



**ACADEMIC – GRADUATE STUDIES AND RESEARCH DIVISION**  
**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI-HYDERABAD**  
**CAMPUS**

**FIRST SEMESTER 2021-2022**

**Course Handout Part II**

**Date: 12/08/2021**

In addition to part I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

**Course No.** : CE G538  
**Course Title** : **Project Planning and Management**  
**Instructor in charge** : **Dr. Bahurudeen A**

**Description :**

Foundations of project management: project life cycle, environment, selection, proposal, scope, ToR standardization; work break down structure; network scheduling: critical path method (CPM), programme evaluation and review technique (PERT), planning and scheduling of activity networks; resource planning; allocation, schedule compression, precedence diagram, generalized activity network; estimation of project cost, earned value analysis, monitoring project progress; quality assurance; contract administration and management; mechanization and advanced process control; quality audit; milestones, bonus and penalties; dispute resolution; capacity building and skill development.

**1. Scope and Objective of the Course:**

The course deals with the fundamentals of construction planning and management techniques. Moreover, various planning and scheduling methods for effective assessment, estimation, control and systematic monitoring on the construction projects are discussed in detail. In addition, contracts and specifications related to Indian as well as international scenarios are also described, which is another imperative dimension of construction projects.

**2. Text Books and Reference Books:**

- B1. Saleh Mubarak (2010), Construction Project Scheduling and Control. John Wiley & Sons, Inc., Hoboken, New Jersey. 2<sup>nd</sup> Edition.  
B1. Chitkara, K.K. Construction Project Management: Planning, Scheduling and Control, Tata McGraw-Hill Publishing Company, New Delhi, 1998  
B3. Chris Hendrickson and Tung Au, Project Management for Construction – Fundamental Concepts for Owners, Engineers, Architects and Builders, Prentice Hall, Pittsburgh, 2000  
B4. Kumar Neeraj Jha, Construction Project Management, Pearson India publications

**3. Course Plan:**

No. of Lectures	Learning Objective	Topics to be covered
1-6	To An overview foundations of project management:	Introduction. General discussion on few prominent construction planning and management. Project life cycle, environment, selection, proposal, scope. Salient features.
7-21	To study elements of Planning and scheduling	Work break down structure, Gantt charts or Bar charts, Basic Network, Arrow Networks, Node, networks, Lags and Leads, Graphical evaluation and review technique (GERT), Linear scheduling method (LSM), Network scheduling: critical path method (CPM), Programme evaluation and review technique (PERT), Precedence



		diagram.
22-28	To evaluate components of resource planning	Different resources (Part1: Materials resources for infra projects. Part 2: Equipment for infra projects), Resource levelling, Fundamentals, Allocation, schedule compression (Time-cost trade of analysis), generalized activity network.
29-35	To Estimate project cost and monitoring project progress	Earned value analysis, Fundamentals of estimation of construction project, Methods, Quality assurance; Mechanization and advanced process control; quality audit; milestones, bonus and penalties; dispute resolution; capacity building and skill development
36-42	To write salient features contract and Specifications	Fundamental of contract and specifications. Indian Scenario administration and management
Total = 42		

4. **Reading Assignments:** Will be given as & when necessary.

5. **Evaluation Scheme:**

Component	Duration	Weightage (%)	Date & Time	Remarks
Mid Semester Test	90 minutes	30	To be announced	Open Book
Term Project	-	15	-	Open book
Assignments	-	15	-	Open Book
Comprehensive Exam	2 hours	40	17/12 AN	Closed book

6. Chamber Consultation Hour: *Wednesday 6:00 pm-6:50 pm*

7. Reading Assignments will be given as and when necessary

8. Notice: Notice concerning this course will be displayed on Google Classroom.

9. **Academic Honesty and Integrity Policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable

**Instructor-in-charge**  
**CE G538**