

ENGINEERING WORKSHOP

(Common to all branches)

OBJECTIVE:

To familiarize with the basic manufacturing processes and to study the various tools and equipment used, hands-on training is given in different sections. Essentially student should know the labour involved, machinery or equipment necessary, time required to fabricate and also should be able to estimate the cost of the product or job work.



TRADES FOR EXERCISES:

At least two exercises from each trade:

- a. Carpentry: Middle lap T joint, cross lap joint, mortise and tenon T joint, Bridle T joint
- b. Fitting: Square joint, V joint, half round joint, dovetail joint
- c. Tin-Smithy: Tray, cylinder, hopper, funnel
- d. Black Smithy: Simple exercises based on black smithy operations such as upsetting, drawing down, punching, bending, swaging and fullering
- e. House-wiring: wiring for ceiling rose and two lamps (bulbs) with independent switch controls with or without looping, wiring for stair case lamp, wiring for a water pump with single phase starter.
- f. Foundry: single pattern, double pattern

TRADES FOR DEMONSTRATION:

- a. Plumbing
- b. Machine Shop
- c. Welding
- d. Power tools in construction, wood working, electrical engineering and mechanical Engineering.

Outcomes

Basic practice sessions must be conducted in the trades mentioned and then two products of Industrial application (with combination of different trades) may be produced with the available resources.

REFERENCE BOOKS:

1. Engineering Work shop practice for JNTU, V. Ramesh Babu, VRB Publishers Pvt. Ltd.
2. Work shop Manual / P.Kannaiah/ K.L.Narayana/ SciTech Publishers.
3. Engineering Practices Lab Manual, Jeyapoovan, SaravanaPandian, Vikas publishers
4. Dictionary of Mechanical Engineering, GHF Nayler, Jaico Publishing House