COURSE OUTCOMES

Course Name: KCE-301**: Engineering Mechanics** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 301.1	calculate the resultant forces and moment for a given system of forces
KCE 301.2	determine the centroid and second moment of area.
KCE 301.3	apply concepts of structural analysis to solve trusses.
KCE 301.4	understand particle dynamics through work - energy and impulse momentum principles
KCE 301.5	apply concepts of kinetics and principle of virtual work to particle systems and rigid bodies

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 301.1	3	1	-	-	-	3	-	-	1	-	-	3
KCE 301.2	3	1	-	-	-	3	-	-	1	-	-	3
KCE 301.3	3	1	-	-	-	3	-	-	1	-	-	3
KCE 301.4	2	1	-	-	-	3	-	-	1	-	-	3
KCE 301.5	2	1	-	-	-	3	-	-	1	-	-	3
Average	**2.6**	**1**				**3**			**1**			**3**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 301.1	2	2
KCE 301.2	3	3
KCE 301.3	3	3
KCE 301.4	2	2
KCE 301.5	2	2
Average	**2.4**	**2.4**

COURSE OUTCOMES

Course Name: KCE-302**: Surveying & Geomatics** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 302.1	learn the principles and working of conventional surveying instruments, theodolite surveying, levelling, contouring and principles of triangulation systems.
KCE 302.2	apply the principles to set out simple circular curves, transition curves with introduction to vertical curves.
KCE 302.3	understand the concepts of GPS and GIS to analyse GIS data for various applications and applications of EDM in Civil Engineering problems.
KCE 302.4	apply the concept and principles of photogrammetry and stereoscopy to interpret aerial and satellite imagery.
KCE 302.5	understand the concepts of the remote sensing process and its application to Civil Engineering areas.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 302.1	2	1	-	-	1	1	1	-	1	-	-	1
KCE 302.2	3	1	-	-	1	2	1	-	1	-	-	1
KCE 302.3	3	2	2	-	3	2	1	-	-	-	-	2
KCE 302.4	3	2	2	-	3	2	1	-	-	-	-	2
KCE 302.5	3	2	-	2	2	2	1	-	1	2	-	2
Average	2.8	1.6	0.8	0.4	2	1.8	1		0.6	0.4	-	1.6

Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 302.1	3	3
KCE 302.2	2	2
KCE 302.3	3	3
KCE 302.4	3	3
KCE 302.5	2	2
Average	**2.50**	**2.50**

COURSE OUTCOMES

Course Name: KCE-303**: Fluid Mechanics** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 303.1	learn physical properties and characteristic behaviour of fluids & principles of fluid mechanics.
KCE 303.2	measure pressure exerted by a fluid and perform stability analysis on submerged and floating bodies
KCE 303.3	analyse the performance and behaviour of fluid in motion.
KCE 303.4	perform flow measurements and analyse pipe network problems
KCE 303.5	interpret the behaviour of moving fluid under laminar and turbulent conditions and analyse boundary layer formation on submerged bodies

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 303.1	3	3	-	-	-	2	-	-	-	-	-	2
KCE 303.2	3	3	-	-	-	2	-	-	-	-	-	2
KCE 303.3	3	3	-	-	-	2	-	-	-	-	-	2
KCE 303.4	3	3	-	-	-	2	-	-	-	-	-	2
KCE 303.5	3	2	1	-	-	2	-	-	-	-	-	2
Average	**3**	**2.8**	**1.00**	**-**	**-**	**2.00**	**-**	**-**	**-**	**-**	**-**	**2**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 303.1	3	3
KCE 303.2	3	3
KCE 303.3	3	3
KCE 303.4	3	3
KCE 303.5	3	3
Average	**3**	**3**

COURSE OUTCOMES

Course Name: KAS-301**: Technical communication** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 354.1	Statement (on completion of this course the student will be able to)
KCE 354.2	Find, create, and investigate complex engineering challenges using your newly gained technical knowledge and exposure.
KCE 354.3	Use the relevant modelling and simulation tools to make decisions at various stages of the solution process.
KCE 354.4	Working alone or in a team on projects will allow you to show off your interpersonal and communication skills.
KCE 354.5	Recognize the importance and applicability of social, ethical, environmental, and cultural factors in the conception, planning, and execution of projects.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 354.1	3	3	3	3	3	3	3	3	3	3	3	3
KCE 354.2	3	3	3	2	3	3	3	3	2	3	2	3
KCE 354.3	3	3	3	3	3	3	3	3	3	3	3	3
KCE 354.4	-	3	-	-	-	-	3	-	-	-	-	-
KCE 354.5	3	3	3		3	3	3	3	-	3	-	3
Average	2.8	3	2.8	1.6	2.8	2.8	3	2.8	1.6	2.8	1.6	2.8

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 354.1	3	3
KCE 354.2	2	3
KCE 354.3	3	3
KCE 354.4	3	3
KCE 354.5	3	3
Average	2.8	3

COURSE OUTCOMES

Course Name: KCE-351**: Building Planning and Drawing Lab Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 351.1	learn symbols used in Civil Engineering drawings & drawings of masonry bonds.
KCE 351.2	draw parts of doors, windows and staircases, plumbing and electrical drawings
KCE 351.3	learn to draw plumbing and electrical drawings and their applications.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 351.1	1	1	1	2	3	1	-	1	-	-	-	1
KCE 351.2	1	1	1	2	3	2	-	1	-	-	-	2
KCE 351.3	1	1	1	2	3	1	-	1	-	-	-	2
Average	**1.00**	**1.00**	**1.00**	**2.00**	**3.00**	**1.33**	**-**	**1.00**	**-**	**-**	**-**	**1.67**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO1**	**PSO2**
KCE 351.1	3	1
KCE 351.2	3	2
KCE 351.3	3	2
Average	**3**	**1.67**

COURSE OUTCOMES

Course Name: KCE-352**: Surveying & Geomatics Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 352.1	develop the application of basic and conventional surveying instruments, their principles and working by prismatic compass, Auto/Dumpy level, Vernier & electronic theodolite to measure bearings, reduced level, horizontal & vertical angles.
KCE 352.2	measure the distance, horizontal and vertical angles by Total Station & learn to measure the area of a land paKCEl by Total Station.
KCE 352.3	Learn & work with mirror stereoscopes, parallax bar and aerial photographs for extracting useful information using FCC & use GPS to collect point and line data.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 352.1	3	2	-	1	3	1	-	1	2	-	-	2
KCE 352.2	3	2	-	1	3	1	-	1	2	-	-	2
KCE 352.3	3	2	-	1	3	1	-	1	2	-	-	2
Average	**3.00**	**2.00**	**-**	**1.00**	**3.00**	**1.00**	**-**	**1.00**	**2.00**	**-**	**-**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 352.1	3	2
KCE 352.2	2	1
KCE 352.3	2	1
Average	**2.33**	**1.33**

