



# MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO

## Department of Civil Engineering

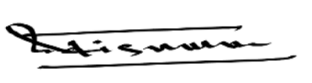


### LESSON PLAN

COURSE TITLE: <b>Quantity Surveying &amp; Estimation</b>		COURSE CODE: <b>CE341</b>	CREDIT HOURS: <b>03</b>	MINIMUM CONTACT HOURS: <b>48</b>	
COURSE INSTRUCTOR: <b>Prof. Dr. Nafees Ahmed Memon(D)/Engr. Abdul Raqeeb(A+B+C)</b>					
Batch:20 <b>CE</b>	Semester: <b>6<sup>th</sup></b>	Semester Starting Date: 03-07-2023	Semester Suspension Date: 20-10-2023		
<b>COURSE LEARNING OUTCOMES:</b>					
CLO	Description	Taxonomy Level	Associated PLO		
1	SOLVE the numerical related to quantities of various civil engineering works.	C3	2		
2	ANALYZE cost of construction project and discuss contract award procedure	C4	4		
<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>
<b>INTRODUCTION AND QUANTITY CALCULATION OF VARIOUS CIVIL ENGINEERING WORKS:</b> <ul style="list-style-type: none"><li>• Introduction and overview of the subject</li><li>• Significance of cost estimation in construction industry</li><li>• Estimate and its’ types</li><li>• Role of quantity surveyor at different organizational levels</li><li>• Importance of preliminary estimate in administrative approval of public sector projects</li><li>• Main requirements and factors to be considered while preparing a detailed estimate</li><li>• Scope of civil engineering works and its’ impact on cost estimate</li><li>• Preliminary estimate of various buildings</li><li>• Load bearing structures (Quantity calculation using Separate wall and Center line methods)</li><li>• R.C.C structures (Quantity calculation related to Column, Beam, Slab, Staircase and Retaining wall)</li><li>• Road works (Lead and Lift, Calculation of earthwork using different methods)</li><li>• Concepts related to quantity calculation of bridges and steel structures</li><li>• Quantity calculation of sewerage and water supply works</li></ul> <b>➤ No. of lectures: 33</b>		<b>1</b>	70	<ul style="list-style-type: none"><li>• Discussion</li><li>• Class practice</li></ul>	<ul style="list-style-type: none"><li>• Sessional Activity I: Class Test/Quiz (07)</li><li>• Sessional Activity II: Assignment/ Project (07)</li><li>• Mid semester Exam (20)</li><li>• Final Exam (36)</li></ul>

<b>RATE ANALYSIS, BILL OF QUANTITIES (BOQ), TENDERING &amp; AWARD OF WORKS</b> <ul style="list-style-type: none"> <li>• Task or Out-turn work</li> <li>• Importance of Rate Analysis (RA)</li> <li>• Significance of productivity calculation in RA</li> <li>• Factors influencing RA</li> <li>• Specifications of various items in construction</li> <li>• Schedule of rates in public sector</li> <li>• RA of different items</li> <li>• Preparing BOQ, Maintaining Measurement Book (MB)</li> <li>• Types of contracts</li> <li>• Preparation of tender documents and evaluation of bids</li> <li>• Security deposit, Earnest money</li> <li>• Valuation of buildings and its' purpose</li> <li>• Procedure for award of works in public sector</li> </ul> <p>➤ <b>No. of lectures: 15</b></p>	2	30	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Class practice</li> </ul>	<ul style="list-style-type: none"> <li>• Sessional Activity III: Class Test/Quiz (03)</li> <li>• Sessional Activity IV: Assignment/Project (03)</li> <li>• Final Exam (24)</li> </ul>
---	---	----	--	---

#### ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities	CLO(s) to be assessed
1	Sessional	20	Class Test/ Quiz/ Assignment/Project	4
2	Mid Semester Exam	20	1	1
3	Final Semester Exam	60	1	1, 2

Prepared by: <b>Prof. Dr. Nafees Ahmed Memon</b>  Signature : Dated: 13-04-2023	Reviewed by: <b>Curriculum Review Committee</b>  Signature: Dated: 18-04-2023	Approved by: <b>Chairman, CED</b>  Signature: Dated: 18-04-2023
---	---	---