Course Outcome

Session 2023-24 (Odd)

Department of Electrical & Electronics Engineering

KIET Group of Institutions, Ghaziabad
Department of Electrical & Electronics Engineering

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Index

S No.	Subject Code	Subject Name	Page No.
		7th Semester	
1	KHU-701	Rural Development: Administration and Planning	27
2	KEE-071	Energy Conservation and Auditing	28
3	KEN-071	Electric & Hybrid Vehicles	29
4	KEE-077	Power System Protection	30
5	KEE-079	Utilization of Electrical Energy & Electric Traction	31
6	KOE-074	Renewable Energy Resources	32
7	KEN-751	Industrial Automation & PLC Lab	33
8	KEN 752	Mini Project or Internship Assessment	34
9	KEN-753	Project-I	35

Program: B.Tech **Academic Session: 2022-23** **Year: II** **Semester: 3**
Course: Technical Communication **Course Code: BAS 301**
Course Coordinator: Dr. Babita Tyagi
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Understand the significance of value inputs in a classroom, process of value education, meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society.	PO:6,7,8,9,10,11,12	Understand	Conceptual
CO2	Apply the meaning of Harmony in the Self the Co-existence of Self and Body.	PO: 8,9,10,11,12	Understand	Procedural
CO3	Apply the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships.	PO: 8,9,10,11,12	Understand	Procedural
CO4	Analyze the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.	PO:6,7,9.10.11,12	Understand	Procedural
CO5	Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.	PO:9,10,11,12	Understand	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	1	1	1	2	3	2	2	-	-
CO2	-	-	-	-	-	-	-	1	1	3	2	2	-	-
CO3	-	-	-	-	-	-	-	1	2	3	2	2	-	-
CO4	-	-	-	-	-	1	1	-	1	3	2	3	-	-
CO5	-	-	-	-	-	-	-	-	2	3	2	1	-	-
PO Target	-	-	-	-	-	1	1	1	1.6	3	2	2	-	-

Program: B.Tech **Academic Session: 2022-23** **Year: II** **Semester: 3**
Course: Maths-IV **Course Code: BAS 302**
Course Coordinator: Dr. Swati Maheshwari
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Identify the application of partial differential equations and apply for solving Linear and non- linear partial differential equations	PO:1,3,4,5,12	Understand	Procedural
CO2	Understand the classification of second order partial differential equations	PO:1,2,3,4,12	Understand	Procedural
CO3	Evaluate general solution of Heat, Wave, Laplace equations and Transmission lines.	PO:1,3,4,5,12	Analyze	Procedural
CO4	Analyze the concept of moments, skewness, kurtosis and moment generating function and the linear and non-linear regression.	PO:1,2,3,12	Analyze	Procedural
CO5	Apply the concept of probability, random variable and for solving the problem related to discrete and continuous probability distribution	PO:1,2,3,12	Analyze	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	2	2	-	-	-	-	-	-	2	-	-
CO2	2	1	1	1	-	-	-	-	-	-	-	1	-	-
CO3	3	3	2	2	3	-	-	-	-	-	-	3	-	-
CO4	1	1	1	-	-	-	-	-	-	-	-	1	-	-
CO5	1	1	1	-	-	-	-	-	-	-	-	1	-	-
PO Target	2	1.8	1.4	1.66	2.5							1.6		

Program: B.Tech   **Academic Session:** 2022-23   **Year: II**   **Semester: 3**
Course: Electromagnetic Field Theory   **Course Code: BAS 303**
Course Coordinator: Dr. Varun Gupta
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Apply different coordinate systems and their application in electromagnetic field theory.	PO:1,2,3,4,9 .12	Apply	Conceptual
CO2	Analyze the concept of static electric field, current, properties of conductors and boundary conditions.	PO:1,2,3,4,9 .12	Analyze	Procedural
CO3	Analyze the concept of static magnetic field, magnetic scalar and vector potential.	PO:1,2,3,4,9 .12	Analyze	Procedural
CO4	Analyze the forces due to magnetic field, magnetization, magnetic boundary conditions and inductors.	PO:1,2,3,4,9 .12	Analyze	Procedural
CO5	Analyze displacement current, time varying fields, propagation and reflection of EM waves and transmission lines.	PO:1,2,3,4, 9,12 PSO:1	Metacognitive	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	1	2	-	-	-	-	1	-	-	1	-	-
CO2	3	3	2	3	-	-	-	-	1	-	-	2	-	-
CO3	3	3	2	3	-	-	-	-	1	-	-	2	-	-
CO4	3	3	2	2	-	-	-	-	1	-	-	2	-	-
CO5	3	3	2	3	2	-	-	-	1	-	-	3	2	-
PO Target	3	2.8	1.8	2.6	2	-	-	-	1	-	-	2	2	

Program: B.Tech **Academic Session: 2022-23** **Year: II** **Semester: 3**
Course: Electrical Measurements & Instruments **Course Code: BEE 302**
Course Coordinator: Dr. Natwar Singh Rathore
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Analyze different types of instruments for the measurement of voltage, current, power and energy.	PO:1,2,3,4,12 PSO:1	Analyze	Procedural
CO2	Understand measurement of electrical quantities resistance, inductance and capacitance with the help of bridges	PO:1,2,3,4,12 PSO:1	Understand	Conceptual
CO3	Analyze the working of instrument transformers and find the errors in current and potential transformers	PO:1,2,3,4,12 PSO:1	Analyze	Procedural
CO4	Understand the working of electronic instruments like voltmeter, multi-meter, frequency meter and CRO.	PO:1,2,3,4,12 PSO:1	Understand	Conceptual
CO5	Apply the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.	PO:1,2,3,4,12 PSO:1	Apply	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	2	-	-	-	-	-	-	-	2	3	-
CO2	2	2	1	1	-	-	-	-	-	-	-	2	2	-
CO3	2	3	3	3	-	-	-	-	-	-	-	2	2	-
CO4	2	2	1	1	-	-	-	-	-	-	-	2	1	-
CO5	3	3	3	3	-	-	-	-	-	-	-	2	2	-
PO Target	2.4	2.6	2.2	2	-	-	-	-	-	-	-	2	2	-

Program: B.Tech   **Academic Session: 2022-23**   **Year: II**   **Semester: 3**
Course: Basics Signal Systems   **Course Code: BEE 303**
Course Coordinator: Dr. Sumit Sharma
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO 1	Draw the various types of signals & systems and perform mathematical operations on them.	PO:1,2,3,4,12 PSO:1	Remember	Conceptual
CO 2	Analyze Fourier series and Fourier transform and its applications to network analysis.	PO:1,2,3,4,12 PSO:1	Analyze	Procedural
CO 3	Analyze the properties of continuous time signals and system through Laplace transform to get the response of linear system to known inputs.	PO:1,2,3,4,5,12 PSO:1	Analyze	Procedural
CO 4	Construct the state-space models of SISO & MIMO system using the concept of state-space.	PO:1,2,3,4,12 PSO:1	Apply	Procedural
CO 5	Solve complex engineering problems using difference equations using the concepts of Z transform.	PO:1,2,3,4,12 PSO:1	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	1	1	-	-	-	-	-	-	-	3	1	-
CO2	3	3	2	2	-	-	-	-	-	-	-	3	2	-
CO3	3	3	2	2	-	-	-	-	-	-	-	3	2	-
CO4	3	2	1	1	1	-	-	-	-	-	-	3	2	-
CO5	3	2	1	1	-	-	-	-	-	-	-	3	1	-
PO Target	2.8	2.4	**1.4**	1.4	**1**	-	-	-	-	-	-	3	1.6	-

Program: B.Tech　　　**Academic Session:　2022-23**　　　**Year: III**　　　**Semester: 3**
Course: Circuit Simulation lab　　　　　　　　**Subject Code: BEE-351**
Course Coordinator: Dr. Sumit Kumar

Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Apply the knowledge of basic circuital law, nodal and mesh analysis for given circuit.	PO:1,2,5,9,10,12 PSO1,2	Apply	Procedural
CO2	Analyze AC and DC circuits using simulation techniques.	PO:1,2,5,9,10,12 PSO1,2	Analyze	Procedural
CO3	Analyze the transient response of AC circuits.	PO:1,2,5,9,10,12 PSO1,2	Analyze	Procedural
CO4	Evaluate the two-port network parameters.	PO:1,2,5,9,10,12 PSO1,2	Evaluate	Procedural
CO5	Estimate the parameters of different filters.	PO:1,2,5,9,10,12 PSO1,2	Evaluate	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO2	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO3	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO4	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO5	3	2	-	-	3	-	-	-	1	1	-	1	1	1
PO Target	3	2	-	-	3	-	-	-	1	1	-	1	1	1

Academic Session: 2022-23   **Year: II**   **Semester: 3**
Course: Electrical Measurements & Instrumentation Lab   **Course Code: BEE 352**
Course Coordinator: Dr. Natwar Singh Rathore
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Understand the importance of calibration of measuring instruments.	PO:1,3,4,12	Understand	Conceptual
CO2	Demonstrate the construction and working of different measuring instruments.	PO:1,3,4	Apply	Procedural
CO3	Apply the knowledge of AC and DC bridges in different measuring applications	PO:1,3,4,12 PSO:1	Apply	Procedural
CO4	Determine electrical engineering parameters like voltage, current, power & phase difference in industry as well as in power generation, transmission and distribution sectors.	PO:1,3,4,12 PSO:1	Evaluate	Conceptual
CO5	Analyze and solve the variety of problems in the field of electrical measurements.	PO:1,3,4,12	Analyze	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	1	1	1	-	-	-	-	-	-	-	1	-	-
CO2	2	1	1	1	-	-	-	-	-	-	-	-	-	-
CO3	3	3	2	2	-	-	-	-	-	-	-	2	1	-
CO4	2	2	2	1	-	-	-	-	-	-	-	3	1	-
CO5	2	2	2	1	-	-	-	-	-	-	-	3	-	-
PO Target	2.2	1.8	1.6	1.2								2.25	1	

