MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO.

FRM-001-QSP-004
DEC.01, 2001.

TENTATIVE TEACHING PLAN (THEORY)

Department: _ Software Engineering _____ __
Name of Teacher: _Dr. Abdul Hakeem Memon_____
Subject: Applied Physics Course Code: _EL-119_____
Batch: 24BS-AI Year: 1st Semester: 1st
Semester Starting Date: 26.08.2024 Semester Suspension Date:

CLO No.	Description	Domain	Taxonomy level	Linking to PLOs
1	Define the basic concepts and fundamental laws of electrostatic and magnetism.	Cognitive	C2	2
2	Explain the comprehensive knowledge of semiconductor physics, optics and lasers	Cognitive	C2	2
3	Apply the fundamental knowledge of modern physics	Cognitive	C2	2

Sr. No	Contents of the course	Associated CLO	Lecture HRS req
01	Electrostatic, Importance of Electrostatics	CLO-1	01
02	Concept of Electric field, Coulomb's Law, Gauss' law	CLO-1	02
03	Absolute and Relative Permittivity, Electric Field Intensity	CLO-1	03
04	Electric potential and Electric potential Difference, dielectrics,	CLO-1	02
05	Capacitors and Calculation of capacitance of parallel plate capacitor	CLO-1	02
06	Concept of Magnetic field, Absolute and Relative Permeability	CLO-1	03
07	Sources of magnetic field,	CLO-1	01
08	Electromagnetic circuit, Generation of EMF	CLO-1	03
09	Faradays laws of Electromagnetic Induction, Inductance	CLO-1	04
10	Crystal Lattice, unit Cells, Energy Bands	CLO-2	02
11	Allowed and forbidden states, Characteristics of Conductors, Semi-conductors and Insulators	CLO-2	02
12	Semiconductors: Composition, purity, P type and N type semi conductive material, carrier properties and distribution	CLO-2	02
13	Carrier action: Diffusion, drift, generation, recombination. Conductivity, mobility	CLO-2	02
14	PN Junction Diode, Diode Curve	CLO-2	02
15	Forward and Reverse Biasing of a Diode	CLO-2	02
16	Bipolar junction transistor and its biasing	CLO-2	02
17	MOSFET and its biasing, Hall Effect	CLO-2	03
18	Optical Absorption, Photo Luminescence,	CLO-2	01
19	Photoconductivity, Photoelectric Effect, Lasers	CLO-3	03
20	Heat and Thermodynamics in relation to cooling of electronic devices	CLO-3	02
21	Regulated Power Supplies	CLO-3	01
22	Current and resistance,	CLO-3	01
23	Nature of light, geometric optics, laws of geometric optics.	CLO-3	01
24	Interference of light waves, diffraction, polarization	CLO-3	01
	Total Credit Hours =		**48**

Signature of Teacher Dated:
Remarks of DMRC:
Signature of Chairman/Director: Dated: