1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**APPLIED PHYSICS**	
Discipline	:	APPLIED PHYSICS	
Course Code	:	BH114	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Be able to define and explain the basics of electrostatics and electromagnetism Basics of pn junction, forward bias light-matter interaction	COGNITIVE	C2	1
3	Be able to solve and formulate basic problems of Electrostatics and Electromagnetism light-matter interaction capacitors frequency, wavelength, band gap	COGNITIVE	C3	2

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**APPLIED PHYSICS (LAB)**	
Discipline	:	APPLIED PHYSICS (LAB)	
Course Code	:	BH115	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Be able to design basic circuits on a breadboard and trainer kits	PSYCHOMOTOR	P2	9

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**CALCULUS AND ANALYTICAL GEOMETRY**	
Discipline	:	CALCULUS AND ANALYTICAL GEOMETRY	
Course Code	:	BH116	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Comprehend key Concepts of single-variable calculus, differential Calculus, Integral	COGNITIVE	C1	1

	Multivariable calculus and analytical geometry			
2	Apply the fundamentals of functions, limits and continuity, derivative, integration, Partial differentiation to engineering problems and also able to solve the geometry and coordinates system	COGNITIVE	C2	2

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**COMPUTER FUNDAMENTALS AND PROGRAMMING**	
Discipline	:	COMPUTER FUNDAMENTALS AND PROGRAMMING	
Course Code	:	CS112	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Define components of a computer system and core programming concepts.	COGNITIVE	C1	1

2	Design and Implement the solution of problems using loops, arrays, functions and structures.	COGNITIVE	C3	3

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**COMPUTER FUNDAMENTALS AND PROGRAMMING (LAB)**	
Discipline	:	COMPUTER FUNDAMENTALS AND PROGRAMMING (LAB)	
Course Code	:	CS113	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
3	Reproduce the programs Independently to compute the output and identify logical and syntax errors.	PSYCHOMOTOR	P3	5

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRONICS WORKBENCH (LAB)**	
Discipline	:	ELECTRONICS WORKBENCH (LAB)	
Course Code	:	EE119	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Distinguish various discrete electronic components, describe their use in circuits and detect any trouble in simple electronic circuits	PSYCHOMOTOR	P1	1

2	Demonstrate the ability to learn the working mechanism and gets some hands on experience on basic electronic equipment	PSYCHOMOTOR	P2	5
3	Reproduce basic electronic circuits on prototype boards using discrete electronic components	PSYCHOMOTOR	P3	5

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**FUNCTIONAL ENGLISH**	
Discipline	:	FUNCTIONAL ENGLISH	
Course Code	:	BH100	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Practice English correctly in writing and comprehension of written text.	COGNITIVE	C2	10
2	Follow English vocabulary and skills to use it in professional life in written and speaking	COGNITIVE	C3	10

	and identify common errors usually made by the learners of English as a second language.			
3	Practice English correctly in speaking with the right pronunciation.	COGNITIVE	C3	10

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**LINEAR CIRCUIT ANALYSIS**	
Discipline	:	LINEAR CIRCUIT ANALYSIS	
Course Code	:	EE110	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Explain basic concepts and terms along with related theorems, laws, and methods for analysis used in the electric circuits.	COGNITIVE	C2	1
2	USE circuit reduction techniques such as series, parallel and source conversions and	COGNITIVE	C3	4

	circuit solving techniques like Mesh and Nodal Analysis and theorems to analyze solutions for static and transient circuits.			

1 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**LINEAR CIRCUIT ANALYSIS (LAB)**	
Discipline	:	LINEAR CIRCUIT ANALYSIS (LAB)	
Course Code	:	EE111	
Semester	:	1 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Conduct experiments in the laboratory in order to interpret experimental data and observe its conformance with analyzed results of circuits	PSYCHOMOTOR	P3	9

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**COMMUNICATION SKILLS**	
Discipline	:	COMMUNICATION SKILLS	
Course Code	:	BH101	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	50 percents marks are distributed to CLO1 and 50 to CLO2 accordingly	COGNITIVE	C1	10
2	This CLO also consist of 50 marks	AFFECTIVE	A1	10

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRONIC DEVICES AND CIRCUITS**	
Discipline	:	ELECTRONIC DEVICES AND CIRCUITS	
Course Code	:	EE122	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Describe and explain the basic construction, operation and characteristics of semiconductor devices.	COGNITIVE	C2	1

1	Apply the acquired knowledge to illustrate the dc and ac response of semiconductor devices-based small-scale circuits.	COGNITIVE	C3	4

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRONIC DEVICES AND CIRCUITS (LAB)**	
Discipline	:	ELECTRONIC DEVICES AND CIRCUITS (LAB)	
Course Code	:	EE123	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Reproduce the basic electronic circuits based on semiconductor devices accurately in the laboratory to confirm the theoretical results.	PSYCHOMOTOR	P3	9

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**LINEAR ALGEBRA**	
Discipline	:	LINEAR ALGEBRA	
Course Code	:	BH126	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Interpret existence and uniqueness of solutions geometrically.	COGNITIVE	C3	1
2	Understand algebraic and geometric representations of vectors in Rn and their	COGNITIVE	C3	1

	operations, including addition, scalar multiplication and dot product.			