COURSE OUTCOMES

Course Name: KCE-353**: Fluid Mechanics Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 353.1	explore fundamental principles of Fluid Mechanics through experimentation to get practical knowledge in calibration of venturi meter, orifice meter and bend meter.
KCE 353.2	learn the application of the variance of the coefficient of discharge with Reynolds Number for venture meter, orifice meter and bend meter & to draw a flow-net using Electric Analogy method and its application part.
KCE 353.3	study the application part of transition from laminar to turbulent flow and to determine lower critical Reynolds Number & velocity distribution in a pipe and variance of friction factor for turbulent flow in commercial pipes.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 353.1	3	2	-	1	-	-	-	1	1	-	-	2
KCE 353.2	3	2	-	1	-	-	-	2	1	-	-	1
KCE 353.3	3	3	-	2	-	-	-	2	1	-	-	2
Average	**3**	**2.33**	**-**	**1.33**	**-**	**-**	**-**	**1.67**	**1.00**	**-**	**-**	**1.67**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 353.1	3	2
KCE 353.2	2	2
KCE 353.3	3	2
Average	**2.67**	**2**

COURSE OUTCOMES

Course Name: KCE 401**: Materials, Testing & Construction Practices**

Year of study: 2022-23

On completion of this course, the students will be able to	
KCE 401.1	Identify various building materials and to understand their basic properties.
KCE 401.2	Understand the use of non-conventional civil engineering materials.
KCE 401.3	Study suitable type of flooring and roofing in the construction process.
KCE 401.4	Characterize the concept of plastering, pointing and various other building services.
KCE 401.5	Exemplify the various fire protection, sound and thermal insulation techniques, maintenance

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 401.1	1	2	-	-	-	1	-	-	-	-	-	2
KCE 401.2	1	2	-	-	-	1	1	-	-	-	-	3
KCE 401.3	2	3	-	-	-	1	1	-	-	-	-	1
KCE 401.4	2	2	-	-	-	2	1	-	-	-	-	1
KCE 401.5	3	3	2	1	-	1	1	-	-	-	-	2
Average	1.8	2.4	2	1	-	1.2	1	-	-	-	-	1.8

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 401.1	1	1
KCE 401.2	2	2
KCE 401.3	2	2
KCE 401.4	2	2
KCE 401.5	3	2
Average	2	1.8

COURSE OUTCOMES

Course Name: KCE402**: Introduction to Solid Mechanics** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 402.1	Analyze the principal stresses and strains with known direct and shear stresses
KCE 402.2	Analyze various beams with different loadings to draw SFD and BMD
KCE 402.3	Analyze Structural members subjected to combined stresses.
KCE 402.4	Apply various methods to calculate slope and deflection for determinate beams and buckling of columns and struts
KCE 402.5	Analyze the behavior of springs, thin and thick cylinders against loads.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 402.1	3	3	3	-	1	2	-	-	1	-	-	2
KCE 402.2	3	3	3	-	1	3	-	-	1	-	-	3
KCE 402.3	3	3	3	-	-	2	-	-	-	-	-	2
KCE 402.4	2	2	2	-	-	2	-	-	-	-	-	2
KCE 402.5	3	3	3	-	-	2	-	-	-	-	-	2
Average	2.8	2.8	2.8	-	1.00	2.2	-	-	1.00	-	-	2.2

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 402.1	2	2
KCE 402.2	3	3
KCE 402.3	2	2
KCE 402.4	2	2
KCE 402.5	2	2
Average	2.2	2.2

COURSE OUTCOMES

Course Name: KCE403**: Hydraulic Engineering and Machines Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 403.1	Able to apply their knowledge of fluid mechanics in addressing problems in open channels.
KCE 403.2	Able to solve the problems in uniform, gradually varied flows in steady state conditions using concept of specific energy.
KCE 403.3	Understand the principle of hydraulic jump to analyse various open channel surges and its applications.
KCE 403.4	understand the working principle of pumps and their performance curves.
KCE 403.5	Understand the working of turbines and evaluate various characteristic curves.

Mapping of Course Outcome and Program Outcome

PO **CO**	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 403.1	2	1	-	-	-	1	-	-	-	-	-	1
KCE 403.2	3	3	-	-	-	2	-	-	-	-	-	2
KCE 403.3	3	3	1	-	-	2	-	-	-	-	-	2
KCE 403.4	3	3	-	1	-	3	-	-	-	-	-	2
KCE 403.5	3	3	-	-	-	3	-	-	-	-	-	2
Average	2.80	2.60	0.2	0.2	-	2.20	-	-	-	-	-	1.80

Mapping of Course Outcome and Program Specific Outcome

PSO **CO**	**PSO 1**	**PSO 2**
KCE 403.1	2	2
KCE 403.2	3	3
KCE 403.3	3	3
KCE 403.4	3	3
KCE 403.5	3	3
Average	2.80	2.80

COURSE OUTCOMES

Course Name: KOE043**: Energy Science & Engg.** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KOE043.1	Understand various energy and its usage.
KOE043.2	Understand the fundamental forces in universe aspects of nuclear energy
KOE043.3	Estimate the solar energy, Utilization of it, Principles involved in solar energy collection and conversion of it to electricity generation.
KOE043.4	Demonstrate the generation of energy from various Conventional and Non-Conventional sources of energy.
KOE043.5	Explore the concepts involved in systems and synthesis by studying its components, types and performance.

Mapping of Course Outcome and Program Outcome

PO CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KOE043.1	2	2	2	2	-	1	2	-	-	-	-	-
KOE043.2	2	2	2	2	-	1	2	-	-	-	-	-
KOE043.3	2	2	2	2	-	1	2	-	-	-	-	-
KOE043.4	2	2	2	2	-	1	2	-	-	-	-	-
KOE043.5	2	2	2	2	-	1	2	-	-	-	-	-
Average	**2**	**2**	**2**	**2**	**-**	**1**	**2**	**-**	**-**	**-**	**-**	**-**

Mapping of Course Outcome and Program Specific Outcome

PSO CO	**PSO 1**	**PSO 2**
KOE043.1	-	-
KOE043.2	-	-
KOE043.3	-	-
KOE043.4	-	-
KOE043.5	-	-
Average	-	-

COURSE OUTCOMES

Course Name: KVE401**: Univarsal Human Values** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KVE401.1	Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society
KVE401.2	Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body.
KVE401.3	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society
KVE401.4	Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.
KVE401.5	Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KVE401.1	2	2	-	-	-	2	2	-	-	-	-	1
KVE401.2	3	3	1	1	-	2	_	1	-	-	-	2
KVE401.3	3	3	1	-	-	2	-	1	-	-	-	2
KVE401.4	3	3	1	-	-	2	-	1	-	-	-	2
KVE401.5	3	3	_		-	2	-	-	-	-	-	2
Average	2.8	2.8	1.00	1.00		2.00	1.50	1.00				1.8

Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KVE401.1	2	2
KVE401.2	2	2
KVE401.3	3	3
KVE401.4	3	3
KVE401.5	3	3
Average	2.6	2.6