Program: B.Tech   **Academic Session: 2022-23**   **Year: II**   **Semester: 3**
Course: Electrical Workshop   **Course Code:** **BEE 353**
Course Coordinator: Prof. Ameer Faisal
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Understand various types of electrical connections.	PO:1,3,4,10,11	Understand	Factual
CO2	Analyze the difference between various electrical wires, cables and accessories.	PO:1,3,4,10,11	Analyze	Conceptual
CO3	Understand the layout of electrical substation & various safety measures.	PO:1,3,4,10,11	Understand	Conceptual
CO4	Understand the construction, working and application of various workshop tools.	PO:1,3,4,10,11	Understand	Conceptual
CO5	Develop small circuits on printed circuit boards.	PO:1,3,4,10,11	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	3	2	2	-	-	-	-	-	2	1	2	-	-
CO2	3	3	3	2	-	-	-	-	-	2	2	2	-	-
CO3	3	2	3	2	-	-	-	-	-	2	2	2	-	-
CO4	3	2	2	2	-	-	-	-	-	2	2	2	-	-
CO5	3	2	2	2	-	-	-	-	-	2	2	3	-	-
PO Target	3	2.4	2.4	2	-	-	-	-	-	2	1.8	2.2	-	-

Program: B.Tech   **Academic Session:** 2022-23   **Year:** II   **Semester:** 3
Course: Mini Project & Internship Assessment   **Course Code:** BCC 351
Course Coordinator: Prof. Masood Rizvi
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Understand research papers for exploring new fields and review reporting.	CO:1,2,4,6,11,12	Understand	Conceptual
CO2	Evaluate new directions of various cutting edge technologies.	CO:1,2,4,5,6,7,9,11,12	Create	Procedural
CO3	Create various skills by preparing detailed project report including all the findings.	CO:1,2,4,6,7,9,11,12	Create	Conceptual, Procedural
CO4	Effective communication by making an oral presentation to show the findings.	CO:2,4,10,12	Apply	Procedural
CO5	Create facts related knowledge by preparing detailed report including outcomes.	CO:2,4,5,6,7,9,11,12	Evaluate	Conceptual, Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	2	-	2	-	1	-	-	-	-	2	2	-	-
CO2	3	3	-	2	2	1	2	-	2	-	2	2	-	-
CO3	3	2	-	3	2	1	2	-	2	-	2	2	-	-
CO4	-	1	-	1	-	-	-	-	-	3	-	1	-	-
CO5	-	2	-	1	1	1	2	-	2	-	2	2	-	-
PO Target	3	2		1.8	1.66	1	2		2	3	2	1.8	-	-

Program: B.Tech   **Academic Session:**   2022-23   **Year: II**   **Semester: 5**
Course: Power System-I   **Course Code: KEE 501**
Course Coordinator: Dr. Brijesh Singh
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Describe the working principle and basic components of conventional and nonconventional power plants as well as the other aspects of power generation.	PO:1,2,3,4,7,12, PSO:1,2	Understand	Factual, Conceptual
CO2	Analyze the role and functioning of different types of supply systems, conductors and performance of transmission lines.	PO:1,2,3,4,12, PSO:1,2	Analyze	Conceptual, Procedural
CO3	Calculate the sag and tension in overhead lines with wind & ice loading, potential distribution over a string of insulators, string efficiency and its improvement.	PO:1,2,3,4,12, PSO:1,2	Apply	Conceptual, Procedural
CO4	Calculate the inductance and capacitance of single phase, three phase lines with symmetrical and unsymmetrical spacing including effect of earth on capacitance of transmission lines.	PO:1,2,3,4,12, PSO:1,2	Apply	Conceptual, Procedural
CO5	Calculate the resistance and capacitance parameters of different types of cables including grading of cables.	PO:1,2,3,4,12, PSO:1,2	Apply	Conceptual, Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	1	1	-	-	1	-	-	-	-	1	2	1
CO2	3	3	2	1	-	-	-	-	-	-	-	1	2	1
CO3	3	3	1	1	-	-	-	-	-	-	-	1	2	1
CO4	3	3	1	2	-	-	-	-	-	-	-	1	2	1
CO5	3	3	1	1	-	-	-	-	-	-	-	1	2	1
PO Target	2.8	2.8	1.2	1.2			1					1	2	1

Program: B.Tech   **Academic Session: 2022-23**   **Year: II**   **Semester: 5**
Course: Control System   **Course Code: KEE 502**
Course Coordinator: Prof. Alok Pandey
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Calculate the transfer function for the operation of open loop and closed loop control systems.	PO:1,10, PSO:2	Apply	Procedural
CO2	Analyze the performance of basic control systems in the time domain.	PO:1,2,4,5,10,12 PSO:2	Analyze	Procedural
CO3	Analyze the stability of linear time-invariant systems in time domain using Routh Hurwitz criterion and root locus technique.	PO:1,2,4,5,10,12 PSO:2	Apply	Procedural
CO4	Analyze the stability of linear time-invariant systems in frequency domain using Nyquist criterion and Bode plot.	PO:1,2,4,5,10,12 PSO:2	Apply	Procedural
CO5	Understand the different types of compensators to achieve the desired performance of control System by root locus and Bode plot method.	PO:1,2,4,5,10,12 PSO:2	Understand	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	-	-	-	-	-	-	-	-	1	-	3	-	2
CO2	3	2	-	2	2	-	-	-	-	1	-	3	-	1
CO3	3	2	-	2	3	-	-	-	-	1	-	3	-	1
CO4	3	2	-	2	3	-	-	-	-	1	-	3	-	1
CO5	3	1	-	1	2	-	-	-	-	1	-	2	-	1
PO Target	3	1.75		1.75	2.5					1		2.8		1.2

