

<b>LESSON PLAN: (CONSTRUCTION MANAGAMENT)</b>		
<b>Discipline :</b>	<b>CIVIL ENGINEERING</b>	
<b>Faculty :</b>	<b>SUBHENDU NAIK</b>	
<b>Semester :</b>	<b>3RD</b>	
<b>Duration :</b>	<b>15 WEEKS (15<sup>th</sup> September 2022 to 22<sup>nd</sup> December 2022)</b>	
<b>Work Load :</b>	<b>Lecture :</b>	<b>4 Lectures per week (50 minutes per Class)</b>
<b>Week</b>	<b>Week Day</b>	<b>Theory</b>
1 <sup>st</sup>	1 <sup>st</sup>	Aims and objectives of construction management
	2 <sup>nd</sup>	Functions of construction management
	3 <sup>rd</sup>	The construction team components-owner,engineer,architect,contractor-their functions and interrelationship and jurisdiction
	4 <sup>th</sup>	Resources for construction management-men,machines,materials,money
2 <sup>nd</sup>	5 <sup>th</sup>	Importance of Construction Planning
	6 <sup>th</sup>	Developing work breakdown structure for construction work
	7 <sup>th</sup>	Construction Planning stages-Pre-tender stage, Post-tender stage.
	8 <sup>th</sup>	Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works.
3 <sup>rd</sup>	9 <sup>th</sup>	Preparation of schedules for labour materials,machinery, finance for small works
	10 <sup>th</sup>	Limitation of Bar charts Construction scheduling by network techniques-defination of terms ,
	11 <sup>th</sup>	PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis,
	12 <sup>th</sup>	estimation of time and critical path
4 <sup>th</sup>	13 <sup>th</sup>	application of PERT and CPM techniques in sample construction works.
	14 <sup>th</sup>	Classification of Stores-storage of stock
	15 <sup>th</sup>	Issue of materials-indent , invoice, bin card
	16 <sup>th</sup>	Job Lay out-Objectives, Review plans
5 <sup>th</sup>	17 <sup>th</sup>	specifications, Lay out of equipments
	18 <sup>th</sup>	Location of equipment, organizing labour at site
	19 <sup>th</sup>	Job lay out for different construction sites.
	20 <sup>th</sup>	Principle of storing material at site.
6 <sup>th</sup>	21 <sup>st</sup>	Introduction – Characteristics, Structure, importance.
	22 <sup>nd</sup>	Organization types-line and staff, functions and their characteristics
	23 <sup>rd</sup>	Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task.
	24 <sup>th</sup>	Leadership-necessity, styles of leadership, role of leader
7 <sup>th</sup>	25 <sup>th</sup>	Human relations-relations with subordinates, peers, Supervisors
	26 <sup>th</sup>	characteristics of group behavior,
	27 <sup>th</sup>	mob psychology, handling of grievances, absenteeism, labour welfare.
	28 <sup>th</sup>	Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts.
8 <sup>th</sup>	29 <sup>th</sup>	Preparing Labour schedule
	30 <sup>th</sup>	Essential steps for optimum labour output
	31 <sup>st</sup>	Labour characteristics
	32 <sup>th</sup>	Wages & their payment
9 <sup>th</sup>	33 <sup>th</sup>	Labour incentives
	34 <sup>th</sup>	Motivation- Classification of motives, different approaches to motivation
	35 <sup>th</sup>	Preparing the equipment schedule
	36 <sup>th</sup>	Identification of different alternative equipment
10 <sup>th</sup>	37 <sup>th</sup>	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
	38 <sup>th</sup>	Inspection and testing of equipment

	39 <sup>th</sup>	Equipment maintenance
	40 <sup>th</sup>	Concept of quality in construction Quality Standards- during construction
11 <sup>th</sup>	41 <sup>th</sup>	Quality Standards -after construction
	42 <sup>th</sup>	Quality Standards-destructive & non destructive methods.
	43 <sup>th</sup>	Programme and progress of work
	44 <sup>th</sup>	Work study
12 <sup>th</sup>	45 <sup>th</sup>	Analysis and control of physical progress corrective measures
	46 <sup>th</sup>	Importance of Safety Management In Construction
	47 <sup>th</sup>	causes and effects of accidents in construction works
	48 <sup>th</sup>	Safety measures in worksites for excavation, scaffolding formwork
13 <sup>th</sup>	49 <sup>th</sup>	Safety measures in worksites for fabrication and erection, demolition.
	50 <sup>th</sup>	Development of safety consciousness
	51 <sup>th</sup>	Safety legislation- Workman's compensation act, contract labour act.
	52 <sup>th</sup>	Introduction to Vulnerability Atlas of India, Concepts of natural hazards
14 <sup>th</sup>	53 <sup>th</sup>	Introduction to disasters and vulnerability profile of India. Definition of disaster related terms.
	54 <sup>th</sup>	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones
	55 <sup>th</sup>	earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures
	56 <sup>th</sup>	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction
15 <sup>th</sup>	57 <sup>th</sup>	Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide
	58 <sup>th</sup>	Thunderstorm incidence maps, Measures against Tsunami hazards.
	59 <sup>th</sup>	Housing vulnerability risk tables and usage of vulnerability atlas of India,
	60 <sup>th</sup>	Inclusion of vulnerability atlas in Tender documents.