

# 101908/ME900C ENGINEERING GRAPHICS

## Course Contents and Lecture Schedule

| No       | Topic  | No. of Lectures |
|----------|--|-----------------|
| <b>1</b> | <b>Module 1 (12 hours)</b>   |                 |
| 1.1      | Introduction to graphics, types of lines, Dimensioning   | 1               |
| 1.2      | Concept of principle planes of projection, different quadrants, locating points on different quadrants   | 2               |
| 1.3      | Projection of lines, inclined to one plane. Lines inclined to both planes.                               | 2               |
| 1.4      | Line rotation method of solving, problems on line rotation method  | 4               |
| 1.5      | Trapezoidal method of solving problems on lines, Problems on lines using trapezoidal method              | 3               |
| <b>2</b> | <b>Module 2 (10 hours)</b>   |                 |
| 2.1      | Introduction of different solids, Simple position plan and elevation of solids                           | 2               |
| 2.2      | Problems on views of solids inclined to one plane  | 2               |
| 2.3      | Problems on views of solids inclined to both planes  | 2               |
| 2.4      | Practice problems on solids inclined to both planes  | 4               |
| <b>3</b> | <b>Module 3 (10 hours)</b>   |                 |
| 3.1      | Introduction to section planes. AIP and AVP. Principle of locating cutting points and finding true shape | 1               |
| 3.2      | Problems on sections of different solids   | 3               |
| 3.3      | Problems when the true shape is given  | 2               |
| 3.4      | Principle of development of solids & sectioned solids and its problems                                   | 4               |
| <b>4</b> | <b>Module 4 (10 hours)</b>   |                 |
| 4.1      | Principle of Isometric View and Projection, Isometric Scale. Problems on simple solids                   | 2               |
| 4.2      | Isometric problems on Frustum of solids, Sphere and Hemisphere   | 4               |

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|----------|---|---|
| 4.3      | Problems on combination of different solids   | 4 |
| <b>5</b> | <b>Module 5 (6 hours)</b>   |   |
| 5.1      | Introduction to perspective projection, different planes, station point etc. Perspective problems on pyramids | 2 |
| 5.2      | Perspective problems on prisms  | 2 |
| 5.3      | Practice on conversion of pictorial views into orthographic views   | 2 |
|          | <b>SECTION B</b> ( <i>To be conducted in CAD lab</i> )  |   |
| 1        | Introduction to CAD and software. Familiarizing features of 2D software. Practice on making 2D drawings       | 2 |
| 2        | Practice session on 2D drafting   | 2 |
| 3        | Introduction to solid modelling and software  | 2 |
| 4        | Practice session on 3D modelling  | 2 |