COURSE OUTCOMES

Course Name: KCE-451**: Material Testing Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 451.1	Test various properties of cement.
KCE 451.2	Test properties of coarse and fine aggregates
KCE 451.3	Test water absorption, dimension tolerances and compressive strength of bricks.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 451.1	3	2	-	-	-	2	1	1	1	-	-	2
KCE 451.2	3	2	-	-	-	3	1	2	1	-	-	2
KCE 451.3	3	2	-	-	-	3	1	2	1	-	-	2
Average	**2.00**	**2.00**	-	-	-	**2.67**	**1.00**	**1.67**	**1.00**	-	-	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO1**	**PSO2**
KCE 451.1	2	2
KCE 451.2	2	2
KCE 451.3	2	2
Average	**2**	**2**

COURSE OUTCOMES

Course Name: KCE-452**: Solid Mechanics Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 452.1	To determine the properties of Mild Steel
KCE 452.2	To determine the deflection of a given member
KCE 452.3	To find Critical load in struts with different end conditions

Mapping of Course Outcome and Program Outcome

PO **CO**	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 452.1	3	2	-	2	-	2	-	2	1	-	-	2
KCE 452.2	3	2	-	2	-	3	-	2	1	-	-	2
KCE 452.3	3	2	-	2	-	3	-	2	1	-	-	2
Average	3	2	-	2	-	2	-	2	2	-	-	2

Mapping of Course Outcome and Program Specific Outcome

PSO **CO**	**PSO 1**	**PSO 2**
KCE 452.1	2	2
KCE 452.2	2	2
KCE 452.3	2	2
Average	2	2

COURSE OUTCOMES

Course Name: KCE-453**: Hydraulics & Hydraulic Machine Lab Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 453.1	determine Manning coefficient & the velocity distribution in an open channel.
KCE 453.2	analyse experimentally the study of flow characteristics over a hump & the study of flow characteristics through a horizontal contraction in a rectangular channel.
KCE 453.3	analyse experimentally flow characteristics of a free hydraulic jump & study characteristics of pumps and turbines.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 453.1	2	2	-	2	-	1	-	1	2	-	-	2
KCE 453.2	3	3	-	2	-	1	-	1	2	-	-	2
KCE 453.3	3	3	-	2	-	2	-	1	2	-	-	1
Average	**2.67**	**2.67**	**-**	**2.0**	**-**	**1.33**	**-**	**1.00**	**2.00**	**-**	**-**	**1.67**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 453.1	2	1
KCE 453.2	3	2
KCE 453.3	2	2
Average	**2.33**	**1.67**

COURSE OUTCOMES

Course Name: KNC402: **Python Programming** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KNC 402.1	To read and write simple Python programs.
KNC 402.2	To develop Python programs with conditionals and loops.
KNC 402.3	To define Python functions and to use Python data structures –- lists, tuples, dictionaries
KNC 402.4	To do input/output with files in Python
KNC 402.5	To do searching, sorting and merging in Python

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KNC 402.1	2	2	2	-	-	2	-	-	2	2	-	-
KNC 402.2	3	3	3	-	-	2	-	-	2	2	-	-
KNC 402.3	3	2	3	-	-	2	-	-	2	2	-	-
KNC 402.4	3	2	2	-	-	2	-	-	2	2	-	-
KNC 402.5	2	2	2	-	-	3	-	-	2	2	-	-
Average	2.6	2.2	2.4	-	-	2.2	2	-	2	2	-	-

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KNC 402.1	1	1
KNC 402.2	1	1
KNC 402.3	1	1
KNC 402.4	1	1
KNC 402.5	1	1
Average	1	1

COURSE OUTCOMES

Course Name:KCE-501:**Geotechnical Engineering Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 501.1	Classify the soil and determine its Index properties.
KCE 501.2	Evaluate permeability and seepage properties of soil.
KCE 501.3	Interpret the compaction and consolidation characteristics & effective stress concept of soil.
KCE 501.4	Determine the vertical and shear stress under different loading conditions and explain the phenomenon of soil liquefaction
KCE 501.5	Interpret the earth pressure and related slope failures.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 501.1	3	2	-	-	-	2	-	1	-	-	-	2
KCE 501.2	3	3	1	3	3	2	1	1	-	-	-	2
KCE 501.3	3	3	1	3	3	2	-	1	-	-	-	2
KCE 501.4	3	3	1	3	3	2	-	1	-	-	-	2
KCE 501.5	3	3	3	3	3	2	-	1	-	-	-	2
Average	3.00	2.8	1.2	2.4	2.4	2.00	0.2	1.00				2.00

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 501.1	2	2
KCE 501.2	2	2
KCE 501.3	3	3
KCE 501.4	3	3
KCE 501.5	3	3
Average	2.6	2.6

COURSE OUTCOMES

Course Name:KCE 502: Structural Analysis **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 502.1	Explain type of structures and method for their analysis.
KCE 502.2	Analyze different types of trusses for member foKCEs.
KCE 502.3	Compute slope and deflection in determinate structures using different methods.
KCE 502.4	Apply the concept of influence lines and moving loads to compute bending moment and shear foKCE at different sections.
KCE 502.5	Analyze determinate arches for different loading conditions.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 502.1	3	3	-	-	-	3	-	-	-	-	-	3
KCE 502.2	3	3	-	-	-	3	-	-	-	-	-	3
KCE 502.3	3	3	-	-	-	3	-	-	-	-	-	3
KCE 502.4	3	3	-	-	-	2	-	-	-	-	-	2
KCE 502.5	3	3	-	-	-	3	-	-	-	-	-	3
Average	**3**	**3**	**-**	**-**	**-**	**2.8**	**-**	**-**	**-**	**-**	**-**	**2.8**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 502.1	3	3
KCE 502.2	3	3
KCE 502.3	3	2
KCE 502.4	3	3
KCE 502.5	2	2
Average	**2.8**	**2.6**

COURSE OUTCOMES

Course Name:KCE 503**:Quantity Estimation & Management Year of study:2022-23**

On completion of this course, the students will be able to	
KCE 503.1	learn estimation of quantities of buildings by different methods
KCE 503.2	analyse rates as per specifications of works
KCE 503.3	apply network techniques of CPM and PERT
KCE 503.4	understand the practical aspect of construction equipment management including earth moving, hauling and conveying equipment
KCE 503.5	learn the project cost control, budgeting and cost planning

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 503.1	2	1	1	1	-	1	-	-	-	-	-	1
KCE 503.2	2	3	3	2	-	2	-	-	-	-	-	2
KCE 503.3	2	2	3	1	-	2	-	-	-	-	-	2
KCE 503.4	3	3	2	2	-	2	-	-	-	-	-	2
KCE 503.5	3	3	3	1	-	3	-	-	-	-	-	2
Average	**2.83**	**2.67**	**0.16**	**0.16**	**-**	**2.50**	**0.16**	**0.33**	**-**	**-**	**2.67**	**2.67**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 503.1	2	2
KCE 503.2	3	3
KCE 503.3	2	3
KCE 503.4	2	3
KCE 503.5	3	3
Average	**2.67**	**2.67**