Program: B.Tech   **Academic Session:** 2022-23   **Year:** II   **Semester: 5**
Course: Electrical Machine-II   **Course Code:** KEE 502
Course Coordinator: Prof. Masood Rizvi
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Analyze the performance of the synchronous machines using voltage regulation methods, voltage and frequency control, load sharing and parallel operation	PO:1,2,4,10,11,12	Analyze	Procedural
CO2	Analyze the performance of salient pole synchronous machine using two reaction theory and effect of varying field current at different loads	PO:1,2,3,11,12	Analyze	Procedural
CO3	Analyze the performance of induction machine using phasor diagram and torque slip characteristics	PO:1,2,3,11,12	Analyze	Procedural
CO4	Analyze the performance of induction machine using different speed control methods	PO:1,2,4,10,11,12 PSO:1	Analyze	Procedural
CO5	Analyze the performance of single-phase induction machine using no-load and block rotor test and different starting methods	PO:1,2,3,11,12	Analyze	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	2	2	1	-	-	-	-	-	1	1	3	-	-
CO2	3	1	3	-	-	-	-	-	-	-	2	1	-	-
CO3	3	2	3	-	-	-	-	-	-	-	1	2	-	-
CO4	3	2	3	1	-	-	-	-	-	1	1	3	1	-
CO5	2	2	2	-	-	-	-	-	-	-	1	3	-	-
PO Target	2.8	1.8	**2.6**	1	-	-	-	-	-	1	1.2	2.4	1	-

Program: B.Tech **Academic Session: 2022-23** **Year: III** **Semester: 5**
Course: Sensors & Transducer **Course Code: KEE 052**
Course Coordinator: Prof. Varun Sharma
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Understand sensors used in industry for measurement of displacement, force and pressure.	PO:1,2,3,4,5	Understand	Conceptual
CO2	Understand sensors in industry for measurement of temperature, position, accelerometer, vibration sensor, flow and level.	PO:1,2,3,4,5	Understand	Conceptual
CO3	Analysis of image processing and machine vision system in a pick and place robot.	PO:1,2,3,4,5	Apply	Procedural
CO4	Analyze data acquisition systems.	PO:1,2,3,4,5	Analyze	Procedural
CO5	Apply the concept of smart sensors in recent technologies like e Vehicle, and Industrial robots.	PO:1,2,3,4,5 PSO:2	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	2	1	2	1	1	-	-	-	-	-	-	2	-	-
CO2	2	1	2	1	1	-	-	-	-	-	-	1	-	-
CO3	3	2	2	2	1	-	-	-	-	-	-	2	-	-
CO4	3	2	2	2	2	-	-	-	-	-	-	1	-	-
CO5	3	2	2	1	1	-	-	-	-	-	-	1	-	2
PO Target	2.6	1.6	2	1.4	1.2	-	-	-	-	-	-	1.4		2

Program: B.Tech   Academic Session: 2022-23   Year: III   Semester: 5
Course: Industrial Automation & Control   Course Code: KEE 053
Course Coordinator: Prof. Arika Singh
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Understand the concept of automation, its terminology and basic communication protocols	PO:1,3,4,5,9,12 PSO: 2	Understand	Conceptual
CO2	Understand the working and applications of relay	PO:1,3,4,5,12 PSO: 2	Apply	Procedural
CO3	Learn the basics of PLC ,its operation and applications in automation.	PO:1,3,4,5,12 PSO: 2	Apply	Procedural
CO4	Study the basics of industrial sensors and its interfacing	PO:1,3,4,5,12	Apply	Procedural
CO5	Understand the basics of pneumatic systems and its applications	PO:1,3,4,5,12	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	2	-	1	1	3				2			2		1
CO2	2	-	3	2	3				-			2		2
CO3	2	-	3	2	3				-			2		2
CO4	2	-	2	1	1				-			2		-
CO5	2	-	1	1	1				-			2		-
PO Target	2.00		2.0	1.40	2.20				0.40			2		1.00

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 5**
Course: Neural Network & Fuzzy System   **Course Code: KEE 056**
Course Coordinator: Prof. (Dr.) Neeraj Kumar Gupta
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Analyze the concepts of learning in neural network.	PO:1,2,3,4,5,12 PSO 1,2	Analyze	Conceptual
CO2	Apply neural network for designing linear and non-linear type problems.	PO:1,2,3,4,5,12 PSO:1,2	Apply	Procedural
CO3	Analyze the concepts of fuzzy logic.	PO:1,2,3,4,5,12 PSO 1,2	Analyze	Procedural
CO4	Apply fuzzy logic for designing control systems.	PO:1,2,3,4,5,12 PSO 1,2	Apply	Procedural
CO5	Apply the concepts of neuro-fuzzy networks and neuro-fuzzy systems for solving conventional problems.	PO:1,2,3,4,5,12 PSO 1,2	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	2	1	2	1	1	-	-	-	-	-	-	2	2	1
CO2	2	1	2	2	1	-	-	-	-	-	-	1	2	2
CO3	2	1	1	1	1	-	-	-	-	-	-	2	1	1
CO4	1	2	1	1	2	-	-	-	-	-	-	1	2	2
CO5	2	1	1	1	1	-	-	-	-	-	-	1	2	2
PO Target	1.80	1.20	1.4	1.20	1.20	-	-	-	-	-	-	1.40	1.80	1.60

