

## Lesson Plan

Name of the Faculty: Ajay Sharma

Discipline: CIVIL ENGINEERING

Semester: 5<sup>th</sup>

Subject: PROJECT PLANNING & MANAGEMENT (CE-309N)

Work Load (Lecture/Practical) per week (in hours): Lectures- , Practicals-

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	UNIT-I Construction Management Significance	1 <sup>st</sup>	
	2 <sup>nd</sup>	, objectives and functions of construction management		
	3 <sup>rd</sup>	, types of constructions, resources for construction industry,		
	4 <sup>th</sup>	stages for construction, construction team,		
2 <sup>nd</sup>	5 <sup>th</sup>	stages for construction, construction team	2 <sup>nd</sup>	
	6 <sup>th</sup>	engineering drawings.		
	7 <sup>th</sup>	Construction Contracts & Specifications		
	8 <sup>th</sup>	, Introduction types of contracts,		
3 <sup>rd</sup>	9 <sup>th</sup>	contract document,	3 <sup>rd</sup>	
	10 <sup>th</sup>	specifications, important conditions of contract, arbitration.		
	11 <sup>th</sup>	UNIT-II Construction Planning Introduction,		
	12 <sup>th</sup>	work breakdown structure,		
4 <sup>th</sup>	13 <sup>th</sup>	stages in planning-pre-tender stages,	4 <sup>th</sup>	
	14 <sup>th</sup>	contract stage, scheduling, scheduling by bar charts,		
	15 <sup>th</sup>	preparation of material, equipment,		
	16 <sup>th</sup>	labour and finance schedule,		
5 <sup>th</sup>	17 <sup>th</sup>	milestone charts.	5 <sup>th</sup>	
	18 <sup>th</sup>	limitation of bar charts,		
	19 <sup>th</sup>	Construction Organization		
	20 <sup>th</sup>	Principles of Organization,.		
6 <sup>th</sup>	21 <sup>st</sup>	communication,	6 <sup>th</sup>	
	22 <sup>nd</sup>	leadership and human relations,		
	23 <sup>rd</sup>	types of Organizations,		
	24 <sup>th</sup>	Organization for construction firm,		

		site organization,		
<b>7<sup>th</sup></b>	<b>25<sup>th</sup></b>	temporary services	<b>7<sup>th</sup></b>	
	<b>26<sup>th</sup></b>	, job layout		
	<b>27<sup>th</sup></b>	UNIT-III Network Techniques in Construction Management-I:		
	<b>28<sup>th</sup></b>	CPM Introduction, network techniques		
<b>8<sup>th</sup></b>	<b>29<sup>th</sup></b>		<b>8<sup>th</sup></b>	
	<b>30<sup>th</sup></b>	, work break down,		
	<b>31<sup>st</sup></b>	classification of activities		
	<b>32<sup>nd</sup></b>	, rules for developing networks,		
<b>9<sup>th</sup></b>	<b>33<sup>rd</sup></b>	network development logic of network,	<b>9<sup>th</sup></b>	
	<b>34<sup>th</sup></b>	allocation of time to various activities,		
	<b>35<sup>th</sup></b>	Fulkerson's rule for numbering events, network analysis ,		
	<b>36<sup>th</sup></b>	determination of project schedules, critical path		
<b>10<sup>th</sup></b>	<b>37<sup>th</sup></b>	, ladder construction, float in activities,	<b>10<sup>th</sup></b>	
	<b>38<sup>th</sup></b>	shared float, updating, resources allocation		
	<b>39<sup>th</sup></b>	, resources smoothing and		
	<b>40<sup>th</sup></b>	resources leveling		
<b>11<sup>th</sup></b>	<b>41<sup>st</sup></b>	. Network Techniques in Construction Management-II	<b>11<sup>th</sup></b>	
	<b>42<sup>nd</sup></b>	-PERT Probability concept in network,		
	<b>43<sup>rd</sup></b>	optimistic time		
	<b>44<sup>th</sup></b>	, pessimistic time,		
<b>12<sup>th</sup></b>	<b>45<sup>th</sup></b>	most likely time, lapsed time, deviation,.	<b>12<sup>th</sup></b>	
	<b>46<sup>th</sup></b>	variance, standard deviation,		
	<b>47<sup>th</sup></b>	slack critical path		
	<b>48<sup>th</sup></b>	, probability of achieving completion time		
<b>13<sup>th</sup></b>	<b>49<sup>th</sup></b>	, central limit theorem	<b>13<sup>th</sup></b>	
	<b>50<sup>th</sup></b>	UNIT-IV Cost-Time Analysis Cost versus time, direct cost,.		
	<b>51<sup>st</sup></b>	indirect cost, total project cost and optimum duration,		
	<b>52<sup>nd</sup></b>	contracting the network for cost optimization,		
<b>14<sup>th</sup></b>	<b>53<sup>rd</sup></b>	steps in time cost optimization, illustrative examples.	<b>14<sup>th</sup></b>	
	<b>54<sup>th</sup></b>	Inspection & Quality Control Introduction,		

	<b>55<sup>th</sup></b>	principles of inspection,		
	<b>56<sup>th</sup></b>	enforcement of specifications,		
<b>15<sup>th</sup></b>	<b>57<sup>th</sup></b>	stages in inspection and quality control	<b>15<sup>th</sup></b>	
	<b>58<sup>th</sup></b>	, testing of structures,		
	<b>59<sup>th</sup></b>	statistical analysis		
	<b>60<sup>th</sup></b>	statistical analysis		