

## COs (2023-24)

## 3rd SEM

S. No.	Paper Code	Paper/COs
1	<b>ES-201</b>	<b>Computational Methods</b>
	ES-201.1	Ability to develop mathematical models of low level engineering problems.
	ES-201.2	Ability to apply interpolation methods and numerical integration.
	ES-201.3	Ability to solve simultaneous linear equations and curve fitting by splines.
	ES-201.4	Ability to numerically solve ordinary differential equations that are initial value or boundary value problems .
2	<b>HS-203</b>	<b>Indian Knowledge System</b>
	HS-203.1	Ability to understand the Indian knowledge System.
	HS-203.2	Ability to understand and apply foundational concepts for science and technology.
	HS-203.3	Ability to understand and apply ancient Indian mathematics and astronomy.
	HS-203.4	Ability to understand ancient Indian engineering and technology.
3	<b>ECC-205</b>	<b>Signals and systems</b>
	ECC-205.1	Ability to understand about various types of signals and systems, classify them, analyze them, and perform various operations on them.
	ECC-205.2	Ability to understand use of transforms in analysis of signals and system.
	ECC-205.3	Ability to carry out simulation on signals and systems for observing effects of applying various properties and operations
	ECC-205.4	Ability to create strong foundation of communication and signal processing to be studied in the subsequently.
4	<b>EEC-209</b>	<b>Electrical Materials</b>
	EEC-209.1	Ability to understand properties and applications of conducting materials.
	EEC-209.2	Ability to understand properties and applications of insulating materials.
	EEC-209.3	Ability to understand properties and applications of magnetic materials.
	EEC-209.4	Ability to understand properties and applications of special materials.
5	<b>ECC-211</b>	<b>Electrical Machines-1</b>
	EEC.211.1	Ability to understand the magnetic circuit and working of EMEC devices.
	EEC.211.2	Ability to understand the working and applications of DC motors.
	EEC.211.3	Ability to analyse of single phase transformer and solution of numerical problems.
	EEC.211.4	Ability to analyse of three phase transformer and solution of numerical problems.

6	<b>ECC-213</b>	<b>Electromagnetic Field Theory</b>
	ECC.213.1	Ability to understand the basic laws of electrostatics.
	ECC.213.2	To understand the basic laws of electromagnetics.
	ECC.213.3	Ability to provide solution of real life plan wave problems for various boundary conditions.
	ECC.213.4	To understand the characteristics and impedance transformation on high frequency transmission lines
7	<b>ECC-215</b>	<b>Electronics-I</b>
	ECC.215.1	The students are able to understand the working of various diodes.
	ECC.215.2	The students are able to understand the working of transistor and their applications.
	ECC.215.3	The students are able to understand the function of logic gates and design of combinational logic circuits
	ECC.215.4	The students are able to understand the function and design of sequential logic circuits.
8	<b>ECC-251</b>	<b>Computational Methods Lab</b>
	ECC-251.1	Ability to develop mathematical models of low level engineering problems.
	ECC-251.2	Ability to apply interpolation methods and numerical integration.
	ECC-251.3	Ability to solve simultaneous linear equations and curve fitting by splines.
	ECC-251.4	Ability to numerically solve ordinary differential equations that are initial value or boundary value problems .
9	<b>EEC-257</b>	<b>Electrical Machines-I Lab</b>
	EEC.257.1	Ability to understand the magnetic circuit and working of EMEC devices.
	EEC.257.2	Ability to understand the working and applications of DC motors.
	EEC.257.3	Ability to analyse of single phase transformer and solution of numerical problems.
	EEC.257.4	Ability to analyse of three phase transformer and solution of numerical problems.
10	<b>EEC-259</b>	<b>Electrical Engineering Workshop</b>
	EEC.259.1	The students are able to understand the symbols, specification and application of components.
	EEC.259.2	The students are able to understand the connections/ wiring diagrams used in electrical installations.
	EEC.259.3	The students are able to understand the function of illumination devices.
	EEC.259.4	The students are able to understand to fabricate the transformer and assembly of domestic appliances.
11	<b>ECC-261</b>	<b>Electronics-I Lab</b>
	ECC.261.1	The students are able to understand the working of various diodes.
	ECC.261.2	The students are able to understand the working of transistor and their applications.
	ECC.261.3	The students are able to understand the function of logic gates and design of combinational logic circuits
	ECC.261.4	The students are able to understand the function and design of sequential logic circuits.

