Course Outcome

Session 2022-23 (Even)

Department of Electrical & Electronics Engineering

8th Semester			
S No.	**Subject Code**	**Subject Name**	**Page No.**
1	KHU-802	Project Management & Entrepreneurship	26
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HoD (EEE)

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Introduction to Soft Computing (KOE 046)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Comprehend the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory.	1,2	C
2	Understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic.	2,3	C
3	Describe with genetic algorithms and other random search procedures useful while seeking global optimum in self-learning situations.	4	P
4	Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications.	2,3	C
5	Develop some familiarity with current research problems and research methods in Soft Computing Techniques.	5,6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	3	3	2	-	-	-	-	-	2	2	3
CO-2	3	3	3	3	3	2						2	2	3
CO-3	3	3	3	3	3	2	2		1			2	2	3
CO-4	3	3	3	3	3	2	2		1			2	2	3
CO-5	3	2	3	3	3	2	2		2			2	2	3
Target Level	3	2.8	3	3	**3**	2	**2**		1.33			2	2	3

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M:Metacognitive

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Universal Human Values & Professional Ethics (KVE-401)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the essential complementarities between 'VALUES" and 'SKILLS' with its relation of engineering concept.	2	F,C
2	Analyze the sustained happiness and prosperity which are the core aspirations of all human beings keeping social environmental, economic, political scenario.	4	F,C
3	Apply the development of a Holistic perspective among students.	3	C, P
4	Apply the value-based living in a natural way using technological advancement.	3	C, P
5	Analyze the plausible implications of such a Holistic approach in terms of ethical human conduct, trustful and mutually satisfying human behavior and mutually enriching interaction with nature by using engineering, management principle.	4	F, C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	1	3	3	2	1	1	3	-	-
CO-2	-	-	-	-	-	2	3	3	3	2	2	3	-	-
CO-3	-	-	-	-	-	2	3	3	3	3	2	3	-	-
CO-4	-	-	-	-	-	2	3	3	2	1	1	3	-	-
CO-5	-	-	-	-	-	2	3	3	2	2	2	3	-	-
Target Level	-	-	-	-	-	1.8	3	3	2.4	1.8	1.6	3	-	-

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Digital Electronics (KEE-401)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Implement logic gates using concepts of binary number system	3	P
2	Design combinational logic circuits	6	P
3	Design sequential logic circuits	6	P
4	Implement the design of synchronous & asynchronous sequential circuits	6	P
5	Apply the concept of Digital Logic Families in logic circuit-implementation	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	3	2	2	-	-	-	-	-		1	-	1
CO-2	3	3	3	3	3	-	-	-	-	-	1	2	-	1
CO-3	3	3	3	3	3	-	-	-	-	-	1	2	-	2
CO-4	3	3	3	3	3	-	-	-	-	-	1	1	-	2
CO-5	3	3	3	3	3	-	-	-	-	-	1	3	-	3
Target Level	3.0	2.8	3.0	2.8	2.8	-	-	-	-	-	1	1.8	-	1.8

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Electrical Machines-I (KEE-402)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Classify the various types of Electromechanical Energy devices.	2	C
2	Determine the response of the dc machine on the basis of Armature Reaction and commutation.	3	P
3	Calculate the performance of dc machine by performing Swinburne' and Hopkinson's test.	3	P
4	Calculate the performance of single-phase transformer by performing open circuit test, short circuit test and Sumpner's test.	3	P
5	Understand the different types of 3 phase transformer connections & conversion from 3-phase to 2-phase using Scott's connection.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	-	-	-	-	-	-	-	-	-	2	-	-
CO-2	3	2	1	1	-	-	-	-	-	1	-	3	1	-
CO-3	3	2	1	1	-	-	-	-	-	1	-	3	1	-
CO-4	3	2	1	1	-	-	-	-	-	1	-	3	2	-
CO-5	3	1	1	1	1	-	-	-	-	1	-	3	2	-
Target Level	2.8	1.8	**1**	**1**	**1**	-	-	-	-	1	-	2.8	1.5	-

