**ME-104: Engineering Drawing and CAD**

**Credit Hours: 2**

**Contact Hours: 2**

**Grading: As per UET Statutes**

1. **COURSE OUTLINE:**

This course provides a thorough introduction to engineering drawing, Various types of lines, Basic geometrical constructions, Conic sections, Theory of orthographic projection, Dimensioning and lettering, Introduction to tolerance, Projections of points, Projections of straight lines, Projections of planes and solids in simple position, sectioning of solids, Isometric projections, Development of surfaces

1. **Weekly Plan**

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| --- | --- |
| Weeks | Contents |
| 1 | Introduction to engineering drawing |
| 2 | Drafting tools, equipment and materials |
| 3 | Lettering, numbering and scales |
| 4 | Geometrical construction |
| 5 | Geometrical construction |
| 6 | Projections of points |
| 7 | Projections of straight lines |
| 8 | Projections of straight lines |
|  | **Mid Term Exam** |
| 9 | Projections of solids |
| 10 | Projections of solids |
| 11 | Sheet Lay out and Distribution |
| 12 | Drawing Sheets |
| 13 | Drawing Sheets |
| 14 | Drawing Sheets |
| 15 | Drawing Sheets |
|  |  |
|  | **Final Term Exam** |

1. **CLOs and its Mapping with PLOs**

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| --- | --- | --- | --- |
| **CLO #** | **CLO** | **Cognitive Domain** | **PLOs** |
| CLO-1 | Understand the basic technique and tools of engineering drawing and graphics as a language of communication | C1 (Knowledge) | PLO 1 (Engineering Knowledge) |
| CLO-2 | To enable students to acquire and use engineering drawing skills as a means of accurately and clearly communicating ideas, information and instructions | C3 (Application) | PLO 3 (Design Development of Solutions) |

1. **CLOs Assessment Mechanism**

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| **Assessment Tools** | **CLO1** | **CLO2** |
| Assignments | 20% | 10% |
| Quizes | 20% | 10% |
| Mid Term | 20% | 50% |
| Final Term | 40% | 30% |
| Semester Project |  | 5% |

1. **Resources**

* TEXT/ REFERENCE BOOKS

1. Elementary Engineering Drawing by N.D. Bhatt
2. Engineering Drawing and Graphic Technology Latest Edition by T.E. French, C.J. Vierk and R.J. Foster.