COURSE OUTCOMES

Course Name:KCE 052**:Concrete Technology** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 052.1	Understand the properties of constituent material of concrete.
KCE 052.2	Apply admixtures to enhance the properties of concrete.
KCE 052.3	Evaluate the strength and durability parameters of concrete.
KCE 052.4	Design the concrete mix for various strengths using difference methods
KCE 052.5	Formulate the advanced concrete types in construction industry.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 052.1	3		-	-	-	2	-	-	-	-	-	3
KCE 052.2	3		3	3	-	3	-	2	-	-	-	2
KCE 052.3	3	3	3	3	3	3	-	2	-	-	-	3
KCE 052.4	3	3	3	3	3	3	-	2	-	-	-	3
KCE 052.5	3		-	-	-	3	-	-	-	-	-	3
Average	**3**	**3**	**3**	**3**	**3**	**2.8**		**2**				**3**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 052.1	2	2
KCE 052.2	2	2
KCE 052.3	3	3
KCE 052.4	3	3
KCE 052.5	3	3
Average	**2.67**	**2.67**

COURSE OUTCOME

Course Name:KNC501**: Constitution Of India, Law And Engineering Year of study: 2022-23**

Course Outcome	On completion of this course the student will be able to
KNC 501.1	Identify and explore the basic features and modalities about Indian constitution.
KNC 501.2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.
KNC 501.3	Differentiate different aspects of Indian Legal System and its related bodies.
KNC 501.4	Discover and apply different laws and regulations related to engineering practices.
KNC 501.5	Correlate role of engineers with different organizations and governance models

Mapping of Course Outcome and Program Outcome

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KNC 501.1	2	2	-	-	-	2	2	-	-	-	-	1
KNC 501.2	3	3	0	1	-	2	_	1	-	-	-	2
KNC 501.3	3	3	0	-	-	2	-	1	-	-	-	2
KNC 501.4	3	3	0	-	-	2	-	1	-	-	-	2
KNC 501.5	3	3	_		-	2	-	-	-	-	-	2
Average	2.8	2.8	**-**	1.00	**-**	2.00	**2**	1.00				1.8

Mapping of Course Outcome and Program Specific Outcome

CO	PSO 1	PSO 2
KNC 501.1	2	2
KNC 501.2	2	2
KNC 501.3	3	3
KNC 501.4	3	3
KNC 501.5	3	3
Average	2.6	2.6

COURSE OUTCOMES

Course Name: KCE-055**: Engineering Hydrology** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 055.1	understand the various aspects of hydrological cycle & definitions, hydrologic systems precipitation, evaporation, infiltration and evapotranspiration.
KCE 055.2	analyse the direct runoff, unit hydrographs ,s-curve hydrograph, synthetic and instantaneous unit hydrographs used for the analysis of runoff.
KCE 055.3	analyse and estimate hydrologic and hydraulic flood routing, flood frequencies and flood forecasting.
KCE 055.4	analyse steady and unsteady flow through confined and unconfined aquifers, Dupuits theory, well hydraulics, mutual interference of wells, well losses, specific capacity.
KCE 055.5	design the water wells and pumping equipment for water wells.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 055.1	2	2	-	-	-	2	-	-	-		-	2
KCE 055.2	2	2	-	-	-	2	2	-	-		-	2
KCE 055.3	3	2	2	1	-	2	2	2	-		-	2
KCE 055.4	3	3	-	-	-	2	2	-	-		-	2
KCE 055.5	2	2	2	1	-	2	2	-	-		-	2

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 055.1	2	2
KCE 055.2	2	3
KCE 055.3	3	2
KCE 055.4	2	2
KCE 055.5	3	2

COURSE OUTCOMES

Course Name:KCE-551**:Geotechnical Engineering Lab** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 552.1	perform specific gravity of a given soil sample & in-situ dry density of soil mass.
KCE 552.2	perform tests and applicability of complete distribution of soil grain size distribution & consistency limits of a given soil sample.
KCE 552.3	perform tests and applicability of compaction characteristics of a given soil sample & consolidation characteristics of a remoulded soil sample.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 552.1	3	1	-	2	-	2	-	1	2	-	-	2
KCE 552.2	3	1	-	2	-	3	-	2	2	-	-	2
KCE 552.3	3	1	-	2	-	3	-	1	2	-	-	2
Average	**3.00**	**1.00**	**-**	**2.00**	**-**	**2.67**	**-**	**1.33**	**2.00**	**-**	**-**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 552.1	3	2
KCE 552.2	3	2
KCE 552.3	3	2
Average	**3**	**2**

COURSE OUTCOMES

Course Name: KCE 552 CAD LAB **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 552.1	Analyze the main module of GIS, georeferencing and digitizing a map
KCE 552.2	Process spatial and attribute data and prepare thematic maps, base maps and creating shapefile
KCE 552.3	conversion of a map from raster layer to vector layer & vice versa, vector analysis using georeferencing tool, raster analysis and adding map components, layout and Exporting Map

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 552.1	3	2	-	1	2	-	-	1	1	-	-	2
KCE 552.2	3	2	-	1	2	-	-	1	1	-	-	2
KCE 552.3	3	3	-	2	2	-	-	1	1	-	-	2
Average	3	2.33	-	1.33	3	-	-	1	1	-	-	**2**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 552.1	3	2
KCE 552.2	2	2
KCE 552.3	3	2
Average	2.67	2

COURSE OUTCOMES

Course Name:KCE 553**:** Quantity Estimation and Management Lab **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE553.1	To estimate the quantities of a residential building.
KCE553.2	to estimate the Bill of Quantities for a residential building.
KCE553.3	to learn the practical aspects of of tender documents,

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 553.1	3	-	-	2	-	2	-	1	-	-	-	2
KCE 553.2	3	-	-	2	-	2	-	2	-	-	-	2
KCE 553.3	3	-	-	2	-	2	-	1	-	-	-	2
Average	**3.00**	**-**	**-**	**2.00**	**-**	**2.00**	**-**	**1.33**	**-**	**-**	**-**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 553.1	3	2
KCE 553.2	3	3
KCE 553.3	3	3
Average	**3**	**2.67**

COURSE OUTCOMES

Course Name: KCE-601**: Design of Concrete Structure** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 601.1	Analyse and Design RCC beams for flexure by IS methods.
KCE 601.2	Analyse and Design RCC beams for shear by IS methods.
KCE 601.3	Analyse and Design RCC slabs and staircase by IS methods.
KCE 601.4	Design the RCC compression members by IS methods.
KCE 601.5	Design various types of footings and cantilever retaining wall

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 601.1	3	3	-	-	-	3	-	2	-	-	-	3
KCE 601.2	3	3	-	-	-	3	-	2	-	-	-	3
KCE 601.3	3	3	-	-	-	3	-	2	-	-	-	3
KCE 601.4	3	3	-	-	-	3	-	2	-	-	-	3
KCE 601.5	3	3	1	1	-	3	-	2	-	-	-	3
Average	**3.00**	**3.00**	**1.00**	**1.00**	**-**	**3.00**	**-**	**2.00**	**-**	**-**	**-**	**3.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 601.1	2	2
KCE 601.2	2	2
KCE 601.3	3	3
KCE 601.4	3	3
KCE 601.5	3	3
KCE 601.6	3	3
Average	**2.67**	**2.67**