BL-1: Remember
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Session: 2022-23 **Semester: 4th**

Subject Name (Code): Network Analysis & Synthesis (KEE-403)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply the knowledge of basic circuital law, nodal and mesh methods of circuit solution through Graph Theory approach.	3	P
2	Analyze the AC and DC circuits through Kirchhoff's law and Network simplification theorems.	4	P
3	Analyze steady-state responses and transient response of DC and AC circuits by classical and Laplace transform methods.	4	P
4	Use the concept of complex frequency and the structure and function of one and two port network.	3	P
5	Develop one port network and different filters.	6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	1	2	1	-	-	-	-	-	-	3	1	-
CO-2	3	3	2	2	2	-	-	-	-	-	-	3	2	-
CO-3	3	3	2	2	2	-	-	-	-	-	-	3	2	-
CO-4	3	2	1	2	1	-	-	-	-	-	-	3	1	-
CO-5	3	3	3	2	2	-	-	-	-	-	-	3	3	-
Target Level	3	2.6	**1.8**	2	**1.6**	-	-	-	-	-	-	3	1.8	-

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Circuit Simulation Lab (KEE-451)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply the knowledge of basic circuital law, nodal and mesh analysis for given circuit.	3	P
2	Analyze AC and DC circuits using simulation techniques.	4	p
3	Analyze the transient response of AC circuits.	4	p
4	Evaluate the two-port network parameters.	5	P
5	Estimate the parameters of different filters.	5	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO-2	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO-3	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO-4	3	2	-	-	3	-	-	-	1	1	-	1	1	1
CO-5	3	2	-	-	3	-	-	-	1	1	-	1	1	1
Target Level	3	2	-	-	3	-	-	-	1	1	-	1	1	1

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Electrical Machine-I Lab (KEE-452)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Perform the speed control of dc motor above and below the rated speed.	3	P
2	Evaluate the efficiency of dc motor by conducting load test.	5	P
3	Evaluate the efficiency of transformer by performing load test.	5	P
4	Evaluate the parameters of equivalent circuit of transformer by conducting short circuit and open circuit test	5	P
5	Design transformer and dc machine parts using MATLAB	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	-	2	2	-	-	-	-	-	1	-	2	-	-
CO-2	2	-	2	-	-	-	-	-	-	-	-	3	-	-
CO-3	3	-	2	2	-	-	-	-	-	1	-	2	1	-
CO-4	3	-	2	2	-	-	-	-	-	1	-	2	1	-
CO-5	3	-	1	1	-	-	-	-	-	1	-	3	-	-
Target Level	2.8	-	1.8	1.4	-	-	-	-	-	1	-	2.6	1	-

Session: 2022-23 **Semester: 4th**

Subject Name (Code): Digital Electronics Lab (KEE-453)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Apply digital binary system it for implementation of Gates.	2, 3	P
2	Design the Sequential circuits with the help of Combinational circuits and feedback element.	6	P
3	Design data selector circuits with the help of universal Gates.	6	P
4	Design the counters with the help of sequential circuit and basic Gates.	6	P
5	Develop the projects using the digital ICs and electronics components.	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	2	3	2	-	-	-	-	-	-	-	2	-	1
CO-2	3	3	3	2	-	-	-	-	-	-	-	2	-	2
CO-3	3	3	3	2	-	-	-	-	-	-	-	3	-	1
CO-4	3	2	2	3	-	-	-	-	-	-	-	2	-	1
CO-5	3	3	3	3	-	-	-	-	-	-	-	3	-	1
Target Level	3	2.6	**2.8**	2.4	-	-	-	-	-	-	-	2.4		1.2

