

GOVERNMENT POLYTECHNIC, SAMBALPUR (RENGALI)

DEPARTMENT OF CIVIL ENGINEERING

NAME OF THE FACULTY: Miss. Sagarika Patel (PTGF) , Civil Engineering

**LESSON PLAN OF CONSTRUCTION MANAGEMENT (TH-2) FOR 6TH SEM SUMMER-2024 w.e.f.
16.01.2024**

WEEK NO.	TOPIC TO BE COVERED	PERIODS ASSIGNED PER TOPIC	PERIODS AVAILABLE PER WEEK
W-1	1. Introduction To Construction Management 1.1 Aims and objectives of construction management. 1.2 Functions of construction management. 1.3 The construction team components owner, engineer, architect, contractor-their functions and interrelationship and jurisdiction. 1.4 Resources for construction management-men, machines, materials, money	4	4
W-2	2. Constructional Planning 2.1 Importance of Construction Planning 2.2 Developing work breakdown structure for construction work 2.3 Construction Planning stages-Pre-tender stage, Post-tender stage. 2.4 Construction	3	4
W-3	2.5 Preparation of schedules for labour materials, machinery, finance for small works 2.6 Limitation of Bar charts 2.7 Construction scheduling by network techniques-definition of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time and critical path, application of PERT and CPM techniques in sample construction works.	4	4
W-4	3. Materials and Stores Management 3.1 Classification of Stores-storage of stock. 3.2 Issue of materials-invoice, bin card	4	4
W-5	4. Construction Site Management 4.1 Job Lay out-Objectives, Review plans, specifications, Lay out of equipments. 4.2 Location of equipment, organizing labour at site. 4.3 Job lay out for different construction s	4	4
W-6	5. Construction Organization: 5.1 Introduction – Characteristics, Structure, importance. 5.2 Organization types-line and staff, functions and their characteristics 5.3 Principles of organization- meaning and significance of terms-control, authority, responsibility, job & task. 5.4 Leadership-necessity, styles of leadership, role of leader	4	4
W-7	5.5 Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare. 5.6 Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts	4	4

W-8	6. Construction Labour and Labour Management: 6.1 Preparing Labour schedule 6.2 Essential steps for optimum labour output 6.3 Labour characteristics 6.4 Wages & their payment 6.5 Labour incentives 6.6 Motivation- Classification of motives, different approaches to motivation	3	4
W-9	7. Equipment Management 7.1 Preparing the equipment schedule 7.2 Identification of different alternative equipment 7.3 Importance of Owning & operating costs in making	4	4
W-10	7.4 Inspection and testing of equipment 7.5 Equipment maintenance	4	4
W-11	8. Quality Control 8.1 Concept of quality in construction 8.2 Quality Standards- during construction, after construction, destructive & non destructive methods.	3	4
W-12	9. Monitoring Progress 9.1 Programme and progress of work 9.2 Work study 9.3 Analysis and control of physical and financial progress corrective measures	3	4
W-13	10. Safety Management In Construction 10.1 Importance of safety 10.2 causes and effects of accidents in construction works 10.3 Safety measures in worksites for excavation, 10.4 Development of safety consciousness 10.5 Safety legislation- Workman's compensation act, contract labour actscaffolding, formwork, fabrication and erection, demolition.	4	4
W-14	11. Role of Vulnerability Atlas of India in construction projects 11.1 Introduction to Vulnerability Atlas of India Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms. 11.2 Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structure	3	4
W-15	11.3 Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures. 11.4 Flood hazard and vulnerability, Flood hazard and Flood prone areas	4	4
W-16	11.5 Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards. 11.6 Housing vulnerability risk tables and usage of vulnerability atlas of India. Inclusion of vulnerability atlas in Tender documents	4	4

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Signature of Concerned Faculty
Department of Civil Engineering

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Department of Civil Engineering