COURSE OUTCOMES

Course Name: KCE-602**: Environmental Engineering** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 603.1	identify water demands, methods of population forecasting and optimal size of water mains
KCE 603.2	analyze water storage and distribution systems and access the capacity of reservoir.
KCE 603.3	describe characteristics of supply water and wastewater
KCE 603.4	Explain various water treatment processes along with disinfection and design water treatment units
KCE 603.5	Explain various wastewater treatment processes and design waste water treatment units

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 603.1	2	2	_	_	-	3	3	1	-	-	-	2
KCE 603.2	3	3	_	-	-	3	3	1	-	-	-	2
KCE 603.3	2	2	-	-	-	3	3	1	-	-	-	2
KCE 603.4	3	3	1	-	-	2	3	1	-	-	-	2
KCE 603.5	3	3	1	-	-	3	3	1	-	-	-	2
Average	2.67	2.67	1.00		-	2.83	3.00	1.00	-	-	-	1.83

Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 603.1	2	2
KCE 603.2	2	2
KCE 603.3	3	3
KCE 603.4	3	3
KCE 603.5	3	3
Average	**2.67**	**2.67**

COURSE OUTCOMES

Course Name: KCE-602**: Transportation Engineering** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 602.1	Understand the history of road development, their alignment & Survey.
KCE 602.2	Design the various geometric parameters of road.
KCE 602.3	Study the traffic characteristics & design of road intersections & signals.
KCE 602.4	Examine the properties of highway materials & their implementation in the design of pavements.
KCE 602.5	Evaluate the various methods to construct different types of roads.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 602.1	3	-	-	-	-	2	-	-	-	-	-	1
KCE 602.2	3	3	3	3	3	2	_	1	-	-	-	3
KCE 602.3	3	3	3	3	3	2	-	1	-	-	-	3
KCE 602.4	3	3	-	-	3	2	-	1	-	-	-	2
KCE 602.5	3	3	_	-	-	2	-	-	-	-	-	2
Average	**3**	**3**	**3**	**3**	**3**	2.00	-	1	-	-	-	2.5

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 602.1	2	2
KCE 602.2	2	2
KCE 602.3	3	3
KCE 602.4	3	3
KCE 602.5	3	3
Average	**2.67**	**2.67**

COURSE OUTCOMES

Course Name: KCE-063**:** INTRODUCTION TO MEMS **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 063.1	Understand the Basic concept of MEMS Fabrication Technologies, Piezoresistance Effect, Piezoelectricity, Piezoresistive Sensor.
KCE 063.2	Explain Mechanics of Beam and Diaphragm Structures.
KCE 063.3	Understand the Basic concept of Air Damping and Basic Equations for Slide-film Air Damping, Couette-flow Model, Stokes-flow Model.
KCE 063.4	Know the concept of Electrostatic Actuation.
KCE 063.5	Understand the applications of MEMS in RF

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 063.1	2	2	-	-	-	2	2	-	-	-	-	1
KCE 063.2	3	3	1	1	-	2	_	1	-	-	-	2
KCE 063.3	3	3	1	-	-	2	-	1	-	-	-	2
KCE 063.4	3	3	1	-	-	2	-	1	-	-	-	2
KCE 063.5	3	3	_		-	2	-	-	-	-	-	2
Average	2.8	2.8	1.00	1.00		2.00	1.50	1.00				1.8

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 063.1	2	2
KCE 063.2	2	2
KCE 063.3	3	3
KCE 063.4	3	3
KCE 063.5	3	3
Average	2.6	2.6

COURSE OUTCOMES

Course Name: KCE-064**:** Foundation Design **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 064.1	Understand the practical aspects of modern methods of soil investigations.
KCE 064.2	Understand to analyse bearing capacity and settlement analysis of shallow foundations.
KCE 064.3	Compute load carrying capacity and settlement of single pile or pile group.
KCE 064.4	Analyse and design well foundations.
KCE 064.5	Analyse and design retaining walls.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 064.1	2	2	-	-	-	2	-	-	-	-	-	2
KCE 064.2	3	3	1	1	-	2	-	-	-	-	-	2
KCE 064.3	3	3	1	1	-	1	-	-	-	-	-	3
KCE 064.4	3	3	1	1	-	2	-	-	-	-	-	2
KCE 064.5	3	3	-	-	-	2	-	-	-	--	-	2
Average	**2.83**	**2.67**	**1.00**	**1.00**	**-**	**1.83**	**-**	**-**	**-**	**-**	**-**	**2.17**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 064.1	2	2
KCE 064.2	3	3
KCE 064.3	3	3
KCE 064.4	3	3
KCE 064.5	3	3
Average	**2.67**	**2.67**

COURSE OUTCOMES

Course Name: KCE-061**: Indian Tradition, Culture and Society Year of study: 2022-23**

On completion of this course, the students will be able to	
KNC 602.1	To identify the roots and details of some ofthe contemporary issues faced by our nation and try to locate possible solutions to thesechallenges by digging deep into our past.
KNC 602.2	To understand the importance of our surroundings and encourage the students to contribute towards sustainabledevelopment.
KNC 602.3	To make aware of holistic life styles ofYogic-science and wisdom capsules in Sanskrit literature that are important in modern society with rapid technological advancements and societal disruptions.
KNC 602.4	To sensitize towards issues related to'Indian' culture, tradition and its composite character.
KNC 602.5	To acquaint with Indian Knowledge System, Indian perspective of modernscientific world-view and basic principles of Yoga and holistic health care system.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KNC 602.1	-	-	-	-	-	2	-	-	-	2	-	1
KNC 602.2	-	-	-	-	-	2	-	-	-	2	-	1
KNC 602.3	-	-	-	-	-	2	-	-	-	2	-	1
KNC 602.4	-	-	-	-	-	2	-	-	-	2	-	1
KNC 602.5	-	-	-	-	-	2	-	-	-	2	-	1
Average	-	-	-	-	-	2	-	-	-	2	-	1

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KNC 602.1	-	-
KNC 602.2	-	-
KNC 602.3	-	-
KNC 602.4	-	-
KNC 602.5	-	-
Average	-	-

COURSE OUTCOMES

Course Name: KCE-652**: Environmental Engineering Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 652.1	Determine turbidity and conductivity & pH, alkalinity and acidity of a waste water sample.
KCE 652.2	Determine hardness and chlorides & residual chlorine of a waste water sample
KCE 652.3	Determine BOD and COD & total, suspended and dissolved particles of a waste water sample

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 652.1	3	3	2	2	-	2	3	2	2	-	-	2
KCE 652.2	3	2	2	2	-	3	3	2	2	-	-	3
KCE 652.3	3	3	2	2	-	3	3	2	2	-	-	3
Average	**3.00**	**2.67**	**2**	**2**	-	**2.67**	**3.00**	**2**	**2**	**-**	**-**	**2.67**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 652.1	2	2
KCE 652.2	3	3
KCE 652.3	3	2
Average	**2.67**	**2.33**

