

SYLLABUS :-

Course Overview: This course aims at developing the skills needed for manual drawing of three dimensional views of objects or architectural subjects using isometric and perspective projections. The students will also be introduced to the concepts of shade and shadow and their use in preparation of architectural presentation drawings. Learning Objectives: 1. Understanding the concept of isometric projection, and acquiring skills of drawing isometric projections from orthographic projections, and vice versa. 2. Understanding the concept of perspective projection: the fundamental principles of drawing one-point and two-point perspectives, and acquiring skills of geometrically drawing perspective views of objects of various degrees of complexity. 3. Exploration of the relationship between locating the object at a distance from observer, position of picture plane, height of observer etc. which will help to draw desired perspective view of the object. 4. Drawing the reflection of objects on reflective surfaces in perspective projection. 5. Understand the concept of shade and shadow in sciography, draw shade and shadow on plans and elevations of objects, and learn how to use them for preparing architectural presentation drawings. 6. Understand the process of incorporating shade and shadow in perspective projection as well as drawing reflection on reflective surfaces. Course Curriculum: Module 1 : Isometric projection of solids Isometric projection of three dimensional objects: simple and intermediate difficulty level; use of isometric scale for isometric projections; difference between isometric projections and isometric view Module 2 : Perspective projections of solids and objects Perspective projection: one point and multi-point perspective views of solids and complex three dimensional subjects (intermediate level difficulty); relation of observer, picture plane, height of the observer in creating different perspective views; reflections in drawing of perspective views Module 3 : Shades and shadows on 3D objects Shade and shadow on simple and complex three dimensional objects; shade and shadow for perspective views for 3D objects; manual drawing techniques to render buildings and prepare architectural presentations using perspective views and sciography Reading List: 1. Bhatt, N.D. and Panchal, V.M. (2014). Engineering drawing (53rd ed.). Charotar Publication. 2. Venugopal, K. (2004). Engineering drawing and graphics. New Age International. 3. Martin, C. L. (1970). Architectural graphics (2nd ed.). McMillan Publication Co. 4. Bethune, J.D. (1986). Essentials of drafting (2nd ed.). Peachpit Press.