ENGINEERING WORKSHOP
(Common to all Branches)

Course Code :13MT1101	**L**	**T**	**P**	**C**
	0	**0**	**3**	**2**

Course Educational Objectives:

To provide hands on experience on basic Engineering and IT related skills.

✤ To train the student in the basics of computer components, maintenance software(s) installation

✤ To train the students in office tools.

✤ To give the student exposure to DOS commands and LINUX commands.

✤ To demonstrate and train the students in basic professional trades.

✤ To train the students to know about different system tools in personal computer.

Course Outcomes:

At the end of the course the student will be able to

✤ Identify the peripherals of a computer, components in a CPU and its function

✤ Work with MS-OFFICE

✤ Work with DOS commands

✤ Work with LINUX commands

✤ Understands different system tools in personal computer.

COMPULSORY EXERCISES:

1. Identification of the peripherals of a computer, components in a CPU and its function – Block diagram of the CPU along with the configuration of each peripheral. Disassembly and assembly of a personal computer.

2.   Installation of MS windows on the personal computer.

3.   One lamp controlled by a one-way switch and (b) Two-way switching for stair-case lamp.

ANY NINE EXPERIMENTS FROM THE FOLLOWING:

Carpentry: Making a Cross-half lap joint using wooden pieces.

Carpentry: Making a Mortise and Tenon joint using wooden pieces.

Fitting: Preparation of a V-fit between mild steel flat pieces.

Fitting: Preparation of a Square-fit between mild steel flat pieces.

Foundry: Preparation of a sand mould using a single piece pattern

Foundry: Preparation of a sand mould using a split piece pattern.

Tin-Smithy: Preparation of a sheet metal pipe-joint using tin-smithy tools.

Tin-Smithy: Preparation of a sheet metal funnel using tin-smithy tools.

Welding: Making a Lap joint through arc welding.

Lathe Machine: Demonstration of turning related activities on Lathe machine.

Black smithy: Demonstration of Plumbing trade.

Plumbing: Demonstration of plumbing trade

Operating System: Changing Boot Device Priority, Installation of Linux, putting passwords, Enabling and disabling external devices, Connectivity Boot Camp.

Hands on Exposure on Linux shell commands: Using man, info commands for finding information about commands. Using file processing commands (ls, cp, mv, ln, mkdir, rmdir, chmod etc..), Using text processing commands (grep, egrep, sed etc…), Using disk utility commands, mount commands (du, df, mount etc..), Vi-Editor.

MS-Word: Using Ms-Word, creating project abstract, creating newsletter, creating feedback form

MS- Excel: Excel orientation, creating scheduler, calculating CGPA, Performance Analysis

MS-PowerPoint: PPT Orientation, Slide Layouts, Custom Animation,

Hyperlinks, inserting Images, Clip Art, Audio, Video, Objects, Tables, Charts.

System tools, Hardware Troubleshooting, Software Troubleshooting and Installations of Anti Virus.

Multimedia Flash (Adobe)

a.   Introduction to Flash interface

b.   Introducing the tools

c.   Putting text into Flash

d.   Smoothen/straighten drawings

e.   Animation Part 1: Using layers, key frames and motion tweening

f.   Animation Part 2: Shape tweening, motion guide and frame by frame animation