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 3**
Course: Circuit Simulation lab   **Subject Code: KEE-451**
Course Coordinator: Dr. Ruchika Singh
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Apply the knowledge of basic circuital law, nodal and mesh analysis for given circuit.	PO:1,2,5,9,10,12 PSO1,2	Apply	Procedural
CO2	Analyze AC and DC circuits using simulation techniques.	PO:1,2,5,9,10,12 PSO1,2	Analyze	Procedural
CO3	Analyze the transient response of AC circuits.	PO:1,2,5,9,10,12 PSO1,2	Analyze	Procedural
CO4	Evaluate the two-port network parameters.	PO:1,2,5,9,10,12 PSO1,2	Evaluate	Procedural
CO5	Estimate the parameters of different filters.	PO:1,2,5,9,10,12 PSO1,2	Evaluate	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO2	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO3	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO4	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO5	3	2	-	-	3	-	-	-	1	1	-	1	1	1
PO Target	3	2	-	-	3	-	-	-	1	1	-	1	1	1

KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Program: B.Tech   **Academic Session:** 2022-23   **Year: III**   **Semester: 5**
Course: Power System-I Lab   **Course Code: KEE 551**
Course Coordinator: Dr. Brijesh Singh
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Simulation of power system model for various parameters of transmission line	PO:1,2,4,5,9,10,12 PSO:1	Apply	Procedural
CO2	Simulation of power system model for ABCD constant of transmission line	PO:1,2,4,5,9,10,12 PSO:1	Apply	Procedural
CO3	Simulation of power system model for the Ferranti effect in transmission line	PO:1,2,4,5,9,10,12 PSO:1	Apply	Procedural
CO4	Simulation of power system model for the sag & tension and string efficiency of insulator of transmission line	PO:1,2,4,5,9,10,12 PSO:1	Apply	Procedural
CO5	Simulation of power system model for the skin effect, and ground clearance of transmission line.	PO:1,2,4,5,9,10,12 PSO:1	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	3	-	-	-	1	1	-	1	1	-
CO2	3	2	-	1	3	-	-	-	1	1	-	1	1	-
CO3	3	2	-	1	3	-	-	-	1	1	-	1	1	-
CO4	3	2	-	1	3	-	-	-	1	1	-	1	1	-
CO5	3	2	-	1	3	-	-	-	1	1	-	1	1	-
PO Target	3	2	-	1	3	-	-	-	1	1	-	1	1	-

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 5**
Course: Control System Lab   **Course Code: KEE 552**
Course Coordinator: Prof. Alok Pandey
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	Statement of Course Outcome			
CO1	Analyze the characteristics of control system components like ac servo motor, synchro, potentiometer, servo voltage stabilizer.	PO:1,2,4,5,10,12 PSO:1	Analyze	Procedural
CO2	Analyze the performance of control systems with different controllers / compensators.	PO:1,2,4,5,10,12 PSO:1	Analyze	Procedural
CO3	Analyze the behavior of dc motor in open loop and closed loop.	PO:1,2,4,5,10,12	Analyze	Procedural
CO4	Analyze the system's stability with different methods of time & frequency domain using MATLAB software.	PO:1,2,4,5,10,12	Analyze	Procedural
CO5	Apply the conversion of transfer functions into state space & vice versa and check the performance parameters in time domain response of a second order system for step input via MATLAB software.	PO:1,2,4,5,10,12	Analyze	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	2	-	-	-	-	2	-	2	2	-
CO2	3	2	-	1	2	-	-	-	-	2	-	2	2	-
CO3	3	2	-	1	2	-	-	-	-	2	-	2	-	-
CO4	2	1	-	2	3	-	-	-	-	1	-	3	-	-
CO5	2	1	-	2	3	-	-	-	-	1	-	3	-	-
PO Target	2.6	1.6		1.4	1.4	-	-	-	-	1.6		1.4	2	-

Program: B.Tech   **Academic Session:** 2022-23   **Year: III**   **Semester: 5**
Course: Electrical Machine-II Lab   **Course Code: KEE 553**
Course Coordinator: Prof. Masood Rizvi
Course Outcomes

