

BCE302	Computer-aided Civil Engineering Drawing	1L:0T:0P	1 credits
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Pre-requisite: No Pre-requisite.

Course Objectives:

CO1	To understand the basic elements of engineering drawing.
CO2	To be able to prepare engineering drawings in 2D and 3D for different structures.
CO3	To understand and interpret engineering drawings.
CO4	To get familiar with the software's used for drafting.

Module 1:

INTRODUCTION: Introduction to concept of drawings, Interpretation of typical drawings, Planning drawings to show information concisely and comprehensively; optimal layout of drawings and Scales; Introduction to computer aided drawing, co- ordinate systems, reference planes. **Commands:** Initial settings, Drawing aids, Drawing basic entities, Modify commands, Layers, Text and Dimensioning. **Blocks.** Drawing presentation norms and standards.

Module 2:

SYMBOLS AND SIGN CONVENTIONS: Materials, Architectural, Structural, Electrical and Plumbing symbols. Rebar drawings and structural steel fabrication and connections drawing symbols, welding symbols; dimensioning standards
MASONRY BONDS: English Bond and Flemish Bond – Corner wall and Cross walls - One brick wall and one and half brick wall

Module 3:

BUILDING DRAWING: Terms, Elements of planning building drawing, Methods of making line drawing and detailed drawing, Site plan, floor plan, elevation and section drawing of small residential buildings, Foundation plan, Roof drainage plans.

Course Outcomes: After the completion of this course the students will be able to:

CO1	Develop Parametric design and the conventions of formal engineering drawing.
CO2	Communicate a design idea/concept graphically/visually.
CO3	Examine a design critically and with understanding of CAD
CO4	To interpret drawings, and to produce designs using a combination of 2D and 3D software.

Text/Reference Books:

1. Subhash C Sharma & Gurucharan Singh (2005), " Civil Engineering Drawing" , Standard Publishers
2. Ajeet Singh (2002), " Working with AUTOCAD 2000 with updates on AUTOCAD 2001", Tata- McGraw-Hill Company Limited, New Delhi
3. Sham Tickoo Swapna D (2009), " AUTOCAD for Engineers and Designers" , Pearson Education,
4. Venugopal (2007), "Engineering Drawing and Graphics + AUTOCAD", New Age

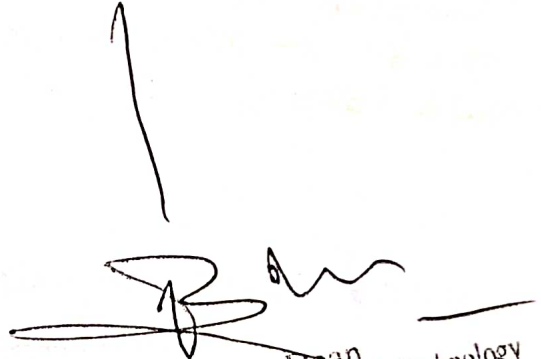
- International Pvt. Ltd.,
5. Balagopal and Prabhu (1987), " Building Drawing and Detailing", Spades publishing KDR building, Calicut.
 6. (Corresponding set of) CAD Software Theory and User Manuals.
 7. Malik R.S., Meo, G.S. (2009) Civil Engineering Drawing, Computech Publication Ltd New Asian.
 8. Sikka, V.B. (2013), A Course in Civil Engineering Drawing, S.K. Kataria & Sons.



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