

**Objective**

The Course is intended to impart understanding in the mode of detailed clause by clause specification as complimentary to the detailed drawings. This subject is also intended to impart knowledge to the student regarding different materials used in the building construction and the methods of application.

**Module 1**

Introduction-Definition-Importance-Scope of the Subject, Specifications forming part of Building Contract, Drafting Specification, Correct form of writing , Avoiding duplication, Ambiguity and conflicting statements. Correct order of sequence. Specification of simple building materials i.e Brick, Stone, Lime, Cement and Wood etc. Traditional building materials.

**Module 2**

Detail specification of Excavation in foundation, Plain Cement Concrete, Masonry in Brick and stone (Rubble and ashlar. Reinforced Cement Concrete work detail specification of all the works related all civil works.

**Module 3**

Material Quality and Standard, various Mixes, cutting, bending and fixing of M. S .Bars. Centring and shuttering and its removal. Curing of concrete, flooring, Paving and Tiling, Indian patent Stone, Terrazzo in situ. Flag Stone flooring. Water proofing of structure, Carpentry and Joinery. Roof work in timber, Panelled door and Glazed window. Specification for Structural steel work , Materials Quality and setting out. Cutting and welding. Specification of First class building and second class building.

**Module 4**

Building Boards. Ply Wood, Particle Boards, Block boards. Acoustic Boards. Flooring- Asphalt Rubber cork, Linoleum, Parquet etc. Glass – various types of glass used in buildings. Patent Glazing for Factories, Glass bricks, Partition, Pavements lights etc . Paints- Plastic Emulsion paint, metal paints, Cement paint, weather proof paint etc.

**Module 5**

Standard Specification for different Institutions like PWD, MES, CPWD, BIS etc. Abstract of quantities and writing Schedules, Rate and Material analysis . Bill of quantities.

**Reference**

1. Birdie, G. S. (2005). Text Book of Estimating and Costing. Dhanpat Rai Publishing.
2. Chakraborty, M. Estimating, Costing, Specification & Valuation
3. C.P.W.D. Standard Schedule of Rates.
4. Khanna, P. N., Indian Practical Civil Engineers' Handbook, Engineers' Publishers, N.Delhi.
5. **Rosen, H.J., Construction Specifications Writing, John Wiley and Sons, N. York and London.**