CO No.	After completion of the course, the student will be able to	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	Statement of Course Outcome			
CO1	Calculate the parameters of the synchronous machines.	PO:1,3,4,10,12	Analyze	Procedural
CO2	Understand parallel operation of two alternators.	PO:1,3,12	Analyze	Procedural
CO3	Determine the parameters of the three phase induction motors.	PO:1,3,4,10,12	Analyze	Procedural
CO4	Evaluate the performance of single-phase induction motor under different operating conditions	PO:1,3,4,10,12	Analyze	Procedural
CO5	Evaluate the performance of synchronous motor	PO:1,3,4,10,12	Analyze	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	-	2	2	-	-	-	-	-	1	-	2	-	-
CO2	2	-	2	-	-	-	-	-	-	-	-	3	-	-
CO3	3	-	2	2	-	-	-	-	-	1	-	2	1	-
CO4	3	-	2	2	-	-	-	-	-	1	-	2	1	-
CO5	3	-	1	1	-	-	-	-	-	1	-	3	-	-
PO Target	2.8	-	1.8	1.4	-	-	-	-	-	1	-	2.6	1	-

KIET Group of Institutions, Ghaziabad

Department of Electrical & Electronics Engineering

Program: B.Tech   Academic Session: 2022-23   Year: III   Semester: 5
Course: Mini Project   Course Code: KEE 554
Course Coordinator: Prof. Masood Rizvi
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand research papers for exploring new fields and review reporting.	CO:1,2,4,6,11,12	Understand	Conceptual
CO2	Evaluate new directions of various cutting-edge technologies.	CO:1,2,4,5,6,7,9,11,12	Create	Procedural
CO3	Create various skills by preparing detailed project report including all the findings.	CO:1,2,4,6,7,9,11,12	Create	Conceptual, Procedural
CO4	Effective communication by making an oral presentation to show the findings.	CO:2,4,10,12	Apply	Procedural
CO5	Create facts related knowledge by preparing detailed report including outcomes.	CO:2,4,5,6,7,9,11,12	Evaluate	Conceptual, Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	2	-	1	-	-	-	-	2	2	-	-
CO2	3	3	-	2	2	1	2	-	2	-	2	2	-	-
CO3	3	2	-	3	2	1	2	-	2	-	2	2	-	-
CO4	-	1	-	1	-	-	-	-	-	3	-	1	-	-
CO5	-	2	-	1	1	1	2	-	2	-	2	2	-	-
PO Target	3	2		1.8	1.66	1	2		2	3	2	1.8	-	-

Program: B.Tech   **Academic Session:** 2022-23   **Year: III**   **Semester: 7**
Course: Rural Development: Administration & Planning   **Course Code: KHU 701**
Course Coordinator: Prof. Varun Sharma
Course Outcomes

\multicolumn{2}{c}{After completion of the course, the student will be able to}	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Understand the concepts , basics and importance of rural development	PO:6,7,8,12	Understand	Conceptual
CO2	Explain pre and post-independence rural development programs.	PO:6,7,8,12	Understand	Procedural
CO3	Understand the importance, structure, significance of Panchayati raj and rural administration.	PO:6,7,8,12	Understand	Conceptual
CO4	Acquire the knowledge about the need and importance of human resource development in rural sector .	PO:6,7,8,9,12	Understand	Conceptual
CO5	Examine the importance of rural industrialization and entrepreneurship	PO:6,7,8,9,11,12	Apply	Procedural

CO No.	\multicolumn{12}{c}{Programme Outcome (PO)}	\multicolumn{2}{c}{PSO/ APO}
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	-	-	-	-	-	2	2	2	-	-	-	2	-	-
CO2	-	-	-	-	-	1	1	1	-	-	-	1	-	-
CO3	-	-	-	-	-	1	1	1	-	-	-	1	-	-
CO4	-	-	-	-	-	2	3	2	2	-	-	2	-	-
CO5	-	-	-	-	-	2	3	2	2	-	1	2	-	-
PO Target	-	-	-	-	-	1.6	2	1.6	2	-	1	1.6	-	-

Program: B.Tech **Academic Session:** 2022-23 **Year: III** **Semester: 7**
Course: Energy Conservation & Auditing **Course Code: KEE 071**
Course Coordinator: Dr. S.K Tripathi
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Analyze the energy conservation/saving opportunities in different electric system and understand related legislations.	PO:1,2,3,4,6,7,12 PSO:2	Analyze	Factual, Procedural
CO2	Evaluate the energy saving behavior of utilities through implementation of demand side management (DSM).	PO:1,2,4,6,7,8.12 PSO:2	Evaluate	Procedural
CO3	Analyze energy audit & management and preparation of energy audit report for different energy conservation instances.	PO:1,2,3,4,6,7,9,10.11,12 PSO:2	Analyze	Procedural
CO4	Apply the energy audit for Mechanical Utilities.	PO:1,2,3,4,7,9,10,12 PSO:2	Apply	Procedural
CO5	Evaluate cost-effective measures towards improving energy efficiency and energy conservation by implementation of energy efficient technologies	PO:1,2,3,4,6,7,12 PSO:2	Evaluate	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	1	-	1	2	-	-	-	-	2	-	1
CO2	3	3	-	2	-	1	2	1	-	-	-	2	-	1
CO3	3	3	2	2	-	1	2	-	2	1	1	3	-	1
CO4	3	3	2	2	-	-	1	-	2	1	-	2	-	1
CO5	3	3	1	2	-	1	2	-	-	-	-	2	-	1
PO Target	3	3	1.75	1.8	-	1	1.8	1	2	1	1	2.2	-	1

