(BM-108) - Computer Aided Engineering Drawing

Course Outline:

Theory:

1. **Introduction**
    1. Introduction to Engineering Drawing
    2. Use of drawing instruments and materials.
    3. Basic Tools- classification and brief description
    4. Lines, Types of lines, configuration of lines and their application, Selection of line thickness
2. **Engineering Geometry**
    1. Geometric construction
    2. Coordinate systems
    3. Basic entities
    4. Drawing simple geometric objects
    5. Introduction to different types of scales.
3. **Modelling Fundamentals**
    1. Introduction to solid modelling
4. **Multiviews and Visualization**
    1. Projection theory
    2. Projection of principal views from 3D models
    3. Orthogrpahic projections
    4. Isometric drawings
    5. Section views
5. **Dimensioning and plotting**
    1. Dimensioning
    2. Plotting and printing

Suggested Teaching Methodology:

- Lecturing
- Lab tasks
- Report Writing

Suggested Assessment:

Theory (100%)

- Sessional (20%)
- Quiz (12%)
- Assignment (8%)
- Midterm (30%)
- Final Term (50%)

Laboratory (100%)

- Labs
- Open-Ended Labs

Text and Reference Books:

1. A Textbook of Engineering Drawing: Along with an Introduction to AutoCAD (2015) by Roop Lal, Ramakant Rana
2. Mastering Autodesk Inventor 2015 and Autodesk Inventor LT 2015: Autodesk Official Press, Curtis Waguespack, ISBN: 978-1-118-86213-1

3. Engineering Drawing and Graphic Technology-International Edition, Thomas E. French, Charles J. Vierck, Robert J. Foster, McGraw-Hill, Inc.1993 ISBN 0-07-022347-5

4. Engineering Drawing and Design-Sixth Edition, C. Jensen, J.D. Helsel, D.R. Short, McGraw-Hill, 2002, ISBN 0-07-821343-6 (T 353 J47 2002)

5. Technical Drawing-Fourteenth Edition, F. E. Giesecke, A. Mitchell, H. C. Spencer, I.L. Hill, J.T. Dygdon, J.E., Novak, Prentice-Hall, Inc., 2012, ISBN 0-13-178446-3 (T 353 T43 2003)