



| 2007 – CIVIL ENGINEERING WORKSHOP PRACTICE -I |           |         |                        |                              |      |               |       |    |          |
|---|-----------|---------|------------------------|------------------------------|------|---------------|-------|----|----------|
| Teaching Schedule Per Week                    |           |         | Progressive Assessment | Examination Schedule (Marks) |      |               |       |    |          |
| Lectures                                      | Practical | Credits |                        | Theory                       |      | Practical Ex. | Total |    |          |
|   | 2         | 2       | 50                     | -                            | -    | -             | -     | -  | 50       |
| Pre-requisite                                 |           | Source  | Semester               | Theory                       | Test | Total         | TW    | PR | Gr Total |
| 2003  |           | CVL     |                        | -                            | -    | -             | 50    | -  | -        |

**RATIONALE:** -This course is Basic Workshop Practice -II. It is designed to provide further knowledge and skill in wood working and welding methods, which a technician would find necessary in course of their diploma in Engineering. Competencies to be developed: -The students should be able to identify the tools and select the proper tools for specific operation and to take care in the proper maintenance and safety of man, machine tool.

### COURSE CONTENTS

#### 1. CARPENTRY

Knowledge of various wood working machines such as wood working lathe, circular saw, band saw, wood planner, universal wood working machines.  
 Knowledge of tools used for different machinery; Knowledge of different types of joint and their uses; Knowledge of wood preservation.; Perform one job involving joints; Perform one job on wood working machines; General safety precautions in various operations.

#### 2. WELDING

Knowledge of types of welding such as: -Arc welding (Electric), gas welding.  
 Identification by name and use of various tools, accessories and equipment used in welding operations such as electrode holders, cables, electrodes, hand shield, chipping hammer, head shield, goggles, tongs, wire brush, transformers, generators, blow pipes nozzles, gauges, cylinders, cutting torch, filler rod, etc.  
 Knowledge of various welding joints commonly used and positional techniques such as flat, horizontal, vertical, overhead, etc. Perform one job involving trigger beading in flat position & one job involving butt or lap joint.  
 General safety precautions: -Use of proper clothing & shoes etc. for safe working, harmful use of loosely connected cables and improper coating, use of hand gloves and apron, removal of spatter and flux, use of protective covering for general body parts, prevention of harmful effects of radiation to surroundings.

Total

#### REFERENCE BOOKS

1. Elements of Workshop Technology – Vol. I, by Hajra Chowdary Asia publications House.,
2. Elements of Workshop technology – Vol. II, by Hajra Chowdary, Asia publication house.,
3. Welding technology by O. P. Khanna .