Program: B.Tech **Academic Session: 2022-23** **Year: III** **Semester: 7**
Course: Electric & Hybrid Vehicle **Course Code: KEN 071**
Course Coordinator: Dr. Brijesh Singh
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO 1	Explain the basics of electric and hybrid electric vehicles, their architecture, technologies and fundamentals.	PO: 1,2,3,4,12 PSO:1	Understand	Procedural
CO 2	Design plug – in hybrid electric vehicle architecture, and component-sizing Power electronics devices used in hybrid electric vehicles.	PO: 1,2,3,4,12 PSO:1	Understand	Procedural
CO 3	Analyze various electric drives suitable for hybrid electric vehicles	PO: 1,2,3,4,12 PSO:1	Analyze	Procedural
CO 4	Discuss different energy storage technologies used for hybrid electric vehicles and their control	PO: 1,2,3,4,12 PSO:1	Understand	Conceptual
CO 5	Design different configurations of electric vehicles and its components, hybrid vehicle configuration by different techniques, sizing of components, optimization and energy management	PO: 1,2,3,4,12 PSO:1	Understand	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	2	-	-	-	-	-	-	-	3	2	
CO2	3	3	2	2	-	-	-	-	-	-	-	2	3	
CO3	3	3	2	2	-	-	-	-	-	-	-	2	3	
CO4	3	3	3	2	-	-	-	-	-	-	-	3	3	
CO5	3	3	3	3	-	-	-	-	-	-	-	2	3	
PO Target	3	3	2.4	2.2	-	-	-	-	-	-	-	2.4	2.8	

Department of Electrical & Electronics Engineering

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 7**
Course: Power System Protection   **Course Code: KEN 077**
Course Coordinator: Prof. Arika Singh
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Understand the need for the power system protection devices.	PO:1,2,4,5,6,,12	Understand	Conceptual
CO2	Explain Relay types ,basic terminology and its application.	PO:1,2,4,5,6,,12	Understand	Conceptual
CO3	Examine types of faults and protection scheme for major power system components	PO:1,2,4,5,6,,12	Apply	Conceptual
CO4	Describe the circuit breaker operation, testing and types.	PO:1,2 4,5,6,,12	Apply	Conceptual
CO5	Explain the electronic relay, microprocessor and computer-based protection schemes	PO:1,2 4,5,6,,12	Understand	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	1	-	1	1			1					2		
CO2	1	2	1	1			1					2		
CO3	2	2	2	2			1					2		
CO4	2	2	2	2			1					2		
CO5	2	-	1	1			1					2		
PO Target	1.60	1.20	1.40	1.40			1.00					2.00		

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 7**
Course: Utilization of Electrical Energy & Electric Traction   **Course   Code: KEE-079**
Course Coordinator: Prof. Ameer Faisal
Course Outcomes

CO No.	After completion of the course, the student will be able to — Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO1	Understand different types of electric heating.	PO:1,2,12	Understand	Conceptual
CO2	Apply concept of electric welding and electrolyte process.	PO:1,2,12	Apply	Procedural
CO3	Design of interior and exterior lighting systems, illumination levels for various purposes light fittings, factory lighting, flood lighting, street lighting.	PO:1,2,3,4,5,6,9,11,12	Apply	Procedural
CO4	Apply the fundamental concepts of electric traction.	PO:1,2,3,4,5,6,7,12	Apply	Procedural
CO5	Apply the knowledge of power electronics converters in Electric Traction.	PO:1,2,3,4,5,6,7,12	Apply	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	1	-	-	-	-	-	-	-	-	-	2	-	-
CO2	3	1	-	1	-	-	-	-	-	-	-	2	-	-
CO3	3	3	3	3	2	2	-	-	1	-	1	3	-	-
CO4	3	2	1	2	1	1	1	-	-	-	-	2	-	-
CO5	3	3	1	2	1	1	1	-	-	-	-	2	-	-
PO Target	2.6	2	1.66	2	1.33	1.33	1	-	1	-	1	2.2	-	-

Program: B.Tech   **Academic Session:**   **2022-23**   **Year: III**   **Semester: 7**
Course: Renewable Energy Resources   **Code: KOE-074**
Course Coordinator: Dr. Mohd. Shariz Ansari
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	After completion of the course, the student will be able to			
CO1	Understand various non-conventional energy resources and their availability along with knowledge on solar cells.	PO:1,2,3,4,5,6,7,10,12	Understand	Factual
CO2	Apply the concept of solar radiation on flat plate and focusing type collectors to convert solar energy into electrical energy.	PO:1,2,3,4,5,6,7,10,12 PSO:2	Apply	Conceptual
CO3	Understand the concept of electrical energy generation from geothermal energy, magneto-hydro dynamics and fuel cells.	PO:1,2,3,4,5,6,7,10,12 PSO:2	Understand	Conceptual
CO4	Understand the concept of electrical energy generation from thermo-electrical, thermionic and wind energy conversions.	PO:1,2,3,4,5,6,7,10,12 PSO:2	Understand	Conceptual
CO5	Understand biomass, ocean thermal, wave and tidal wave energy conversions.	PO:1,2,3,4,5,6,7,10,12 PSO:2	Understand	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1			1		2	3			1		1		
CO2	3			2		3	3			1		2		
CO3	1			2		2	3			1		2		
CO4	1			2		2	3			1		2		
CO5	1			2		2	3			1		2		
PO Target	1.4			1.8		2.2	3			1		1.8		

