



MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO

Department of Civil Engineering

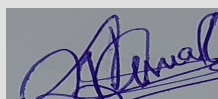
LESSON PLAN

COURSE TITLE: Steel Structures		COURSE CODE: CE316	CREDIT HOURS: 03	MINIMUM CONTACT HOURS: 48
COURSE INSTRUCTOR: Engr. Azizullah Jamali (C)/Engr. Fahad Ali Shaikh (A+B+D)				
Batch: 21CE	Semester: 6th	Semester Starting Date: 15-07-2024	Semester Suspension Date: 06-11-2024	
COURSE LEARNING OUTCOMES:				
CLO	Description	Taxonomy level	PLO	
1	DISCUSS the basic concepts related to design of steel structures along with design loads.	C2	1	
2	ANALYZE and design main structural members and connections of steel structures	C4	3	
LESSON CONTENTS AND ASSOCIATED CLO(s)				
Contents	CLO	Marks	Delivery Methods	Assessment Methods (Marks)
DESIGN METHODS & SPECIFICATIONS; DESIGN LOADS & ANALYSIS - Properties of steel, variation of stress-strain diagram with different percentage of carbon. - Advantages and disadvantages of steel structures. - Various steel sections used in the design of steel structures. - Introduction to AISC steel construction manual - Basic concepts and specification related to Allowable Stress Design (ASD) and Load Resistance Factor Design (LRFD) methods. - Use of steel table. - Different loads considered in the design such as dead load, live load, wind load, earthquake load and traffic load on bridges. - Load calculation and analysis of main structural members. No. of Lectures: 13	1	25	<ul style="list-style-type: none"> • Lectures • Discussions 	<ul style="list-style-type: none"> • Class Test-I (05) • Mid semester Exam (20)
DESIGN OF STRUCTURAL MEMEBERS: - Design of floor beams and girders with different loading conditions - Design of beam with additional flange plates. - Web buckling and web crippling in steel beams. - Euler's column theory, slenderness ratio, effective length, buckling of columns. - Design of column using different steel sections. - Design of plate girder, Significance of stiffeners in plate girder design. - Design of purlin, Types and strength of steel connections, significance of steel connection design. - Significance of truss design in steel structures and design of tension member - Fabrication and erection methods used in the construction of steel structures. No. of Lectures: 35	2	75	<ul style="list-style-type: none"> • Lectures • Discussions • Design practice 	<ul style="list-style-type: none"> • Class Test-II (05) • Assignment (10) • Final Exam (60)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities	CLO(s) to be assessed	
1	Sessional	20	Class Test(s)	02	1, 2
			Assignment(s)	01	2
2	Mid Semester Exam	20	1		1
3	Final Semester Exam	60	1		2

Prepared by: Engr Azizullah Jamali



Signature:

Dated: 27-05-2024

Reviewed by: **Curriculum Review Committee**



Signature:

Dated: 30-05-2024

Approved by: **Chairman, CED**



Signature:

Dated: 30-05-2024