

Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly West Bengal University of Technology)

Syllabus for B. Tech in Civil Engineering

(Applicable from the academic session 2018-2019)

| CE(ES)392 | Computer-aided Civil Engineering Drawing | 1L + 2P | 2 Credits |
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| Module 1 | INTRODUCTION Introduction to concept of drawings, Interpretation of typical drawings, Planning drawings to show information concisely and comprehensively; optimally 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. | | 2 L |
| Module 2 | SYMBOLS AND SIGN CONVENTIONS Materials, Architectural, Structural, Electrical and Plumbing symbols. Rebar drawings and structural steel fabrication and connections drawings symbols, welding symbols; dimensioning standards | | 2 L |
| Module 3 | MASONRY BONDS English Bond and Flemish Bond – Corner wall and Cross walls -One brick wall and one and half brick wall | | 1 L |
| Module 4 | 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. Depicting joinery, standard fittings & fixtures, finishes. Use of Notes to improve clarity | | 5 L |
| Module 5 | PICTORIAL VIEW Principles of isometrics and perspective drawing. Perspective view of building. Fundamentals of Building Information Modelling (BIM) | | 2 L |
| Drawings | | | |
| 1 | Buildings with load bearing walls including details of doors and windows. | 6P | |
| 2 | Taking standard drawings of a typical two storeyed building including all MEP, joinery, rebars, finishing and other details and writing out a description of the facility in about 500-700 words | 4P | |
| 3 | RCC framed structures | 6P | |
| 4 | Reinforcement drawings for typical slabs, beams, columns and spread footings | 6P | |
| 5 | Industrial buildings - North light roof structures – Trusses | 4P | |
| 6 | Perspective view of one and two storey buildings | 4P | |
| Reference | 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-Mc Graw-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, | | |