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Power System-II (KEE-601)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Analyze the role of components and one line diagram in power system studies including network under both balanced and unbalanced fault conditions	4	P
2	Analysis of load flow problem of an electrical power network	4	P
3	Apply the concept of travelling wave theory in transmission lines operations	3	P
4	Analyze the steady state and transient state stability of the power system under various conditions.	4	P
5	Understand the operating principle and applications of a various types of relays and circuit breakers in power systems.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	2	2	-	2	-	-	-	-	-	3	-	-
CO-2	3	3	2	2	-	2	-	-	-	-	-	3	-	-
CO-3	3	2	1	2	-	1	-	-	-	-	-	3	-	-
CO-4	3	3	2	2	-	2	-	-	-	-	-	3	-	-
CO-5	2	2	1	1	-	2	-	-	-	-	-	2	-	-
Target Level	2.8	2.6	**1.6**	1.8	-	1.8	-	-	-	-	-	2.8	-	-

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Microprocessor & Microcontroller (KEE-602)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the basic architecture of 8085 & 8086 microprocessors .	2	C
2	Illustrate the programming model of microprocessors using 8085 microprocessor.	2	C
3	Illustrate the interfacing of different external peripheral devices with 8085 microprocessor.	2	C
4	Understand the architecture of 8051 microcontroller.	2	C
5	Illustrate advance level microprocessor & microcontroller for different applications	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	-	-	1	-	-	-	-	1	-	-	1	-	-
CO-2	3	2	1	2	1	-	-	-	2	-	1	2	-	1
CO-3	3	2	1	2	1	-	-	-	2	-	1	2	-	1
CO-4	2	-	-	1	-	-	-	-	1	-	-	1	-	-
CO-5	3	2	1	2	1	-	-	-	2	-	1	2	-	1
Target Level	2.6	2	**1**	1.6	1	-	-	-	1.6	-	1	1.6	-	1

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Power Electronics (KEE-603)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the characteristics as well as the operation of BJT, MOSFET, IGBT, SCR, TRIAC and GTO and identify their use in the power switching applications	3	C
2	Analyze the non-isolated DC-DC converters and identify their use in different Power electronics applications.	3	P
3	Evaluate the performance parameters of phase controlled rectifiers	5	P
4	Analyze single-phase ac voltage controllers, cyclo-converters and their various applications	4	P
5	Analyze the single-phase and three phase bridge inverters, Voltage source inverters and current source inverters	6	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	1	2	2	-	-	-	-	-	-	2	2	2
CO-2	3	3	2	3	3	1	-	-	-	1	1	2	3	2
CO-3	3	3	2	3	2	1	-	-	-	1	1	2	2	3
CO-4	3	3	2	3	3	1	-	-	-	1	2	2	2	3
CO-5	3	3	2	3	2	2	-	-	-	2	2	3	3	1
Target Level	3.00	3.00	1.8	2.8	2.40	1.25	-	-	-	1.25	1.5	2.20	2.4	2.2

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Special Electrical Machines (KEE-061)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the working principle and constructional Features of different types of electrical machines.	**2**	C
2	Analyze the torque- speed characteristics of different electrical machines and interpret their performance.	4	C,P
3	Apply different types of control techniques for a machine and identify the best control strategy.	3	C,P
4	Illustrate the use of stepper, BLDCs, SRM, and other special machines in the area of the various industrial and domestic as well as commercial applications.	**4**	C,P
5	Understand the concepts of Single phase synchronous motor and characteristics of reluctance and hysteresis motors.	2	F,P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	2	-	-	-	-	3	-	-	-	-	2	2	2
CO-2	3	2	-	-	-	-	3	-	-	-	-	2	3	2
CO-3	3	3	-	2	-	-	3	-	-	-	-	3	3	3
CO-4	3	3	-	2	-	-	3	-	-	-	-	3	3	3
CO-5	2	-	-	-	-	1	3	-	-	-	-	3	2	-
Target Level	**2.6**	**2.5**	**-**	**2**	**-**	**1**	**3**	**-**	**-**	**-**	**-**	**2.6**	**2.6**	**2.5**

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M:Metacognitive

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Basics of Data Base Management (KOE-067)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Describe the features of a database system and its application and compare various types of data models.	2	C
2	Construct an ER Model for a given problem and transform it into a relation database schema.	6	C
3	Formulate solution to a query problem using SQL Commands, relational algebra, tuple calculus and domain calculus.	6	P
4	Explain the need of normalization and normalize a given relation to the desired normal form.	3	P
5	Explain different approaches of transaction processing and concurrency control.	2	M

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	-	-		3	-	-	1	1		1	2		1
CO-2	2	1	3	2	3	-	-	1	-	3	2	1	3	2
CO-3	3	-	-	-	3	-	-	1	-	1	1	1	3	1
CO-4	2	3	-	3	-	-	-	1	-			1	2	1
CO-5	2	3	-	3	-	-	-	1	-			1	1	2
Target Level	2.4	2.33	3	2.66	3	-	-	1	1	2	1.33	1.2	2.25	1.4

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Constitution of India, Law and Engineering (KNC-601)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Identify and explore the basic features and modalities about the Indian constitution.	3	C
2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.	6	C,P
3	Differentiate different aspects of the Indian Legal System and its related bodies..	2	C
4	Discover and apply different laws and regulations related to engineering practices.	5	C
5	Correlate role of engineers with different organizations and governance models	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	2	1	2	2	2	-	-	-	-
CO-2	-	-	-	-	-	2	1	2	2	2	-	-	-	-
CO-3	-	-	-	-	-	3	3	2	2	2	-	-	-	-
CO-4	-	-	-	-	-	2	1	2	2	2	-	-	-	-
CO-5	-	-	-	-	-	2	1	2	2	2	-	-	-	-
Target Level	-	-	-	-	-	2.2	1.4	2	2	2	-	-	-	-

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Understanding the Human Being Comprehensively (KOE-069)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the comprehensive human goal of life.	2	C
2	Understand the harmony of nature and existence.	2	C
3	Analyze the activities of self in its completeness.	4	P
4	Analyze the coexistence in all four orders of nature.	4	P
5	Analyze the human traditions from self to entire existence.	4	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	1	1	2	2	2	1	3	-	-
CO-2	-	-	-	-	-	2	2	1	1	1	1	3	-	-
CO-3	-	-	-	-	-	1	1	3	3	3	2	3	-	-
CO-4	-	-	-	-	-	1	2	2	1	1	1	3	-	-
CO-5	-	-	-	-	-	2	1	3	2	2	1	3	-	-
Target Level	-	-	-	-	-	1.4	**1.4**	**2.2**	1.8	1.8	1.2	3	-	-

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Power System-II Lab (KEE-651)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Compare the different performance characteristics of various relays including data provided by manufacturers.	5	P
2	Develop programs for load-flow solutions using NR and GS methods.	6	P
3	Develop programs for various types of faults in power network.	6	P
4	Demonstrate different numerical integration methods and factors influencing transient stability.	3	P
5	Determine the effect of load in long transmission line.	3	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	3	3	2	-	-	-	-	2	1	-	-	3	-
CO-2	3	3	3	2	3	-	-	-	2	1	-	-	3	-
CO-3	3	3	3	2	3	-	-	-	2	1	-	-	3	-
CO-4	3	3	2	2	2	-	-	-	2	1	-	-	3	-
CO-5	3	3	2	2	-	-	-	-	2	1	-	-	3	-
Target Level	3	3	2.6	2	2.6	-	-	-	2	1	-	-	3	-

Session: 2022-23 **Semester: 6th**

Subject Name (Code): Microprocessor & Microcontroller Lab (KEE-652)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the microprocessor system.	2	C
2	Apply the concept of flow chart for understanding the data flow.	3	P
3	Apply the concept of assembly language to program microprocessor-based system.	3	P
4	Interfacing different peripheral devices with the microprocessor.	6	P
5	Understand microcontroller 8051.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO-2	2	1	-	1	1	-	-	-	-	-	-	2	-	1
CO-3	2	1	-	1	1	-	-	-	2	-	-	2	-	1
CO-4	2	2	1	2	-	-	-	-	2	-	-	3	-	2
CO-5	1	-	-	-	-	-	-	-	-	-	-	1	-	-
Target Level	1.6	1.33	**1**	1.33	1	-	-	-	2	-	-	1.8	-	1.33