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**OBJECT ORIENTED PROGRAMMING**	
Discipline	:	OBJECT ORIENTED PROGRAMMING	
Course Code	:	CS124	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Explain principles of object oriented paradigm, class libraries, exception handling.	COGNITIVE	C2	1
2	Use class instances and their relationships to build object oriented solutions.	COGNITIVE	C3	1

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**OBJECT ORIENTED PROGRAMMING (LAB)**	
Discipline	:	OBJECT ORIENTED PROGRAMMING (LAB)	
Course Code	:	CS125	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
3	Implement OOP concepts to develop piece of code (Program)	PSYCHOMOTOR	P3	5

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**PAKISTAN STUDIES**	
Discipline	:	PAKISTAN STUDIES	
Course Code	:	PS103	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Describe the key events leading up to the creation of Pakistan and know about Pakistan\'s historical perspective, geo location,constitutional phases, contemporary affairs and future challenges	COGNITIVE	C1	7

2	Evaluate the effectiveness of different political regimes in pakistan	COGNITIVE	C5	8

2 Semester 2023

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**SOLID STATE ELECRONICS**	
Discipline	:	SOLID STATE ELECRONICS	
Course Code	:	EE120	
Semester	:	2 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Theory of Semiconductors Physics	COGNITIVE	C1	1
3	Solve the problems in Semiconductor Physics	PSYCHOMOTOR	P2	2

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**COMPUTER-AIDED ENGINEERING DESIGN (LAB)**	
Discipline	:	COMPUTER-AIDED ENGINEERING DESIGN (LAB)	
Course Code	:	CS219	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Explain the fundamental skill on how to use computer aided engineering design software	COGNITIVE	C2	1
2	Reproduce the object in the 2D and 3D space	PSYCHOMOTOR	P3	5

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**DIFFERENTIAL EQUATIONS**	
Discipline	:	DIFFERENTIAL EQUATIONS	
Course Code	:	BH216	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	To define basic mathematical concepts related to differential equations	COGNITIVE	C1	1
2	To Explain different types of analytical methods for solution of differential equation	COGNITIVE	C2	2

3	To develop and Solve different engineering problems in the form of differential equations	COGNITIVE	C3	3

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**DIGITAL LOGIC DESIGN**	
Discipline	:	DIGITAL LOGIC DESIGN	
Course Code	:	EE214	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Define	COGNITIVE	C2	1
2	Solve	COGNITIVE	C2	2
3	Differentiate	COGNITIVE	C3	3

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**DIGITAL LOGIC DESIGN (LAB)**	
Discipline	:	DIGITAL LOGIC DESIGN (LAB)	
Course Code	:	EE215	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRONIC CIRCUIT DESIGN**	
Discipline	:	ELECTRONIC CIRCUIT DESIGN	
Course Code	:	EE210	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
1	Explain the basic concepts of amplifiers and its behavioral analysis with the help of hybrid parameters, AC & DC load lines	COGNITIVE	C1	1
2	Distinguish the frequency characteristics and stability analysis of different electronic	COGNITIVE	C2	2

	devices including filters, amplifiers, and oscillators			
3	Apply Kirchhoff laws (current/voltage)	COGNITIVE	C3	3

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRONIC CIRCUIT DESIGN (LAB)**	
Discipline	:	ELECTRONIC CIRCUIT DESIGN (LAB)	
Course Code	:	EE211	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	Description	Bloom's Taxonomy		PLO
		Domain	Level	
3	design and implement .	PSYCHOMOTOR	P3	3

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**INSTRUMENTATION AND MEARSUREMENTS**	
Discipline	:	INSTRUMENTATION AND MEARSUREMENTS	
Course Code	:	EE212	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

3 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**INSTRUMENTATION AND MEARSUREMENTS (LAB)**	
Discipline	:	INSTRUMENTATION AND MEARSUREMENTS (LAB)	
Course Code	:	EE213	
Semester	:	3 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**COMPLEX VARIABLES AND TRANSFORSM**	
Discipline	:	COMPLEX VARIABLES AND TRANSFORSM	
Course Code	:	BH226	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ELECTRICAL NETWORK ANALYSIS**	
Discipline	:	ELECTRICAL NETWORK ANALYSIS	
Course Code	:	EE224	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**INTEGRATED ELECTRONICS**	
Discipline	:	INTEGRATED ELECTRONICS	
Course Code	:	EE222	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**INTEGRATED ELECTRONICS (LAB)**	
Discipline	:	INTEGRATED ELECTRONICS (LAB)	
Course Code	:	EE223	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**ISLAMIC STUDIES**	
Discipline	:	ISLAMIC STUDIES	
Course Code	:	IS202	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**MICROPROCESSOR AND MICROCONTROLLERS**	
Discipline	:	MICROPROCESSOR AND MICROCONTROLLERS	
Course Code	:	EE220	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

4 Semester 2024

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:	**MICROPROCESSOR AND MICROCONTROLLERS (LAB)**	
Discipline	:	MICROPROCESSOR AND MICROCONTROLLERS (LAB)	
Course Code	:	EE221	
Semester	:	4 Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	30% Rubric, 30% Test, 30% VIVA and 10% Open Ended Project	
Marks	:	Lab:100	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	

Semester

UNIVERSITY OF SINDH, JAMSHORO

DEPARTMENT OF ELECTRONIC ENGINEERING

Title of Subject	:		
Discipline	:		
Course Code	:		
Semester	:	Semester	
Effective	:	20EE-Batch onwards	
Pre-requisites	:	English Language Proficiency of Intermediate	Co-requisite: Nil
Assessment	:	10% Assignments, 30% Mid Exam and 60% Final Exam	
Marks	:	Theory:	
Credit Hours	:	3	
Minimum Contact Hours	:	45	

Course Learning Outcomes:

Upon successful completion of this course, each student will be able to:

CLO	**Description**	**Bloom's Taxonomy**		**PLO**
		Domain	**Level**	