



**MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO**  
**Department of Civil Engineering**




**LESSON PLAN**

<b>COURSE TITLE: Construction Planning &amp; Management</b>		<b>COURSE CODE: CE437</b>	<b>CREDIT HOURS: 03</b>	<b>MINIMUM CONTACT HOURS: 48</b>
<b>COURSE INSTRUCTOR: Prof. Dr. Tauha Hussain Ali (D) /Dr. Ali Raza Khoso (A+B+C+D) /Engr. Muhammad Saleem Raza (B)</b>				
<b>Batch: 19CE</b>	<b>Semester 8<sup>TH</sup></b>	<b>Semester Starting Date: 03-07-2023</b>	<b>Semester Suspension Date: 20-10-2023</b>	
<b>COURSE LEARNING OUTCOMES:</b>				
<b>CLOs</b>	<b>Course Learning Outcomes</b>	<b>Taxonomy Level</b>	<b>PLOs</b>	
1.	APPLY the knowledge of deterministic and probabilistic models for project planning and scheduling.	C3	11	
2.	APPLY the knowledge of value engineering and construction economics for appraisal of different construction projects	C3	11	
<b>LESSON CONTENTS AND ASSOCIATED CLO(s)</b>				
<b>Contents</b>	<b>CLO No.</b>	<b>Marks Assigned</b>	<b>Delivery Methods</b>	<b>Assessment Methods (Marks)</b>
<p><b>Introduction and basic overview of Construction Management</b></p> <ul style="list-style-type: none"> <li>• Introduction and overview of the subject</li> <li>• Construction industry, players and their roles, organizational hierarchy</li> <li>• Types of Construction Projects, Construction Economy, and Civil Engineer</li> <li>• Skills and responsibilities of construction managers</li> <li>• Introduction to Information and Knowledge Management</li> </ul> <p><b>Project Planning &amp; Scheduling</b></p> <p><b>a) Bar Chart/Gantt Chart/WBS &amp; Resource Leveling</b></p> <p>Introduction to scheduling techniques, Work Breakdown Structure and use of software, Gantt Chart, Introduction to Resource Leveling, Introduction to Various construction industry software</p> <p><b>b) Deterministic Techniques</b></p> <p>Critical Path Method using Activity on Arrow (A.O.A) Diagram, Critical Path Method using Activity on Node (A.O.N) Diagram, Precedence Diagram Method (PDM)</p> <p><b>a) Probabilistic Techniques</b></p> <p>Project Evaluation and Review Technique (PERT), Graphical Evaluation and Review Technique (GERT), Determining Mean, Variance, Standard deviation, Probability and Beta Distribution.</p> <p><b>No. of Lectures: 26</b></p>	1	54	<ul style="list-style-type: none"> <li>• Class Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Class Test-I (05)</li> <li>• Assignment-I (05)</li> <li>• Mid semester Exam (20)</li> <li>• Final Exam (24)</li> </ul>

<p><b>Value Engineering and construction economics</b> Introduction to Value Engineering and its' phases, Life cycle costing, Introduction to engineering economics, Economics Aspect for the Construction Industry, Time Value of Money, Project financial appraisal &amp; Methods of economic comparison, Developing the cash flow diagram for the projects, Construction Cost Control</p> <p><b>Construction Equipment and Management</b> Importance of Equipment Management in Construction, Developments in Construction Equipment, Types of Construction Equipment, Selection of Construction Equipment &amp; Factors influencing the productivity of equipment, Equipment economics</p> <p><b>No. of Lectures: 22</b></p>	2	46	<ul style="list-style-type: none"> <li>• Class Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Class Test-II (05)</li> <li>• Assignment-II (05)</li> <li>• Final Exam (36)</li> </ul>
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**ASSESSMENT DETAILS**

S. No.	Assessment Activities	Marks	Activities		CLO(s) to be assessed
1	Class Test/Assignment/Project Design/Presentation/Quiz/Field Report	20	Class test(s)	2	1, 2
			Assignment(s)	2	1, 2
2	Mid Semester Exam	20	1		1
3	Final Semester Exam	60	1		1, 2

<p>Prepared by: <b>Prof. Dr. Tauha Hussain Ali</b></p> <p style="text-align: center;"></p> <p>Signature:</p> <p>Dated: 08-04-2023</p>	<p>Reviewed by: <b>Curriculum Review Committee</b></p> <p style="text-align: center;"></p> <p>Signature:</p> <p>Dated: 18-04-2023</p>	<p>Approved by: <b>Chairman, CED</b></p> <p style="text-align: center;"></p> <p>Signature:</p> <p>Dated: 18-04-2023</p>
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