Department of Civil Engineering

Program: B.Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 3rd
Course Name: Fluid Mechanics Lab Course Code: KCE 353

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply Bernoulli's Theorem & Momentum equation in pipe flow.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual
CO2	Apply continuity equation and flow visualization in pipe flow.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual
CO3	Apply the concept of buoyancy and floatation.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual
CO4	Illustrate the concept of wind tunnel.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	-	1	-	-	-	3	2	-	-	-	-
CO2	3	3	2	-	3	-	-	-	3	2	-	-	-	-
CO3	3	3	3	-	3	-	-	-	3	2	-	-	-	-
CO4	3	2	3	-	2	-	-		3	2	-	-	-	-
PO Target	3	2.75	2.75	-	3	-	-	-	3	2	-	-	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: III
Course Name: Fluid Mechanics, Course Code: KCE 303

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the broad principles of different forces acting on a fluid	PO-1, PO-2, PO-3, PO-9, PO-12	Apply	Factual
CO2	Apply the concepts of different types of fluid flow in pipes	PO-1, PO-2, PO-3, PO-9, PO-12	Analyse	Conceptual
CO3	Apply the principles of different discharge measuring instruments in pipe flow	PO-1, PO-2, PO-3, PO-9, PO-12	Apply	Procedural
CO4	Apply the continuity, momentum and energy principles	PO-1, PO-2, PO-3, PO-4 PO-9, PO-12	Analyse	Conceptual
CO5	Apply the concepts of dimensional analysis in complex fluid flow problems	PO-1, PO-2, PO-3, PO-4 PO-9, PO-12	Apply	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	1	-	-	-	-	-	1	-	-	1	-	-
CO2	3	3	1	-	-	-	-	-	1	-	-	1	-	-
CO3	3	2	1	-	-	-	-	-	1	-	-	1	-	-
CO4	3	3	2	1	-	-	-	-	1	-	-	1	-	-
CO5	3	2	2	2	-	-	-	-	1	-	-	1	-	-
PO Target	**3**	**2.4**	**1.4**	**1.5**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 3rd
Course Name: Mini Project, Course Code: KCE 354

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand a system, component or process to meet desired progress of project.	PO-1, PO-2, PO-3,PO-4PO-5,PO-6,PO-7,PO-8,PO-9, PO-10,PO-11,PO-12,PSO-1,PSO-2	Understand	Conceptual
CO2	Apply reasoning and logical aptitude while working in society, dealing with real life problems	PO-1, PO-2,PO-6, ,PO-8,PO-9, PO-10,PO-11,PO-12	Apply	Conceptual, Procedural
CO3	Prepare Project Report for a project in Civil Engineering domain.	PO-1, PO-2, PO-3,PO-4PO-5,PO-6,PO-7,PO-8,PO-9, PO-10,PO-11,PO-12,PSO-1	Apply	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**3**	**3**	**3**	**2**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**3**	**3**
CO2	**1**	**1**	**-**	**-**	**-**	**2**	**-**	**1**	**1**	**1**	**1**	**2**	**-**	**-**
CO3	**3**	**3**	**3**	**3**	**2**	**2**	**2**	**2**	**3**	**3**	**3**	**2**	**3**	**-**
PO Target	**2.3**	**2.3**	**3**	**3**	**2**	**2**	**2**	**1.6**	**2.3**	**2**	**2.3**	**2**	**3**	**3**

Department of Civil Engineering

Program: B.Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 3rd

Course Name: Surveying & Geomatics Lab Course Code: KCE 352

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Demonstrate and use various conventional surveying instruments such as chain/tape, compass, theodolite, auto-level in the field of civil engineering applications such as highway profiling, setting out curves etc.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual
CO2	Measure distances, horizontal & vertical angles and coordinates using electronic total station and GPS.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Apply	Conceptual
CO3	Apply the principles of photogrammetric surveying and take observations using mirror stereoscope and understand digitization using GIS and visual interpretation of standard FCC.	PO-1, PO-2, PO-3,PO-5, PO-9, PO-10	Analyse	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	-	1	-	-	-	3	2	-	-	-	-
CO2	3	3	2	-	3	-	-	-	3	2	-	-	-	-
CO3	3	3	3	-	3	-	-	-	3	2	-	-	-	-
PO Target	3	3	2.67	-	2.33	-	-	-	3	2	-	-	-	-

