16ME103 WORKSHOP PRACTICE

Hours Per Week :

L	T	P	C
-	-	3	2

Course Description and Objectives:

This course is aimed to impart knowledge and provide hands-on experience in Carpentry, Fitting, Tinsmithy, Blacksmithy and House wiring. In addition it also provides knowledge on various manufacturing processes such as Foundary, Welding, Machine Shops and CNC Machines.

Course Outcomes:

Upon completion of the course, the student will be able to

CO1: Identify various tools connected to the trades such as Carpentry, Fitting, Tinsmithy, Blacksmithy and House wiring.

CO2: Fabrication of wooden joints and understanding joining of metals.

CO3: Make metal joints and sheet metal work.

CO4: Understand various advance machine tools and its components; make metal tools like knives, needles, swords, arrows etc.

CO5: Develop methodology as per specifications of the product.

SKILLS:

- ✓ *Prepare wooden and metal furniture.*
- ✓ *Electrical wiring and power supply in residences.*
- ✓ *Make funnels, trays, locker, steel almirahs, etc.*
- ✓ *Fabrication of various agriculture tools, hooks, axes, axels, rims, etc.*
- ✓ *CNC machines and various machining operations and processes.*

EXERCISES IN THE FOLLOWING TRADES :

1. Carpentry.
2. Fitting.
3. Tin Smithy and Black Smithy.
4. House Wiring.
5. Foundry and Welding (Demonstration).
6. Machine shop and CNC (Demonstration).

Note: In each trade, the student has to perform at least two jobs.

TEXT BOOKS :

1. S.K. Hazra Choudhury, "Elements of workshop Technology", 11th edition, Media Promoters, 1997.
2. Gopal, T.V., Kumar, T., and Murali, G., "A first course on workshop practice: Theory, Practice and Work Book", Suma Publications, Chennai, 2005.
3. Venkatachalapathy, V. S., "First year Engineering Workshop Practice", Ramalinga Publications, Madurai, 1999.

ACTIVITIES:

- *To make wooden joints like Mortise and Tenon joint, T-lap Joint which are used to prepare a wooden furniture.*
- *To prepare metal joints and metal sheet products like V-Joint and trays by using mild steel flats and Galvonised iron sheets.*
- *Trials on electrical circuit connections.*