B.Tech. FIRST SEMESTER

CE1L2

IT WORKSHOP

Credits: 2

Lecture: --

Internal assessment: 25 marks

Lab : 3 periods/week

Semester end examination: 50 marks

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### Objectives:

- To identify various software peripherals
- To use the productivity tools
- To practice the PC hardware and working conditions

### Learning outcomes:

After performing the experiments listed in the syllabus, the students will be able to

- Identify various software peripherals
- Use the productivity tools

### PC HARDWARE:

Identification of basic peripherals, assembling a PC, installation of system software like MS Windows, Linux and the device drivers. Troubleshooting Hardware and software \_ some tips and tricks.

### INTERNET & WORLD WIDE WEB:

Different ways of hooking the PC on to the internet from home and workplace and effectively usage of the internet, web browsers, email, newsgroups and discussion forums .Awareness of cyber hygiene( protecting the personal computer from getting infected with the viruses), worms and other cyber attacks .

### PRODUCTIVITY TOOLS:

Crafting professional word documents; excel spread sheets, power point presentations and personal web sites using the Microsoft suite of office tools and Latex.

**(Note: Student should be thoroughly exposed to minimum of 12 Tasks)**

### PC HARDWARE:

#### Task 1:

Identification of the peripherals of a computer. To prepare a report containing the block diagram of the CPU along with the configuration of each peripheral and its functions and submit the assignment to your instructor

#### Task 2:

A practice on disassemble the components of a PC and assembling them to working condition.

#### Task 3:

- a) Basic DOS commands
- b) Installation of MS windows on a PC.lab instructor should verify the installation process

**Task 4:**

- a) Introduction to LINUX
- b) System requirements
- c) Installation procedure

**Task 5:**

Exposure to Basic commands and system administration in Linux including: Basic Linux commands in bash, Create hard and symbolic links.

**Task 6:****HARDWARE TROUBLESHOOTING (DEMONSTRATION):**

Students have to be given a PC which does not boot due to improper assembly or defective peripherals. Identification of a problem and fixing it for getting to working condition.

**SOFTWARE TROUBLESHOOTING (DEMONSTRATION):**

Students have to be given a malfunctioning CPU due to system software problems. Identification of a problem and fixing it for getting to working condition.

**INTERNET & WORLD WIDE WEB:****Task 7:****BASIC GUIDE TO INTERNET:**

Students should get connected to their Local Area Network and access the Internet. In the process they should configure the TCP/IP setting and demonstrate how to access the websites and email.

**Task 8:****a) SURFING THE INTERNET:**

Students customize their web browsers using bookmarks, search toolbars and pop up blockers.

**b) SEARCH ENGINES:** Students should know what search engines are and how to use the search engines.

A few topics would be given to the students for which they need to search on Google.

**Task 9:****CYBER HYGIENE (DEMONSTRATION):**

Awareness of various threats on the internet. To install an anti virus software and to configure their personal firewall and windows update on their computers.

**LaTeX and Word****EXPLANATION OF WINDOW COMPONENTS (menu bar, tool bar, title bar)****WORD ORIENTATION:**

Importance of LaTeX and MS/ equivalent (FOSS) tool Word as word Processors.

Details of the four tasks and features that would be covered in each, Using LaTeX and word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

**Task 10:****USING LATEX 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 LaTeX and Word.

**Task 11:****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, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes and Paragraphs.

**Note:** instructors has to explain about IEEE formats and standards

**EXCEL****EXCEL ORIENTATION:**

The mentor needs to tell the importance of MS/ equivalent (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered in each. Using Excel –

Accessing, overview of toolbars, saving excel files, Using help and resources

**Task 1:****CREATING A SCHEDULER:**

Features to be covered:-Gridlines, Format Cells, Summation, auto fill, Formatting Text

**LOOKUP / VLOOKUP****Task 2:****PERFORMANCE ANALYSIS:**

Features to be covered:-Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting

**Task 3:**

Cricket scorecard- features to be covered:-pivot tables, interactive buttons, importing data, data protection, and data validation

**LATEX AND MS/EQUIVALENT (FOSS) TOOL POWER POINT:****Task 12:**

Students will be working on basic power point utilities and tools which help them create basic power point presentation. Topic covered during this week includes :- PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows, Hyperlinks, Inserting –Images, Clip Art, Tables and Charts in both LaTeX and PowerPoint.

**Task 13:**

Concentrating on the in and out of Microsoft power point and presentations in Latex. Helps them learn best practices in designing and preparing power point presentation. Topic covered during this week includes: – Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.

## Learning resources

### Reference books:

1. Scott Mueller's Upgrading and Repairing PCs, (18<sup>th</sup> edition) by Scott Mueller, QUE, Pearson, 2008.
2. The Complete Computer upgrade and repair book, (3<sup>rd</sup> edition) by Cheryl A Schmidt, Dreamtech, 2009.
3. Basic concepts of information technology workshop, (3<sup>rd</sup> edition) by Raven Babu, G.P. and Narayana, M.V., B.S Publications, 2008.