Department of Civil Engineering
Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 3rd
Course Name: Surveying & Geomatics, Course Code: KCE302

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the principles of surveying to establish horizontal and vertical control.	PO-1, PO-5, PO-9, PO-10, PO-12	Apply	Procedural
CO2	Design horizontal and vertical curves.	PO-1, PO-3, PO-5, PO-9, PO-10, PO-12	Apply	Procedural
CO3	Demonstrate working of a total station and GPS for data collection to be used in a geographic information system.	PO-1, PO-2, PO-3, PO-4, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Understand	Conceptual
CO4	Apply principles of photogrammetry for surveying.	PO-1, PO-3, PO-4, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Apply	Procedural
CO5	Apply principles of Remote Sensing and Digital Image Processing for Civil Engineering problems.	PO-1, PO-2, PO-3, PO-4, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Apply	Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	3	-	-	-	2	-	-	-	2	3	-	2	-	2
CO2	3	-	2	-	2	-	-	-	2	3	-	2	-	2
CO3	3	3	2	2	3	2	2	-	2	2	-	2	-	-
CO4	3	-	2	2	3	2	2	-	2	1	-	2	-	-
CO5	3	2	2	2	3	2	2	-	2	1	-	2	-	-
PO Target	**3.0**	**2.5**	**2.0**	**2.0**	**2.6**	**2.0**	**2.0**	**-**	**2.0**	**2.0**	**-**	**2.0**	**-**	**2.0**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 3rd

Course Name: Building Planning and Drawing Lab, Course Code: KCE 351

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the principles of planning and bye-laws (National building code) used for building planning.	PO-1, PO-6, PO-7, PO-8, PO-9, PO-10, PO-12	Apply	Procedural
CO2	Prepare the plan and elevation of the buildings.	PO-1, PO-5, PO-6, PO-9, PO-10, PO-12	Apply	Procedural
CO3	Draft the sectional views of the buildings using AutoCAD.	PO-1, PO-5, PO-6, PO-9, PO-10, PO-12	Apply	Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	1	2
CO1	3	-	-	-	-	3	2	3	1	2	-	2	-	-
CO2	2	-	-	-	3	1	-	-	2	2	-	2	-	-
CO3	2	-	-	-	3	1	-	-	2	2	-	2	-	-
PO Target	**2.33**	**-**	**-**	**-**	**3**	**1.67**	**2**	**3**	**1.67**	**2**	**-**	**2**	**-**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 3rd
Course Name: Engineering Mechanics, Course Code: KCE 301

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply scalar and vector techniques for solving forces in statically determinate structures	PO-1, PO-2, PO-3, PO-4, PO-6, PO-12,PSO-1	Apply	Conceptual, Procedural
CO2	Apply fundamental concepts of centre of gravity and moment of inertia for engineering problems.	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Apply	Factual, Conceptual, Procedural
CO3	Apply basic knowledge of equilibrium condition to calculate forces in truss	PO-1, PO-2, PO-3, PO-4,PO-6, PO-12,PSO-1	Apply	Conceptual, Procedural
CO4	Apply basic dynamics concepts of force, momentum, work and energy in engineering problems.	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Apply	Factual, Conceptual, Procedural
CO5	Apply fundamental concepts of kinematics and kinetics of particles in complex problems.	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Apply	Factual, Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	1	2	-	1	-	-	-	-	-	**2**	**2**	-
CO2	3	3	2	2	-	-	-	-	-	-	-	**2**	**2**	-
CO3	3	3	2	3	-	1	-	-	-	-	-	**2**	**2**	-
CO4	3	3	2	3	-	-	-	-	-	-	-	**2**	**2**	-
CO5	3	3	2	3	-	-	-	-	-	-	-	**3**	**2**	-
PO Target	3	3	1.8	2.6	-	1	-	-	-	-	-	**2.2**	**2**	

