IT AND ENGINEERING WORKSHOP

2)

I B. Tech. - I Semester   **L   T   P   C**
Course Code: A3HS20   **-   -   3   2**

COURSE OBJECTIVES:

The course should enable the students to:

1. Identify the tools used in various engineering workshop trades.
2. Practice safety norms while handling tools and equipments in engineering workshop.
3. Develop models using fitting, carpentry, foundry, Black-Smithy and Tin-Smithy trades.
4. Demonstrate the process of house wiring for connecting and controlling home appliances.
5. Show the metal joining arc welding process, plumbing, and power tools.
6. Give hands on practice on productivity tools like word processors, spreadsheets, presentations.
7. Explain the internal parts of a computer, assembling and disassembling a computer.
   Describe the networking of computers and use internet facility for browsing and searching.

COURSE OUTCOMES:

Students will be able to

1. Identify various components and peripherals of computer.
2. Assemble and Disassemble a computer
3. Create documents and spread sheets using MS Word and MS Excel
4. Create Presentations using MS Power Point.
5. Assess various browsers based on their performance and security parameters.

LIST OF EXPERIMENTS

WEEK -1
OPERATING SYSTEM INSTALLATION
Windows 7, Windows 8 and Windows 10.

WEEK - 2
OPERATING SYSTEM INSTALLATION
Linux (Ubuntu) and dual booting.

WEEK - 3
INSTALLING DRIVERS
LAN, graphics, audio, video and command prompt, commands.

WEEK - 4
NETWORK CONNECTIONS
IP configurations, connecting devices in LAN through bridge, hub, switch; Wi-Fi, Li-Fi and Bluetooth settings; Crimping: Crossover, strait over.

WEEK - 5
TROUBLESHOOTING
Hardware troubleshooting, software troubleshooting.

WEEK - 6
BLOG CREATION
Creating blogs, import the data into blogs, blog templates, blog design.

WEEK-7
SKYPE INSTALLATION
Skype installation and usages of Skype.

WEEK-8
CYBER HYGIENE
Install antivirus software; Configure their personal firewall and windows update on their computer.

WEEK-9
MS WORD
Prepare the project document and resume.

WEEK-10
MS EXCEL
Spreadsheet basics, modifying worksheets, formatting cells, formulas and functions, sorting and filtering, charts.

WEEK-11
Ms Power Point
Power point screen, working with slides, add content, work with text, working with tables, graphics, slide animation, reordering slides, adding sound to a presentation.

WEEK-12
HOUSE WIRING
Power point, light fitting and switches, television, home theater.

WEEK-13
CARPENTRY
Study of tools and joints; Practice in planning, chiseling, marking and sawing; Joints: Cross joint, T joint, Dove tail joint.

WEEK-14
SOLDERING
Electronic components (PCB'S), resistance soldering, desoldering, and soldering effects.

WEEK-15
FITTING
Study of tools, practice in filing, cutting, drilling and tapping; Male and female joints, stepped joints**.**

WEEK-16
ELECTRICAL WINDING
Lap winding, wave winding and design of transformer.

TEXT BOOKS:
1. Peter Norton, "Introduction to Computers", Tata Mc Graw Hill Publishers, 6th Edition, 2010.
2. Scott Muller, Que, "Upgrading and Repairing", Pearson Education, PC's 18th Edition, 2009.
3. H. S. Bawa, "Workshop Practice", Tata Mc Graw Hill Publishing Company Limited, New Delhi, 2nd Edition, 2007.