**LESSON PLAN**

NAME OF FACULTY: DEEPAK PUNIYA / SUMIT KUMAR DISCIPLINE: MECHANICAL ENGG. SEMESTER: 4th

SUBJECT: CAD / CAM

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD (PRACTICAL) PER WEEK: 2 TURNS/WEEK (4 PERIODS/ TURN)

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| **WEEK** | **TOPIC** | | **COVERD ON**  **DATE** | | |
| G1 | | G2 |
| **1** | **UNIT-1: 1. Computer Aided Design (CAD) (03 Sheets)**  1.1 Introduction to Computer Aided Drafting (2D) commands of any one software (Auto CAD, ProE, Solid works, Unigraphics etc.)  1.2 Introduction to CAD Software, Installing CAD Software, |  | |  | |
| **2** | Familiarization with software, coordinate system (Absolute, Relative and Polar), snap, grid, and ortho mode and setting of units and layout,  1.3 Exercises on preparing drawings of some machine elements using: Drawing commands – point, line, arc, circle, ellipse circle, ellipse, | |  | |  |
| **3** | Editing commands – scale, erase, copy, stretch, lengthen and explode.  1.4 Dimensioning and placing text in drawing area, sectioning and hatching, | |  | |  |
| **4** | Inquiry for different parameters of drawing entity, Create layers within a drawing, | |  | |  |
| **5** | 1.5 Some exercise on simple drawings. | |  | |  |
| **6** | **UNIT 2 :-Prepare assembly drawing using Drafting Software(2D) (3 sheets)**  2.1 Plummer Block | |  | |  |
| **7** | 2.2 Stepped pulley, V-belt pulley | |  | |  |
| **8** | 2.3 Machine tool Holder, Wall Bracket | |  | |  |
| **9** | **UNIT 3 ;-Isometric Drawing by CAD using any part modeling Software (3D) (2 sheet)**  Introduction: Part modelling: Datum Plane; constraint; sketch; dimensioning; extrude; revolve; sweep; blend; protrusion; extrusion; | |  | |  |
| **10** | Introduction: rib; shell; hole; round; chamfer; copy; mirror; assembly; align; orient. | |  | |  |
| **11** | Exercises for 3D Drawings 3.1Flanged coupling,3.2.Bearing Block Bushed bearing. | |  | |  |
| **12** | **4. Computer Aided Manufacturing (CAM)**  4.1. Introduction to CAM software, steps in using CAM software | |  | |  |
| **13** | 4.2 Generate part program using CAM software (MasterCAM/EdgeCAM or any other CAM software) for turning jobs Creating Fillet features | |  | |  |
| **14** | . 4.3 Generate part program using CAM software (MasterCAM/EdgeCAM or any other CAM software) for milling jobs | |  | |  |
| **15** | Revision and Exercise of 3D Modeling | |  | |  |
| **16** | Revision and Exercise of 3D Modeling | |  | |  |