COURSE OUTCOMES

Course Name: KCE-651**: Transportation Engineering Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 651.1	Perform the various tests on aggregate like crushing value, impact value, flakiness, los angles and stripping value of coarse- aggregate.
KCE 651.2	Perform the various tests on bitumen like of penetration Value, softening value, ductility, flash & fire point, and striping value.
KCE 651.3	Perform the various tests of traffic study like traffic volume study, speed study and able to find the strength of subgrade soil.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 651.1	3	2	-	3	3	2	-	2	2	-	-	3
KCE 651.2	3	2	-	3	3	2	-	2	2	-	-	3
KCE 651.3	3	2	-	3	3	2	-	2	2	-	-	3
Average	3.00	2.00	-	3.00	3.00	2.00	-	2.00	2.00	-	-	3.00

Mapping of Course Specific Outcome and Program Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 651.1	2	2
KCE 651.2	2	2
KCE 651.3	2	2
Average	2	2

COURSE OUTCOMES

Course Name: KCE-653**: Structural Detailing Lab** **Year of study: 2022-23**

On completion of this Lab, the students will be able to	
KCE 653.1	draw influence line diagrams for Horizontal Thrust end Bending moment of two hinged and three hinged arch.
KCE 653.2	Learn preparation of working drawing for simply supported, continuous RC beams and slabs.
KCE 653.3	Learn preparation of working drawing for isolated footings for RC Columns & combined rectangular and trapezoidal footings.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 653.1	3	1	-	2	-	2	-	1	-	-	-	2
KCE 653.2	3	1	-	2	-	2	-	2	-	-	-	2
KCE 653.3	3	1	-	2	-	2	-	1	-	-	-	2
Average	**3.00**	**1.00**	**-**	**2.00**	**-**	**2**	**-**	**1.33**	**-**	**-**	**-**	**2**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 653.1	2	2
KCE 653.2	2	2
KCE 653.3	2	2
Average	**2.00**	**2.00**

COURSE OUTCOMES

Course Name: KCE-071**: Railway Airport & Water Ways Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE071.1	Explain the importance of railway infrastructure.
KCE071.2	Identify the factors governing design of railway infrastructures.
KCE071.3	Analysis and design the railway track system.
KCE071.4	Understand the concepts of airport engineering and design components of airport.
KCE071.5	Associate with the concepts of water transport system.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE071.1	2	2	-	-	-	1	-	-	-	-	-	2
KCE071.2	3	3	3	-	-	2	-	-	-	-	-	2
KCE071.3	3	2	3	-	-	2	-	-	-	-	-	2
KCE071.4	3	2	-	-	-	2	-	-	-	-	-	1
KCE071.5	2	2	-	-	-	2	2	-	-	-	-	1
Average	**2.83**	**2.67**	**3**	**-**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**2**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE071.1	2	2
KCE071.2	3	3
KCE071.3	3	2
KCE071.4	3	3
KCE071.5	3	3
Average	**2.83**	**2.67**

COURSE OUTCOMES

Course Name: KHU-701**:** RURAL DEVELOPMENT: ADMINISTRATION AND PLANNING

Year of study: 2022-23

On completion of this course, the students will be able to	
KCE 702.1	Students can understand the definitions, concepts and components of Rural Development
KCE 702.2	Students will know the importance, structure, significance, resources of Indian rural economy.
KCE 702.3	Students will have a clear idea about the area development programmes and its impact.
KCE 702.4	Students will be able to acquire knowledge about rural entrepreneurship.
KCE 702.5	Students will be able to understand about the using of different methods for human resource planning

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 702.1	2	2	-	-	-	2	2	-	-	-	-	1
KCE 702.2	3	3	1	1	-	2	_	1	-	-	-	2
KCE 702.3	3	3	1	-	-	2	-	1	-	-	-	2
KCE 702.4	3	3	1	-	-	2	-	1	-	-	-	2
KCE 702.5	3	3	_		-	2	-	-	-	-	-	2
Average	2.8	2.8	1.00	1.00		2.00	1.50	1.00				1.8

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 702.1	2	2
KCE 702.2	2	2
KCE 702.3	3	2
KCE 702.4	3	3
KCE 702.5	3	3
Average	**2.67**	**2.50**

COURSE OUTCOMES

Course Name: Irrigation and Water Resource Engineering (KCE078) **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 071.1	analyse the hydrologic cycle, hydrologic systems precipitation, evaporation and infiltration
KCE 071.2	analyse the direct runoff and hydrographs used for the analysis of runoff
KCE 071.3	learn the irrigation systems and development of irrigation in India.
KCE 071.4	learn sediment transport theories of lined and unlined canal system
KCE 071.5	design of the regulation and control systems of canal and types of canal irrigation works

Mapping of Course Outcome and Program Outcome

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KCE 071.1	2	2	-	-	-	1	-	-	-	-	-	2
KCE 071.2	3	2	-	-	-	2	1	-	-	-	-	2
KCE 071.3	3	3	-	-	-	2	1	-	-	-	-	1
KCE 071.4	3	3	-	-	-	3	1	-	-	-	-	2
KCE 071.5	3	3	2	1	-	2	1	-	-	-	-	2
Average	**2.83**	**2.50**	**2.00**	**1.00**	**-**	**2.00**	**1.00**	**-**	**-**	**-**	**-**	**1.83**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	PSO 1	PSO 2
KCE 071.1	2	2
KCE 071.2	2	2
KCE 071.3	3	2
KCE 071.4	3	3
KCE 071.5	2	2
Average	2	2

COURSE OUTCOMES

Course Name: Renewable Energy Resources (KCE074) **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 076.1	Understand of renewable sources of energy and solar cell
KCE 076.2	Gain knowledge about working principle of various solar energy systems
KCE 076.3	Understand Geothermal energy and magneto-hydrodynamics, its mechanism of production and its applications
KCE 076.4	Illustrate the concepts of Direct Energy Conversion systems & their applications and to educate the wind energy operation and its types
KCE 076.5	Explain bio gas generation and understand the principle and mechanism of Geothermal & Tidal energy

Mapping of Course Outcome and Program Outcome

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KCE 076.1	3	2	2	2	2	1	2	1	3	1	-	3
KCE 076.2	3	2	2	2	2	1	2	1	3	1	-	3
KCE 076.3	3	2	2	2	2	1	2	1	3	1	-	3
KCE 076.4	3	2	2	2	2	1	2	1	3	1	-	3
KCE 076.5	3	2	2	2	2	1	2	1	3	1	-	3
Average	3	2	2	2	2	1	2	1	3	1	-	3

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	PSO 1	PSO 2
KCE 076.1	2	1
KCE 076.2	2	1
KCE 076.3	2	-
KCE 076.4	2	-
KCE 076.5	2	-
Average	2	1

COURSE OUTCOMES

Course Name: ROE071: Modelling and Simulation of Dynamic Systems

Year of study: 2022-23

On completion of this course, the students will be able to	
ROE 071.1	Define, describe and apply basic concepts related to modeling and simulation.
KCE 076.2	Construct bond graphs for the type of systems mentioned above, simplify and analyze the bond graph according to causality conflicts, and from a given bond graph without conflicts.
ROE 071.3	Use conservation laws and constitutive relationships and other physical relations to model mechanical, electrical and flow systems, and combinations of these.
ROE 071.4	Find dynamic response and transfer function using various tools for system modelling.
ROE 071.5	Model and simulate mechanical and electrical systems using the computer tools Simulink.

