



**MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY
JAMSHORO**

Department of Civil Engineering




LESSON PLAN

COURSE TITLE: Applied Physics		COURSE CODE: CE109	CREDIT HOURS: 03	MINIMUM CONTACT HOURS: 48	
COURSE INSTRUCTOR: Engr. Maroosha Iarik (A+B+C+D)					
Batch: 23CE	Semester: 1 st	Semester Starting Date: 15-08-2023	Semester Suspension Date: 24-11-2023		
COURSE LEARNING OUTCOMES:					
CLO No.	Description	Taxonomy level	Associated PLO		
1	SOLVE the two-dimensional Force System and Equilibrium conditions by applying the basic principles of statics.	C4	1		
2	APPLY fundamental concepts of kinetics and kinematics to the analysis of a body when it is subjected to different types of motion	C3	1		
3	UNDERSTAND fundamental concepts of basic electrical and mechanical engineering	C2	1		
LESSON CONTENTS AND ASSOCIATED CLO(s)					
Contents		CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
<ul style="list-style-type: none"> • Introduction: <ul style="list-style-type: none"> - Concept of mass, force, time and space, - Scalar and Vector quantities • System of Forces: <ul style="list-style-type: none"> - Force types, characteristics - system of forces - resolution and composition of force system by analytical and graphical method, - Concept of moment of force, - Principle of Transmissibility, - Principle of Moment • Equilibrium of Rigid Bodies: <ul style="list-style-type: none"> - Equilibrium and its Conditions - Free body diagram and its application • Friction: <ul style="list-style-type: none"> - Concepts and laws of friction - Friction on horizontal and inclined plane - Angle and co-efficient of friction <p>No. of lectures: 28</p>		1	59	<ul style="list-style-type: none"> • Class Lectures • Discussion 	<ul style="list-style-type: none"> • Assignment-I (05) • Class test-I (04) • Mid semester Exam (30) • Final Exam (20)

<ul style="list-style-type: none"> • Kinematics: <ul style="list-style-type: none"> - Newton's laws of motion - Motion under constant acceleration - Motion under variable acceleration - Projectile Motion - Simple harmonic motion <p>- No. of lectures: 11</p>	2	21	<ul style="list-style-type: none"> • Class Lectures • Discussion 	<ul style="list-style-type: none"> • Class test-II (06) • Final Exam (15)
<ul style="list-style-type: none"> • Electrical Elements and circuits: <ul style="list-style-type: none"> - Electric current - voltage - power and energy - Ohm's law - Inductance and capacitance. - Kirchoff's laws - Related problems • Basic Mechanical Concepts: <ul style="list-style-type: none"> - Fundamentals of heat transfer - Conduction and Thermal conductivity - Overall heat transfer coefficients - Practical equations - Laws of thermodynamics <p>- No. of lectures: 09</p>	3	20	<ul style="list-style-type: none"> • Class Lectures • Discussion 	<ul style="list-style-type: none"> • Assignment-II (5) • Final Exam (15)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities	CLO(s) to be assessed
1	Class test / Quiz	10	2	1, 2
2	Assignment	10	2	1, 3
3	Mid Semester Exam	30	1	1
4	Final Semester Exam	50	1	1, 2, 3

Prepared by: Engr. Maroosha larik  Signature: Dated: 10/09/2023	Reviewed by: Curriculum Review Committee  Signature: Dated: 14/10/2023	Approved by: Chairman, CED  Signature: Dated: 14/10/2023
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