

GOVERNMENT POLYTECHNIC, BALANGIR

DEPARTMENT OF CIVIL ENGINEERING

LESSION PLAN

SESSION 2023-24

SUBJECT: CONSTRUCTION MANAGEMENT	BRANCH: CIVIL ENGINEERING
NAME OF THE FACULTY: DOLESWARI CHHATRIA	SEMESTER: 6 TH

SL NO.	CHAPTER	HOURS	LECTURE NO.	TOPIC TO BE COVERED
1	CHAPTER 01	04		INTRODUCTION TO CONSTRUCTION MANAGEMENT
			1	Aims and objectives of construction management.
			2	Functions of construction management.
			3	The construction team components owner, engineer, architect, contractor-their functions and interrelationship and jurisdiction
			4	Resources for construction management-men, machines, materials, money
2	CHAPTER 02	07		CONSTRUCTIONAL PLANNING
			1	Importance of Construction Planning, Developing work breakdown structure for construction work
			2	Construction Planning Stages-Pre-tender stage, post-tender stage
			3	Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works
			4	Preparation of schedules for labour materials, machinery, finance for small works
			5	Limitation of Bar charts
			6	Construction scheduling by network techniques-definition of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis
			7	Estimation of time and critical path, application of PERT and CPM techniques in sample construction works
3	CHAPTER 03	04		MATERIALS AND STORES MANAGEMENT
			1	Classification of Stores-storage of stock.
			2	Classification of Stores-storage of stock.
			3	Issue of materials-indent, invoice, bin card
			4	Issue of materials-indent, invoice, bin card
4	CHAPTER 04	05		CONSTRUCTION SITE MANAGEMENT
			1	Job Lay out-Objectives, Review plans

			2	Specifications, Lay out of equipments.
			3	Location of equipment, organizing labour at site.
			4	Job lay out for different construction sites
			5	Principle of storing material at site.
5	CHAPTER 05	06		CONSTRUCTION ORGANIZATION
			1	Introduction – Characteristics, Structure, importance.
			2	Organization types-line and staff, functions and their characteristics
			3	Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task.
			4	Leadership-necessity, styles of leadership, role of leader
			5	Human relations-relations with subordinates, peers, Supervisors, characteristics of group behaviour, mob psychology, handling of grievances, absenteeism, labour welfare.
			6	Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts
6	CHAPTER 06	06		CONSTRUCTION LABOUR AND LABOUR MANAGEMENT
			1	Preparing Labour schedule
			2	Essential steps for optimum labour output
			3	Labour characteristics
			4	Wages & their payment
			5	Labour incentives
			6	Motivation- Classification of motives, different approaches to motivation.
7	CHAPTER 07	06		EQUIPMENT MANAGEMENT
			1	Preparing the equipment schedule
			2	Identification of different alternative equipment
			3	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
			4	Inspection and testing of equipment
			5	Inspection and testing of equipment
			6	Equipment maintenance

8	CHAPTER 08	05		QUALITY CONTROL
			1	Concept of quality in construction
			2	Quality Standards- during construction
			3	Quality Standards-after construction
			4	destructive & non-destructive methods
			5	destructive & non-destructive methods
9	CHAPTER 09	06		MONITORING PROGRESS
			1	Programme and progress of work
			2	Programme and progress of work
			3	Work study
			4	Work study
			5	Analysis and control of physical and financial progress corrective measures.
			6	Analysis and control of physical and financial progress corrective measures.

10	CHAPTER 10	05		SAFETY MANAGEMENT IN CONSTRUCTION
			1	Importance of safety
			2	causes and effects of accidents in construction works
			3	Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
			4	Development of safety consciousness
			5	Safety legislation- Workman's compensation act, contract labour act.
11	CHAPTER 11	06		ROLE OF VULNERABILITY ATLAS OF INDIA IN CONSTRUCTION PROJECTS
			1	Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms.
			2	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures
			3	Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures
			4	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction.

			5	Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards
			6	Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents.