



Estimation , Costing & Valuation Internship

Course Objectives

1. Understand foundational concepts of estimation and identify various types used in civil engineering projects.
2. Apply unit systems and measurement techniques to prepare accurate Bills of Quantities (BOQ) in standard formats.
3. Classify construction works and interpret basic engineering drawings for estimation purposes.
4. Perform quantity take-off for foundation and earthwork with precision.
5. Estimate superstructure quantities and prepare detailed Bar Bending Schedules (BBS).
6. Prepare a comprehensive BOQ using Excel and assign standard item codes from the DSR.

Prerequisites

- Basic knowledge of Civil Engineering fundamentals — including construction materials, structural components, and basic building terminology.
- Familiarity with engineering drawings — ability to read simple plans, elevations, and sections.
- Understanding of basic mathematics — ratios, proportions, area, and volume calculations.
- Basic computer skills — especially in Microsoft Excel or equivalent spreadsheet software.
- Awareness of construction processes — such as excavation, concreting, brickwork, and plastering (helpful but not mandatory).

Tools & Environment

1. Software & Digital Tools

- Microsoft Excel / Google Sheets – for BOQ preparation, quantity calculations, and rate analysis.
- AutoCAD (Basic) – for reading and extracting measurements from drawings.
- DSR (Delhi Schedule of Rates) – for standard item codes and rates.
- PDF Reader – for accessing reference documents, drawings, and project files.

2. Reference Materials

- Standard textbooks on Estimation, Costing & Valuation.
- BIS Codes (IS:1200 series) related to measurements and quantities.
- Latest schedule of rates from relevant PWD or government agencies.



Module Breakdown

- **Module 1 – Introduction to Estimation & Types**

Definition and importance of estimation in civil engineering.

Objectives of estimation.

Different types of estimates (preliminary, detailed, revised, supplementary, etc.).

Factors affecting estimation accuracy.

- **Module 2 – Units, Measurement Systems & BOQ Format**

Standard units of measurement (SI & FPS systems).

Methods of measurement as per IS codes.

Components and structure of a Bill of Quantities (BOQ).

Standard formats for BOQ preparation.

- **Module 3 – Classification of Works & Drawing Basics**

Classification of civil works (earthwork, masonry, concrete, finishing, etc.).

Basics of reading plans, elevations, and sections.

Understanding symbols and notations in engineering drawings.

- **Module 4 – Quantity Take-Off: Foundation & Earthwork**

Centre-line method and long wall-short wall method.

Measurement of excavation, PCC, and foundation concrete.

Soil filling and backfilling quantities.

- **Module 5 – Superstructure Quantity & Bar Bending Schedule (BBS)**

Estimation of brickwork, plastering, and flooring.

Reinforcement estimation from drawings.

Preparation of a Bar Bending Schedule.

- **Module 6 – BOQ Preparation in Excel + Item Coding from DSR**

Step-by-step BOQ creation in Excel.

Applying DSR item codes and descriptions.

Formatting and finalizing BOQ documents.



SR.	TITLE	TOPIC	OBJECTIVE
1	Introduction to Estimation & Costing	Orientation	Understand the scope and importance of estimation in civil projects
2	Types of Estimates	Basics	Identify and differentiate preliminary, detailed, revised, and supplementary estimates
3	Units & Measurement Systems	Basics	Learn standard measurement units (SI & FPS) and IS code references
4	BOQ Format & Components	Documentation	Understand structure and components of a Bill of Quantities
5	Classification of Works	Basics	Classify civil works into earthwork, masonry, concrete, finishing, etc.
6	Drawing Basics for Estimation	Drawing Skills	Read and interpret plans, elevations, and sections for measurements
7	Foundation Quantity Take-Off	Measurement	Calculate quantities for excavation, PCC, and footings
8	Earthwork Calculations	Measurement	Apply centre-line and long wall-short wall methods for earthwork
9	Superstructure Quantity Calculation	Measurement	Estimate brickwork, plastering, and flooring quantities
10	Bar Bending Schedule Preparation	Reinforcement	Prepare reinforcement quantity and BBS from structural drawings
11	BOQ in Excel	Tools	Create BOQ using Excel with proper formatting
12	DSR Item Coding	Standardization	Apply correct item codes from the Delhi Schedule of Rates



Minimum Completion Criteria:

- Complete all modules and MCQs
- Attempt weekly marathons
- Submit at least 2 out of 5 mini-projects in the final level
- Attend minimum 80% of lessons

Certificate Details

- Upon successful completion of the Internship, learners will receive a Government-Recognized Certificate from Vidyawan, a registered MSME enterprise (*Udyam Registration No: UDYAM-WB-14-0205610*).



One Month Internship Certificate



Weekly Marathon Participation Certificate

Performance-Based Badge System

- Gold Badge – For Top Performers (90%+ score, completed 4+ projects)
- Silver Badge – For consistent performance (70–89%)
- Copper/Participant Badge – For all learners who complete the program

Contact Information

For queries, registration, or collaboration, feel free to contact us:

Vidyawan – Internship & Skill Development Platform

(A Government-registered MSME – UDYAM-WB-14-0205610)

- Email: contact.vidyawan@gmail.com
- Website: www.vidyawan.in (Get in touch section)
- Location: West Bengal, India
- Follow us for updates and upcoming internships