



Kot, Bhalwal, Jammu

Model Institute of Engineering
& Technology (Autonomous)
Course Handout

COURSE HANDOUT

CONSTRUCTION PLANNING AND MANAGEMENT (CE-603)

BE – 6th Semester [Branch: CE]

ACADEMIC YEAR (2023-24)

Mr. Ishan Anand

Assistant Professor

Department of Civil Engineering



Department of Civil Engineering

Model Institute of Engineering & Technology (Autonomous)

Kot Bhalwal, Jammu - 181122

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Dr. Arun K. Gupta Teaching-Learning Centre

Version 1.1

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Please Do Not Print Unless Necessary



Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
							Sessional	Final Exam	Total
CE-603	Construction Planning and management	Core	4	3	1	0	50	100	150

COURSE OUTCOMES

At the end of the course the student will be able to:	
CO1	Prepare quantities for different items of work and probable cost in the construction project.
CO2	Explain the technical specifications for various works to be performed for a project and how they impact.
CO3	Evaluate cost of work for DPR
CO4	Analyse benefit/cost, life cycle breakeven on economic alternatives.
CO5	Estimate for valuation and depreciation of real estate structures.

Unit-I

Principles of estimating, methods of taking out quantities, mode of measurement, sheets, BOQ. Types of estimates, contingencies, work charge estimate. Layout plan, index plan. Sub-heads, SOR. Administrative approval, expenditure sanction. Cost of Works: Factors affecting cost of work, overhead charges, contingencies and work charge establishment, various percentages for different services in building, preparation of DPR

(10 Hours)

Unit-II

Methods of building estimates w.r.t to detailed specification of each item of work, estimate of masonry platform, single room building, two/three room building estimate. Estimate of office building, estimate of R.C.C. works, R.C.C. water tank estimate and underground water tank estimate. Estimate of earthwork of road from Section.

(10 Hours)

Unit-III

Analysis of Rates: overhead costs, labour required. Analysis of rates and specifications for various items of building works, C.S.R., Valuation, gross income, net income, outgoings, scrap and salvage values, capitalized value, depreciation, valuation of buildings, fixation of rent, plinth area required.

(10 Hours)

Unit-IV

Time Value of Money, Cash Flow diagram, Nominal and effective interest. Single Payment, Compound Amount Factor, Uniform series of Payments, Problem time zero and equation time zero. Constant increment to periodic payments – Arithmetic Gradient (G), Geometric Gradient (C). Comparing alternatives and different analysis.

(8 Hours)

Unit-V

Real Estate, Investment Property, Equipment Replace Analysis, Depreciation and Taxes, Inflation. Project Finance – Sources of finance - Long-term and short -term finance, Working Capital Management, Inventory valuation.

(8 Hours)

Textbooks

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
1	Estimating in Building Construction	Peterson & Dagostino	Pearson Prentice Hall	8 th (2014)
2.	Estimation & Costing	Dutta & Dutta	UBS Publishers,	27th (2020)



Reference Books

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
1	Contracts & Estimates	B.S.Patil	CRC Press	7 th (2019)
2	Estimation & Quantity Surveying	D. Silambarsan	Shri Krishna Hitech Publishing	1 st (2007)

COURSE PLAN		
Unit-I Estimating		
S.No	Topics	Recommended Books
1	Principles of estimating	Book 1, Ch.1
2	Methods of taking out quantities	Book 1, Ch.1
3	Mode of measurement, sheets, BOQ	Book 1, Ch.1
4	Types of estimates	Book 1, Ch.1
5	Contingencies, work charge estimate. Layout plan, index plan. Sub-heads, SOR	Book 1, Ch.1
6	Administrative approval, expenditure sanction	Book 1, Ch.1
7	Cost of Works: Factors affecting cost of work, overhead charge	Book 1, Ch.1
8	Contingencies and work charge establishment,	Book 1, Ch.1
9	Various percentages for different services in building	Book 1, Ch.1
10	Preparation of DPR.	Book 1, Ch.1
Unit-II Methods of Estimates		
11	Methods of building estimates w.r.t to detailed specification of each item of work	Book 1, Ch.2
12	Estimate of masonry platform, single room building, two/three room building estimate	Book 1, Ch.2
13	Estimate of office building	Book 1, Ch.2
14	Estimate of R.C.C. works, R.C.C.	Book 1, Ch.2
15	Water tank estimate, underground water tank estimate.	Book 1, Ch.3
16	Estimate of earthwork of road from Section.	Book 1, Ch.4
Unit-III Analysis of Rates		
17	Overhead costs, labour required	Book 1, Ch.5
18	Analysis of rates and specifications for various items of building works	Book 2, Ch.2
19	C.S.R., Valuation, gross income, net income,	Book 2, Ch.2
20	Outgoings, scrap and salvage values, capitalized value,	Book 1, Ch.6
21	Depreciation, valuation of buildings, fixation of rent, plinth area required.	Book 2, Ch.2
Unit-IV Time value money		
22	Time Value of Money, Cash Flow diagram	Book 2, Ch.3
23	Nominal and effective interest	Book 2, Ch.4
24	Single Payment, Compound Amount Factor,	Book 2, Ch.4
25	Uniform series of Payments	Book 2, Ch.3
26	Problem time zero and equation time zero	Book 2, Ch.3



27	Constant increment to periodic payments – Arithmetic Gradient (G), Geometric Gradient (C).	Book 2, Ch.3
28	Comparing alternatives and different analysis	Book 2, Ch.3
Unit-V Investment and Finance		
29	Real Estate, Investment Property	Book 2, Ch.8
30	Equipment Replace Analysis	Book 2, Ch.8
31	Depreciation and Taxes, Inflation.	Book 2, Ch.8
32	Project Finance – Sources of finance - Long-term and short -term finance	Book 2, Ch.8
33	Working Capital Management, Inventory valuation	Book 2, Ch.8

ADDITIONAL WEB RESOURCES

1.	NPTEL Course – Construction Planning and Management IIT Guwahati, by Prof Arbind Kumar Singh https://nptel.ac.in/courses/105103093 .
2.	Swayam – https://onlinecourses.swayam2.ac.in/nou20_cs11/preview

GRADING AND ASSESSMENT

- **Sessional Test:** 20 marks
- **Assignment:** 20 marks
- **Attendance:** 10 marks
- **Final Examination:** 100 marks

COURSE POLICIES

- **Attendance:** Minimum 75% attendance is mandatory to appear in the final examination of the course.
- **Academic Integrity:** MIET's academic integrity policies apply. Plagiarism will not be tolerated.
- **Late Submissions:** Assignments and projects must be submitted by the specified timelines.

FACULTY INFORMATION

- **Office Hours**
Monday (12:05 PM - 12:55 PM)
Friday (12:05 PM - 12:55 PM)
- **Contact Information**
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