BL-1: Remember
BL-2: Understand
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BL-5: Evaluate
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F: Factual
C: Conceptual
P: Procedural
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Session: 2022-23 **Semester: 6th**

Subject Name (Code): Power Electronics Lab (KEE-653)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Design and simulation of uncontrolled rectifier circuit.	6	P
2	Design and simulation of inverter circuit with R and RL loads	6	P
3	Hardware simulation of chopper circuit with DC motor load.	4	P
4	Hardware simulation of cycloconverter circuit.	4	P
5	Analysis of advance power converters.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	3	3	2					2	2	2	2	2
CO-2	2	3	2	2	2					2	2	2	2	2
CO-3	3	3	3	2	3					3	2	2	3	2
CO-4	3	3	3	2	2					2	2	2	2	2
CO-5	2	3	3	3	2					2	2	2	2	2
Target Level	2.4	3	2.8	2.20	2.20					2.20	2	2	2.20	2

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Project Management & Entrepreneurship (KHU 802)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the theories of entrepreneurship and Entrepreneurial Development Programs.	2	F
F2	Apply innovative business ideas and market opportunities.	3	P
3	Apply the importance of Project Management and Project's life cycle	3	P
4	Analyze project finance and report.	4	P
5	Analyze social sector perspectives & social entrepreneurship.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	1	1	2	2	-	3	1	-	-
CO-2	-	-	-	-	-	2	2	3	3	-	3	2	-	-
CO-3	-	-	-	-	-	3	3	2	3	-	3	2	-	-
CO-4	-	-	-	-	-	2	3	2	3	-	3	2	-	-
CO-5	-	-	-	-	-	2	3	3	2	-	3	3	-	-
Target Level	-	-	-	-	-	2	2.4	2.4	2.6	-	3	2	-	-

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Entrepreneurship Development (KOE-083)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the growth and role of small-scale industries in the national economy, demand-based and resources, stages in starting a small-scale industry.	2	C
2	Apply for assessment of the viability, formulation, financing, field study, demand analysis, material balance, output methods, and benefit-cost analysis.	3	C
3	Analyze the preparation of balance sheets and assessment of economic viability, decision making, expected costs wages and incentive, inventory control, and preparation of financial reports.	4	P
4	Understand the financial functions, cost of capital approach in project planning, risk analysis, capital expenditures profit planning, and control of financial flows.	2	P
5	To apply partnership laws, business ownership, sales, income taxes, and workman compensation act.	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	1	-	-	-	-	-	1	3	3	2	3	2	-	-
CO-2	2	-	-	-	1	-	2	3	3	2	3	2	-	-
CO-3	2	-	-	-	2	-	2	1	3	3	3	2	-	-
CO-4	1	-	-	-	2	-	2	2	3	3	3	2	-	-
CO-5	1	-	-	-	-	-	1	3	3	2	3	2	-	-
Target Level	1.4	-	-	-	1.66	-	1.6	2.4	3	2.4	3		-	-

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Introduction to Smart Grid (KOE-084)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the basic concepts, definitions, functions and opportunities of Smart Grid.	2	C
2	Analyze Smart Meters, AMR, Hybrid Vehicles, V2G and Automation.	4	F
3	Analyze the concept of various Smart Grid Technologies.	5	C
4	Analyze the concept of Microgrid and Distributed Energy Resources.	5	C
5	Analyze Power Quality issues and Management in Smart Grid.	5	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	1	3	2	3	2	-	1	-	-	2	2	3	1	2
CO-2	-	3	2	3	3	-	2	-	-	3	2	3	3	3
CO-3	1	3	3	3	2	-	2	-	-	2	3	3	2	2
CO-4	2	3	3	2	3	-	2	-	-	3	3	3	3	3
CO-5	2	3	3	3	3	-	2	-	-	3	3	3	3	3
Target Level	1.5	3	2.6	2.8	2.6	-	1.8	-	-	2.6	2.6	3	2.4	2.6