**4th SEM**

<b>12</b>	<b>BS-202</b>	<b>Probability, Statistics and Linear Programming</b>
	BS-202.1	Ability to solve probability problems and describe probability distributions.
	BS-202.2	Ability to describe and summarize data.
	BS-202.3	Ability to use test for hypothesis.
	BS-202.4	Ability to formulate and solve linear programming problems.
<b>13</b>	<b>HS-204</b>	<b>Technical Writing</b>
	HS-204.1	Ability to improve grammar and sentence structure and build vocabulary.
	HS-204.2	Ability to write different types of writings with clarity.
	HS-204.3	Ability to write different types of business documents.
	HS-204.4	Ability to apply business ethics and enhance personality.
<b>14</b>	<b>EEC-206</b>	<b>Network analysis and synthesis</b>
	EEC-206 .1	Ability to determine function from waveform.
	EEC-206 .2	Ability to determine transient respond of circuit.
	EEC-206 .3	Ability to determine two port parameter of circuit.
	EEC-206 .4	Ability to realize the circuit from their transfer function.
<b>15</b>	<b>EEC-210</b>	<b>Electrical Machines-II</b>
	EEC-210.1	Ability to analyse the synchronous generator.
	EEC-210.2	Ability to analyse ofthree phase induction motor
	EEC-210.3	Ability to analyse ofsynchronous motor.
	EEC-210.4	Ability to analyse ofsingle phase motor.
<b>16</b>	<b>EEC-212</b>	<b>Power System-1</b>
	EEC-212.1	Ability to calculate the transmission line parameters.
	EEC-212.2	Ability to analyse performance of transmission line.
	EEC-212.3	Ability to understand working of cables.
	EEC-212.4	Ability to solve load flow in power system.
<b>17</b>	<b>ECC-218</b>	<b>Electronics-II</b>
	ECC-218.1	Ability to solve problems related to amplifier circuits.
	ECC-218.2	Ability to apply the amplifiers circuits in real world.
	ECC-218.3	Ability to analyse various operational amplifier circuits.
	ECC-218.4	Ability to understand the function of various waveform generators.

18	<b>BS-252</b>	<b>Probability, Statistics and Linear Programming Lab</b>
	BS-252 .1	Ability to solve probability problems and describe probability distributions.
	BS-252 .2	Ability to describe and summarize data.
	BS-252 .3	Ability to use test for hypothesis.
	BS-252 .4	Ability to formulate and solve linear programming problems.
19	<b>EEC-256</b>	<b>Electrical Machine-II Lab</b>
	EEC-256.1	Ability to analyse the synchronous generator.
	EEC-256.2	Ability to analyse ofthree phase induction motor
	EEC-256.3	Ability to analyse ofsynchronous motor.
	EEC-256.4	Ability to analyse ofsingle phase motor.
20	<b>EEC-260</b>	<b>Power System-1 Lab</b>
	EEC.260.1	Ability to calculate the transmission line parameters.
	EEC.260.2	Ability to analyze performance of transmission line.
	EEC.260.3	Ability to understand working of cables.
	EEC.260.4	Ability to solve load flow in power system.
21	<b>EEC-262</b>	<b>Network nalysis and synthesis Lab</b>
	EEC.262.1	Ability to determine function from waveform.
	EEC.262.2	Ability to determine transient respond of circuit.
	EEC.262.3	Ability to determine two port parameter of circuit.
	EEC.262.4	Ability to realize the circuit from their transfer function.
22	<b>EEC-264</b>	<b>Electronics-II Lab</b>
	<b>EEC.264.1</b>	Ability to solve problems related to amplifier circuits.
	<b>EEC.264.2</b>	Ability to apply the amplifiers circuits in real world.
	<b>EEC.264.3</b>	Ability to analyse various operational amplifier circuits.
	<b>EEC.264.4</b>	Ability to understand the function of various waveform generators.