

Course Code	Course Name	L-T-P-Credits	Year of Introduction
CE404	CIVIL ENGINEERING PROJECT MANAGEMENT	3-0-0-3	2016

Prerequisite: HS300 Principles of Management

Course objectives:

- To impart knowledge on principles of planning and scheduling projects, with emphasis on construction.
- To understand the uses and suitability of various construction equipment,
- To study the legal and ethical issues related to construction projects
- To become familiar with TQM and similar concepts related to quality
- To impart knowledge in the principles of safe construction practices
- To understand the need of ethical considerations in construction.

Syllabus : Construction Planning and Scheduling, Construction disputes and settlement, Ethics in Construction, Construction safety, Principles of Materials management, Quality management practices, Construction procedures

Expected Outcomes:

The students will be able to:

- i. Plan and schedule a construction project.
- ii. Select an appropriate construction equipment for a specific job
- iii. Familiarise the legal procedures in construction contracts
- iv. Formulate suitable quality management plan for construction
- v. Familiarise the safety practices and procedures.
- vi. Apply principles of ethics in decision making.

Text Books:

1. Kumar Neeraj Jha, Construction Project Management, Pearson, Dorling Kindersley (India) Pvt. Lt
2. L.S. Srinath – PERT and CPM –Principles and Applications, Affiliated East-West Press, 2001
3. Peurifoy and Schexnayder – Construction Planning, Equipment, and Methods, Tata McGraw Hill, 2010

Reference Books

1. B.C.Punmia & K K Khandelwal, Project Planning with CPM and PERT, Laxmi Publication, New Delhi, 2016
2. Charles D Fledderman, Engineering Ethics, Prentice Hall, 2012
3. [F. Harris](#), Modern Construction and Ground Engineering Equipment and Methods, Prentice Hall, 1994
4. Gahlot and Dhir, Construction Planning and Management, New Age International, 1992
5. K KChitkara, Construction Project Management, McGraw Hill Education Pvt Ltd., 2000
6. Khanna, O.P., Industrial Engineering and Management., Dhanapat Rai Publications, 1980
7. National Building Code, BIS
8. P.P. Dharwadkar, Management in Construction Industry, Oxford and IBH
9. Shrivastava, Construction Planning and Management, Galgotia Publications, 2000

COURSE PLAN

Module	Contents	Hours	Sem. Exam Marks %
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I	Unique features of construction projects ; Identification of components –Principles of preparing DPR- Construction planning and scheduling - I – Bar charts, Network Techniques, Use of CPM and PERT for planning – Drawing network diagrams – time estimates – slack – critical path-Examples	7	15
II	Crashing and time –cost trade off, Resource smoothing and resources levelling - Construction, equipment, material and labour schedules. Preparation of job layout. Codification of the planning system : Codification approach- Work package and activities identification code – Resource codes – Cost and Finance accounting codes – Technical document codes.	7	15
FIRST INTERNAL EXAMINATION			
III	Construction disputes and settlement : Types of disputes – Modes of settlement of disputes – Arbitration- Arbitrator - Advantages and disadvantages of arbitration – Arbitration Award. Construction cost and budget :Construction cost – Classification of construction cost – Unit rate costing of resources- Budget – Types of budget – Project Master budget.	6	15
IV	Concept of ethics – Professional ethics – ethical problems – provisions of a professional code – Role of professional bodies.Project management information system- Concept – Information system computerization – Acquiring a system – Problems in information system management - Benefits of computerized information system.	7	15
SECOND INTERNAL EXAMINATION			
V	Concept of materials management – inventory – inventory control – Economic order quantity- ABC analysis. Safety in construction – Safety measures in different stages of construction – implementation of safety programme.	7	20
VI	Construction procedures: different methods of construction – types of contract – Tenders – prequalification procedure - earnest money deposit – contract document – General and important conditions of contract - measurement and measurement book - Inspection and quality control - need, principles and stages. Basics of Total Quality Management	8	20
END SEMESTER EXAMINATION			

QUESTION PAPER PATTERN (End semester examination)

Maximum Marks :100

Exam Duration: 3 Hrs

Part A -Module I & II : 2 questions out of 3 questions carrying 15 marks each

Part B - Module III & IV: 2 questions out of 3 questions carrying 15 marks each

Part C - Module V & VI : 2 questions out of 3 questions carrying 20 marks each

Note : 1.Each part should have at least one question from each module

2.Each question can have a maximum of 4 subdivisions (a, b, c, d)