Mapping of Course Outcome and Program Outcome

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
ROE 071.1	3	2	1	-	-	2	2	-	-	-	-	3
KCE 076.2	3	2	1	-	-	2	2	-	-	-	-	3
ROE 071.3	3	2	1	-	-	2	2	-	-	-	-	3
ROE 071.4	3	2	1	-	-	2	2	-	-	-	-	3
ROE 071.5	3	2	1	-	-	2	2	-	-	-	-	3
Average	**3**	**2**	**1**	**-**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**3**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	PSO 1	PSO 2
ROE 071.1	1	1
KCE 076.2	1	1
ROE 071.3	1	1
ROE 071.4	1	1
ROE 071.5	1	1
Average	**1**	**1**

COURSE OUTCOMES

Course Name: KCE-751**: Non Destructive Testing Laboratory** **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 751.1	determine the compressive strength of the concrete by using rebound hammer, ultrasonic puls velocity test and pull out method
KCE 751.2	assess the corrosion in the reinforcement bar and determine thickness of concrete cover, diameter & spacing of reinforcing bars
KCE 751.3	analyse the characteristic of structural steel by using various laboratory test such as corrosion and welding performance.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 751.1	3	-	-	-	2	3	2	1	2	-	-	1
KCE 751.2	3	-	-	-	2	3	2	1	2	-	-	1
KCE 751.3	3	-	-	-	2	3	3	1	2	-	-	1
Average	**3**	**-**	**-**	**-**	**2**	**3**	**2.33**	**1**	**2**	**-**	**-**	**1**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 751.1	2	2
KCE 751.2	2	2
KCE 751.3	2	2
Average	**2**	**2**

KCE753 Industrial Training **Credit – 1**

COURSE OUTCOMES

Course Name : KCE 753: Industrial Training **Year of study:2022-23**

On completion of this course, the students will be able to	
KCE 753.1	understand basic terminology of a particular Civil Engineering Industry & its components
KCE 753.2	understand the relationship between components of a particular Civil Engineering Industry & its system of working
KCE 753.3	apply appropriate practical experience in various working procedures related to Civil Engineering Industry

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 753.1	2	2	-	-	-	2	1	1	3	2	2	3
KCE 753.2	3	2	-	-	-	2	1	1	3	2	2	3
KCE 753.3	2	2	-	-	-	2	1	1	3	2	2	3
KCE 753	**2.33**	**2.00**	**-**	**-**	**-**	**2.00**	**1.00**	**1.00**	**3.00**	**2.00**	**2.00**	**3.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 753.1	1	1
KCE 753.2	2	2
KCE 753.3	2	2
KCE 753	**1.67**	**1.67**

KCE754 Project-I **(L-T-P 0-0-4)** **Credit – 8**

COURSE OUTCOMES

Course Name: KCE 875: Project **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 754.1	Identify complex civil engineering problems based on current state of art and demonstrate knowledge of mathematics, science, engineering fundamentals and domain knowledge in Civil Engineering to the solution of complex engineering problems
KCE 754.2	demonstrate an ability to understand the design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, cultural, societal and environmental considerations
KCE 754.3	demonstrate the research-based knowledge to systematize the research methods including design and conduct of experiments, analysis and interpretation of data with an understanding of the limitation and synthesis of the information to provide valid conclusions within the specified time frame
KCE 754.4	understand the impact of professional engineering solutions in social, ethical, environmental, and cultural contexts and demonstrate the knowledge of and need for sustainable development
KCE 754.5	understand and apply engineering principles and modern tools to achieve the specified objectives.
KCE 754.6	able to communicate effectively on complex engineering activities with the engineering community and society at large, such as, being able to comprehend and write effective reports and design documents, make effective presentations, and give /receive clear instructions as an individual and as team member.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 754.1	3	3	3	1	1	2	1	1	2	1	1	2
KCE 754.2	3	3	3	1	2	2	1	2	3	1	1	2
KCE 754.3	3	3	3	1	3	1	1	2	2	1	1	2
KCE 754.4	3	2	2	1	2	3	3	3	2	1	1	2
KCE 754.5	3	2	2	1	3	2	1	2	2	1	2	2
KCE 754.6	3	2	2	1	2	2	1	2	2	3	1	2
KCE 754	**3.00**	**2.50**	**2.50**	**1.00**	**2.17**	**2.00**	**1.33**	**2.00**	**2.17**	**1.33**	**1.17**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 754.1	1	1
KCE 754.2	3	3
KCE 754.3	3	3
KCE 754.4	2	2
KCE 754.5	3	3
KCE 754.6	1	1
KCE 754	**2.17**	**2.17**

COURSE OUTCOMES

Course Name: ROE086: RENEWABLE ENERGY RESOUKCES Year of study: 2022-23

On completion of this course, the students will be able to	
ROE 086.1	Understand the Various non-conventional energy resouKCEs and their merits and demerits.
ROE 086.2	Illustrate the concept of Solar Cells and Solar Thermal Energy utilization in various applications.
ROE 086.3	Comprehend the concept of Geothermal, Magneto-hydrodynamics (MHD) power plants and Fuel Cells & their applications.
ROE 086.4	Identify Winds energy as alternate form of energy and to know how it can be tapped.
ROE 086.5	Describe the Biomass resouKCEs and its conversion.
ROE 086.6	Understand and analyze the Ocean Thermal Energy Conversion (OTEC) and Wave and Tidal Wave energy resouKCEs.

Mapping of Course Outcome and Program Outcome

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
ROE 086.1	3	2	1			2	2					3
ROE 086.2	3	2	1			2	2					3
ROE 086.3	3	2	1			2	2					3
ROE 086.4	3	2	1			2	2					3
ROE 086.5	3	2	1			2	2					3
ROE 086.6	3	2	1			2	2					3
Average	3.00	2.00	1.00			2.00	2.00	-	-	-	-	3.00

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	PSO 1	PSO 2
ROE 086.1	1	1
ROE 086.2	1	1
ROE 086.3	1	1
ROE 086.4	1	1
ROE 086.5	1	1
ROE 086.6	1	1
Average	1	1

COURSE OUTCOMES

Course Name: KCE-084: Solid Waste Management **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 084.1	understand solid waste management souKCEs, types, functional elements and to explain the hierarchical structure in solid waste management and a requirement for an integrated solution.
KCE 084.2	select the appropriate method for transportation and handling of solid waste.
KCE 084.3	explain the operation and maintenance of landfill
KCE 084.4	examine the operation of composting and energy recovery from waste
KCE 084.5	describe hazardous waste and its disposal
KCE 084.6	gain knowledge on E-Waste and biomedical waste and their disposal