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Automation & Robotics (KOE-091)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Classify advantages, goals, types, need laws and principles of automation	2	C
2	Describe classification and types of automatic transfer machines	2	C
3	Explain classification of robots and laws of robotics	2	P
4	Analyze robot drive mechanisms	4	P
5	Explain methods of robot programming and simulation concept.	4	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	1	1	1	-	-	-	-	-	-	1	3	-	-
CO-2	2	1	1	1	-	-	-	-	-	-	1	3	-	-
CO-3	2	1	1	1	-	-	-	-	-	-	1	3	-	-
CO-4	3	2	1	2	2	-	-	-	-	-	2	3	-	-
CO-5	3	2	1	2	2	-	-	-	-	-	1	3	-	-
Target Level	2.4	2	1	1.4	2						1.2	3	-	-

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M:Metacognitive

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Big Data (KOE-097)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand fundamentals of Big Data analytics	2	F,C
2	Application of Hadoop and map reduce frameworks	2	P
3	Analyzing Hadoop Distributed File System with simple JAVA and Hadoop I/O	2	C,P
4	Unde0rstand NoSQL MongoDB, spark and scala for Big Data	2	F,C
5	Inspect the big data using programming tools like Pig, Hive and HBase.	2	C,P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	2	3	2	3	3	-	-	3	-	1	-	3	-	-
CO-2	2	3	2	3	3	-	-	-	-	1	-	3	-	-
CO-3	2	3	2	3	3	-	-	-	-	1	-	3	-	-
CO-4	2	3	3	3	3	-	-	-	-	1	-	3	-	-
CO-5	2	3	3	3	3	-	-	-	-	1	-	3	-	-
Target Level	2	3	**2.4**	3	3	-	-	3	-	1	-	3	-	-

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Human Values in Vedic Darsana (KOE-099)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Understand the need and importance of Vedic Literature with Nyay Darsana	2	C
2	Understand the basics of Vaisesika Darsana	2	C
3	Understand the philosophy of spirituality with Samkhya & Yoga Darsana	2	P
4	Understand the philosophy of the God with the Upanisad & the Vedant Darsana	2	C
5	Understand the purpose and program for a human being based on Vedic Darsana.	2	C

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	-	-	-	-	-	1	2	1	-	-	1	2	-	-
CO-2	-	-	-	-	-	1	-	1	-	1	1	2	-	-
CO-3	-	-	-	-	-	2	2	2	1	1	1	2	-	-
CO-4	-	-	-	-	-	1	1	1	-	-	-	2	-	-
CO-5	-	-	-	-	-	1	2	1	1	1	1	2	-	-
Target Level	-	-	-	-	-		2		1	1	1	2	-	-

Session: 2022-23 **Semester: 8th**

Subject Name (Code): Project-2 (KEN-753)

S No.	Course Outcomes	BL	KL
Student will be able to:			
1	Demonstrate a sound technical knowledge of their selected project topic.	3	P
2	Identification of problem, interpretation and solution.	4	P
3	Formulate engineering solutions to complex problems utilizing a systems approach.	6	M
4	Develop an engineering project and communicate with engineers and the community at large in written and oral forms.	6	M
5	Demonstrate the knowledge, skills and attitudes of a professional engineer as a team.	3	P

PO	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11	PO 12	PSO1	PSO2
CO-1	3	1	-	2	-	1	1	1	1	2	2	2	2	1
CO-2	3	2	1	2	-	2	2	-	2	2	3	2	2	2
CO-3	3	2	3	3	-	1	2	2	3	2	3	2	3	3
CO-4	3	2	2	3	3	1	1	-	3	3	3	3	3	3
CO-5	2	1	1	2	-	1	1	-	2	2	2	2	2	2
Target Level	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

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

F: Factual
C: Conceptual
P: Procedural
M:Metacognitive

The End