IV Year II Semester	L	T	P	C
Code: 17CE802	3	1	0	3

CONSTRUCTION TECHNOLOGY AND MANAGEMENT

Course Learning Objectives

The objectives of this course are:

1. To introduce to the student the concept of project management including network drawing and monitoring
2. To introduce various equipments like earth moving equipment, trucks and handling equipment, aggregate production and construction equipment and machinery, related to constriction.
3. To introduce the importance of safety in construction projects

Course Outcomes

Upon the successful completion of this course, the students will be able to:

1. Gain knowledge of project management, scheduling.
2. Gain knowledge of PERT and can able to do cost analysis.
3. Understand the functioning of various earth moving equipment
4. Gain knowledge related to cranes, tractors, bulldozers etc.,
5. Gain knowledge related to Construction equipment
6. Gain knowledge related to construction methods

SYLLABUS

UNIT-I

Construction project management and its relevance – qualities of a project manager – project planning – coordination –scheduling - monitoring – bar charts – milestone charts – critical Path Method – Applications

UNIT-II

Project Evaluation and Review Technique – cost analysis - updating – crashing foroptimum cost – crashing for optimum resources – allocation of resources

UNIT-III

Construction equipment – economical considerations – earthwork equipment –Trucks and handling equipment – rear dump trucks – capacities of trucks and handling equipment – calculation of truck production – compaction equipment – types of compaction rollers

UNIT-IV

Hoisting and earthwork equipment – hoists – cranes – tractors - bulldozers – graders – scrapers– draglines - clamshell buckets

UNIT -V Concreting equipment – crushers – jaw crushers – gyratory crushers – impact crushers – selection of crushing equipment - screening of aggregate – concrete mixers – mixing and placing of concrete – consolidating and finishing

UNIT-VI

Construction methods – earthwork – piling – placing of concrete – form work –fabrication and erection – quality control and safety engineering

Text Books:

1. Construction Planning Equipment and Methods, Peurifoy and Schexnayder , Shapira,Tata Mcgrawhill
2. Construction Project Management Theory and Practice, Kumar NeerajJha (2011),Pearson.
3. Construction Technology, Subir K. Sarkar and SubhajitSaraswati, Oxford University press.
4. Project Planning and Control with PERT and CPM, B. C. Punamia and K KKhandelwal, Laxmi Publications, Pvt Ltd. Hyderabad.

References:

1. Construction Project Management - An Integrated Approach, Peter Fewings , Taylor and Francis
2. Construction Management Emerging Trends and Technologies, Trefor Williams, Cengage learning.
3. Hand Book of Construction Management, P. K. Joy, Trinity Press Chennai, New Delhi.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	2	1	3	1	3	1	1	3	3	2	2	2	2	2
CO2	1	3	1	1	1	3	2	3	3	2	3	3	2	1	2
CO3	1	1	1	1	2	3	2	3	2	3	2	3	1	2	2
CO4	1	2	1	2	2	2	2	2	1	2	1	2	2	1	2
CO5	1	1	2	1	2	1	2	1	2	1	2	1	2	2	1
CO6	1	1	1	2	2	1	2	1	2	2	1	2	1	2	1