Mapping of Course Outcome and Program Outcome

PO / CO	**PO1**	**PO 2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
KCE 084.1	2	1	3	-	-	-	2	-	1	-	1	2
KCE 084.2	2	1	3	-	2	2	2	2	2	-	1	2
KCE 084.3	2	1	2	-	-	2	2	-	2	-	1	2
KCE 084.4	2	1	2	-	-	-	2	-	2	-	1	2
KCE 084.5	2	1	2	-	-	2	3	2	1	-	1	2
KCE 084.6	2	1	2	-		2	3	2	1	-	1	2
Average	**2**	**1**	**2.3**	**-**	**2**	**2**	**2.33**	**2**	**1.5**	**-**	**1**	**2**

Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 084.1	1	1
KCE 084.2	1	1
KCE 084.3	1	1
KCE 084.4	1	1
KCE 084.5	1	1
KCE 084.6	1	1
Average	**1**	**1**

COURSE OUTCOMES

Course Name: KCE-085**: Engineering Hydrology and Ground Water Management**

Year of study: 2022-23

On completion of this course, the students will be able to	
KCE 085.1	understand the various aspects of hydrological cycle & definitions, hydrologic systems precipitation, evaporation, infiltration and evapotranspiration.
KCE 085.2	analyse the direct runoff, unit hydrographs ,s-curve hydrograph, synthetic and instantaneous unit hydrographs used for the analysis of runoff.
KCE 085.3	analyse and estimate hydrologic and hydraulic flood routing, flood frequencies and flood forecasting.
KCE 085.4	analyse steady and unsteady flow through confined and unconfined aquifers, Dupuits theory, well hydraulics, mutual interference of wells, well losses, specific capacity.
KCE 085.5	design the water wells and pumping equipment for water wells.
KCE 085.6	understand ground water quality, contamination of groundwater and its control, ground water modeling techniques and ground water exploration, rain water harvesting.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 085.1	2	2	-	-	-	2	-	-	-		-	2
KCE 085.2	2	2	-	-	-	2	2	-	-		-	2
KCE 085.3	3	2	2	1	-	2	2	2	-		-	2
KCE 085.4	3	3	-	-	-	2	2	-	-		-	2
KCE 085.5	2	2	2	1	-	2	2	-	-		-	2
KCE 085.6	2	2	-	-	1	2	2	-	-		-	2
Average	**2.33**	**2.17**	**2.00**	**1.00**	**1.00**	**2.00**	**2.00**	**2.00**	**-**	**-**	**-**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 085.1	2	2
KCE 085.2	2	3
KCE 085.3	3	2
KCE 085.4	2	2
KCE 085.5	3	2
KCE 085.6	3	3
Average	**2.5**	**2.33**

COURSE OUTCOMES

Course Name: KCE-086**: Urban Transportation System & Planning**

Year of study: 2022-23

On completion of this course, the students will be able to	
KCE 086.1	understand the various aspects of social, political, and environmental role of transportation.
KCE 086.2	understand objective, goal and need of transportation planning.
KCE 086.3	learn the type of transportation systems and their applications.
KCE 086.4	analyse the travel demand and trip generation.
KCE 086.5	understand the evaluation of transport planning proposals and long and short term planning.
KCE 086.6	understand the various aspects of the transport management system and their applications.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 086.1	1	-	-	-	-	1	-	-	-	-	-	2
KCE 086.2	2	-	-	-	-	2	-	-	-	-	-	3
KCE 086.3	2	2	-	-	-	3	-	-	-	-	-	2
KCE 086.4	3	3	-	-	-	2	-	1	-	-	-	3
KCE 086.5	3	2	2	-	-	2	-	1	-	-	-	2
KCE 086.6	2	2	-	-	-	2	-	-	-	-	-	2
Average	**2.17**	**2.25**	**2.00**	**-**	**-**	**2.00**	**-**	**1.00**	**-**	**-**	**-**	**2.33**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 086.1	2	2
KCE 086.2	2	2
KCE 086.3	3	2
KCE 086.4	3	3
KCE 086.5	3	3
KCE 086.6	3	3
Average	**2.67**	**2.5**

KCE851 Seminar **(L-T-P 0-0-4)** **Credit – 1**

COURSE OUTCOMES

Course Name : KCE 851: Seminar **Year of study:2022-23**

On completion of this course, the students will be able to	
KCE 851.1	understand the process of selection of a Technical topic & gathering the technical information related with the topic with relevant engineering knowledge.
KCE 851.2	understand the methodology to systematize the gathered information on the topic & organize the presentation
KCE 851.3	identifying the most relevant technical aspects for a preparation of effective presentation with use of graphics and ppt

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 851.1	2	1	-	-	1	2	1	1	1	3	-	1
KCE 851.2	2	1	-	-	1	2	1	1	1	3	-	1
KCE 851.3	2	1	-	-	1	2	1	1	1	3	-	1
KCE 851	2.00	1.00	-	-	1.00	2.00	1.00	1.00	1.00	3.00	-	1.00

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 851.1	1	1
KCE 851.2	3	2
KCE 851.3	1	1
KCE 851	**1.67**	**1.33**

KCE852 Project **(L-T-P 0-0-4)** **Credit – 8**

COURSE OUTCOMES

Course Name: KCE 852: Project **Year of study: 2022-23**

On completion of this course, the students will be able to	
KCE 852.1	Identify complex civil engineering problems based on current state of art and demonstrate knowledge of mathematics, science, engineering fundamentals and domain knowledge in Civil Engineering to the solution of complex engineering problems
KCE 852.2	demonstrate an ability to understand the design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, cultural, societal and environmental considerations
KCE 852.3	demonstrate the research-based knowledge to systematize the research methods including design and conduct of experiments, analysis and interpretation of data with an understanding of the limitation and synthesis of the information to provide valid conclusions within the specified time frame
KCE 852.4	understand the impact of professional engineering solutions in social, ethical, environmental, and cultural contexts and demonstrate the knowledge of and need for sustainable development
KCE 852.5	understand and apply engineering principles and modern tools to achieve the specified objectives.
KCE 852.6	able to communicate effectively on complex engineering activities with the engineering community and society at large, such as, being able to comprehend and write effective reports and design documents, make effective presentations, and give /receive clear instructions as an individual and as team member.

Mapping of Course Outcome and Program Outcome

PO / CO	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**
KCE 852.1	3	3	3	1	1	2	1	1	2	1	1	2
KCE 852.2	3	3	3	1	2	2	1	2	3	1	1	2
KCE 852.3	3	3	3	1	3	1	1	2	2	1	1	2
KCE 852.4	3	2	2	1	2	3	3	3	2	1	1	2
KCE 852.5	3	2	2	1	3	2	1	2	2	1	2	2
KCE 852.6	3	2	2	1	2	2	1	2	2	3	1	2
KCE 852	**3.00**	**2.50**	**2.50**	**1.00**	**2.17**	**2.00**	**1.33**	**2.00**	**2.17**	**1.33**	**1.17**	**2.00**

Mapping of Course Outcome and Program Specific Outcome

PSO / CO	**PSO 1**	**PSO 2**
KCE 852.1	1	1
KCE 852.2	3	3
KCE 852.3	3	3
KCE 852.4	2	2
KCE 852.5	3	3
KCE 852.6	1	1

KCE 852	**2.17**	**2.17**