



# VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

(Accredited by NAAC & NBA, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH)  
Aziznagar Gate, C.B. Post, Hyderabad – 500 075

## DEPARTMENT OF MECHANICAL ENGINEERING

I B.Tech I Semester

### ENGINEERING WORKSHOP LABORATORY (A11381)

#### 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.

**Course outcomes:** Upon the completion of the lab, the students should

1. Understand the process of assembly/disassembly of computer parts and installation of different software's.
2. Study and practice on workshop tools and their operations.
3. Practice on manufacturing of components using workshop trades including fitting, carpentry, foundry, house wiring, black smithy, tin smithy, soldering and welding.
4. Identify and apply suitable tools for different trades of Engineering processes including material removing, measuring, chiseling.
5. Apply basic electrical engineering knowledge for house wiring practice.





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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**I B.Tech I Semester**  
**ENGINEERING WORKSHOP LABORATORY (A11381)**  
**LIST OF EXPERIMENTS**

S.No.	NAME OF THE EXPERIMENTS
1	CARPENTRY
2	BLACK SMITHY
3	FOUNDRY
4	WELDING
TRADE FOR DEMONSTRATION	
5	PLUMBING
6	MACHINE SHOP

**LIST OF EQUIPMENT**

S.No.	NAME OF THE EQUIPMENT
1	Carpentry Vice, Wooden Mallet, Metal Jack Plane, Marking Gauges, mortise chisel, firmer chisel, Wood Rasp File, Hand, Tenon and Compass Saw, , tenon saw, steel rule, try square
2	Sledge hammers, anvil, Square bit tongs, round bit tongs, round ring tongs, flat bit tongs, pick up tongs, hot chisel, cold chisel, cutters, flatters, fullers, swages, forge furnance, electrical blowers.
3	Moulding boards, moulding flask sets, shawls, trowels, peen rammers, butt rammers, strike - off bar, slicks, finishing trowels, single piece pattern, double piece pattern, vent rod.
4	Arc and gas weldings, welding screen, welding gloves, electrode holder, wire brush, chipping hammer
<b>TRADE FOR DEMONSTRATION</b>	
5	Pipe wrench, bench vice, pipe vice, die set
6	Lathe machine



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**I B.Tech II Semester**  
**IT & ENGINEERING WORKSHOP LABORATORY (A12087)**  
**LIST OF EXPERIMENTS**

S.No.	NAME OF THE EXPERIMENTS
1	HOUSE WIRING
2	FITTING
3	TIN –SMITHY AND DEVELOPMENT OF JOBS CARRIED OUT AND SOLDERING.

**LIST OF EQUIPMENTS**

S.No.	NAME OF THE EQUIPMENTS
1	Wire strippers, poker, screw drivers, Testers, Cutting plier, nose plier,
2	Ball peen hammer, steel rule, try square, peen hammer, scribers, flat rough file, flat dead smooth file, half round smooth file, half round rough file, square rough file, triangular smooth file, inside caliper, outside caliper, hack saw frame, scribing block bench vice.
3	Try square, sheet metal flat chisel, stakes, nylon mallet, snips, support plate, swing blade protractor, rubber mallet, divider, square rough file, triangular smooth file, inside caliper, outside caliper, hack saw frame, scribing block bench vice. Soldering machine.