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 7**
Course: Industrial Automation & PLC Lab   **Subject Code: KEN-751**
Course Coordinator: Prof. Salim
Course Outcomes

CO No.	After completion of the course, the student will be able to	Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
	Statement of Course Outcome			
CO1	Understand automation, PLC, I/O modules of PLC, Programming languages and instructions of PLC	PO:1,2,3,5,7.9,12 PSO:2	Understand	Conceptual
CO2	Analyze Ladder diagram concept to test digital logic gates, Boolean expression, Demorgan's theorem."	PO:1,2,3,4,5,7.9,12 PSO:2	Apply	Procedural
CO3	Understand the Ladder program for DOL starter, timers, and counters	PO:1,2,3,5,7.9,12	Understand	Conceptual
CO4	Understand evolution and architecture of DCS, hierarchical control in DCS, programming DCS	PO:1,2,3,4,5,7.9,12	Understand	Conceptual
CO5	Explain the concept of basic digital electronics and data manipulation, basic PLC circuits for entry-level PLC applications.	PO:1,2,3,5,7.9,12 PSO:2	Understand	Conceptual

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	2	1	1	-	1	-	1	-	1	-	-	2	-	1
CO2	3	2	2	1	1	-	1	-	1	-	-	2	-	2
CO3	2	1	1	-	1	-	1	-	1	-	-	2	-	-
CO4	2	1	2	2	2	-	2	-	1	-	-	3	-	-
CO5	2	1	1	-	1	-	1	-	1	-	-	2	-	1
PO Target	2.2	1.2	1.4	1.5	1.2	-	1.2	-	1.00	-	-	2.2	-	1.33

Program: B.Tech   **Academic Session: 2022-23**   **Year: III**   **Semester: 7**
Course: Mini Project or Internship Assessment   **Subject Code: KEN-752**
Course Coordinator: Dr. Ruchika Singh
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Understand research papers for exploring new fields and review reporting.	CO:1,2,4,6,11,12	Understand	Conceptual
CO2	Evaluate new directions of various cutting edge technologies.	CO:1,2,4,5,6,7,9,11,12	Create	Procedural
CO3	Create various skills by preparing detailed project report including all the findings.	CO:1,2,4,6,7,9,11,12	Create	Conceptual, Procedural
CO4	Effective communication by making an oral presentation to show the findings.	CO:2,4,10,12	Apply	Procedural
CO5	Create facts related knowledge by preparing detailed report including outcomes.	CO:2,4,5,6,7,9,11,12	Evaluate	Conceptual, Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	2	-	2	-	1	-	-	-	-	2	2	-	-
CO2	3	3	-	2	2	1	2	-	2	-	2	2	-	-
CO3	3	2	-	3	2	1	2	-	2	-	2	2	-	-
CO4	-	1	-	1	-	-	-	-	-	3	-	1	-	-
CO5	-	2	-	1	1	1	2	-	2	-	2	2	-	-
PO Target	3.0	3.0	-	-	2.4	1	-	-	-	3.0	2.0	2.0	-	-

KIET Group of Institutions, Ghaziabad
Department of Electrical & Electronics Engineering

Program: B.Tech   **Academic Session:** 2022-23   **Year: III**   **Semester: 7**
Course: Project-I   **Subject Code: KEN-753**
Course Coordinator: Dr. Ruchika Singh
Course Outcomes

After completion of the course, the student will be able to		Relevant POs/ PSOs/ APOs	Revised Bloom's Level (BL)	Knowledge Category (KC)
CO No.	**Statement of Course Outcome**			
CO1	Demonstrate a sound technical knowledge of their selected project topic.	PO:1,2,4,6,7,8,9,10,11,12 PSO:1,2	Understand	Procedural
CO2	Identification of problem, interpretation and solution.	PO:1,2,3,4,6,7,9,10,11,12 PSO:1,2	Analyze	Procedural
CO3	Formulate engineering solutions to complex problems utilizing a systems approach.	PO:1,2,3,4,6,7,8,9,10,11,12 PSO:1,2	Evaluate	Metacognitive
CO4	Develop an engineering project and communicate with engineers and the community at large in written and oral forms.	PO:1,2,3,4,5,6,7,9,10,11,12 PSO:1,2	Evaluate	Metacognitive
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer as a team.	PO:1,2,3,4,6,7,9,10,11,12 PSO:1,2	Apply	Procedural

CO No.	Programme Outcome (PO)												PSO/ APO	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	1	-	2	-	1	1	1	1	2	2	2	2	1
CO2	3	2	1	2	-	2	2	-	2	2	3	2	2	2
CO3	3	2	3	3	-	1	2	2	3	2	3	2	3	3
CO4	3	2	2	3	3	1	1	-	3	3	3	3	3	3
CO5	2	1	1	2	-	1	1	-	2	2	2	2	2	2
PO Target	2.8	1.6	1.75	2.4	3	1.2	1.4	1.5	2.2	2.2	2.6	2.2	2.4	2.2

The End