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 5th

Course Name: Geotechnical Engineering Lab, Course Code: KCE 552

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Determine the index properties of soils.	PO1,PO2,PO3,PO6,PO9,PO10,PO12	APPLY	FACTUAL&CONCEPTUAL
CO2	Calculate the seepage in soil sample.	PO1,PO2,PO3,PO6,PO9,PO10,PO12	APPLY	FACTUAL&CONCEPTUAL
CO3	Determine the shear strength parameters of soil	PO1,PO2,PO3,PO6,PO9,PO10,PO12	APPLY	FACTUAL&CONCEPTUAL

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	1	-	-	1	-	-	2	3	-	2	-	-
CO2	3	3	1	-	-	1	-	-	2	3	-	2	-	-
CO3	3	3	1	-	-	1	-	-	2	3	-	2	-	-
PO Target	3	3	1	-	-	1	-	-	2	3	-	2	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 5th
Course Name: Geotechnical Engineering, Course Code: KCE501

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	**Use** the basic concepts of Index properties of soils in engineering practices.	PO1,PO2,PO4,PO6,PO10,PO12	Apply	Factual; Conceptual; Procedural
CO2	**Execute** the knowledge of soil hydraulics in geotechnical engineering**.**	PO1,PO2,PO4,PO6,PO10,PO12	Apply	Factual; Conceptual; Procedural
CO3	**Predict** the compaction and consolidation characteristics of soils.	PO1,PO2,PO4,PO6,PO10,PO12, PSO2	Apply	Factual; Conceptual; Procedural
CO4	**Analyse** the stress distributions in soils.	PO1,PO2,PO4,PO6,PO10,PO12	Analyse	Factual; Conceptual; Procedural
CO5	**Interpret** the earth pressure and related slope failures.	PO1,PO2,PO4,PO6,PO10,PO12	Apply	Factual; Conceptual; Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	-	1	-	-	-	1	-	1	-	-
CO2	3	2	-	1	-	1	-	-	-	1	-	1	-	-
CO3	3	2	-	1	-	1	-	-	-	1	-	1	-	1
CO4	3	2	-	1	-	1	-	-	-	1	-	1	-	-
CO5	3	2	-	1	-	1	-	-	-	1	-	1	-	-
PO Target	**3**	**2**	**-**	**1**	**-**	**1**	**-**	**-**	**-**	**1**	**-**	**1**	**-**	**0.2**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 5th
Course Name: Mini Project, Course Code: KCE 554

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Design a system, component or process to meet desired progress of project.	PO1,PO2,PO4,PO5,PO6,PO7, PO9,PO11,PO12,PSO1,PSO2	CREATE	CONCEPTUAL& PROCEDURAL
CO2	Formulate solution to the different civil engineering projects.	PO1,PO2,PO4,PO5,PO6,PO7, PO9,PO11,PO12,PSO1,PSO2	CREATE	CONCEPTUAL& PROCEDURAL
CO3	Compose detailed project report for a project in civil engineering domain	PO2,PO9,PO10,PO12	CREATE	PROCEDURAL

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	-	1	2	1	1	-	1	-	1	1	2	2
CO2	3	3	-	1	2	1	1	-	1	-	1	1	2	2
CO3	-	1	-	-	-	-	-	-	1	3	-	2	-	-
PO Target	**3**	**2.33**	**-**	**1**	**2**	**1**	**1**	**-**	**1**	**3**	**1**	**1.33**	**2**	**2**

Department of Civil Engineering

Program: B.Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 5th

Course Name: Quantity Estimation and Construction Management, Course Code: KCE-503

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Compute the quantities of a building materials by different methods.	PO1,PO2,PO3, PO4,PO5,PO8, PO9,PO10, PO11,PO12, PSO2	Apply	Conceptual, Procedural
CO2	Prepare contracts and tender documents of projects.	PO2,PO4,PO8, PO9,PO10, PO11,PO12, PSO2	Apply	Factual, Conceptual, Procedural
CO3	Apply network techniques in construction management.	PO1,PO2,PO4,PO5,PO8,PO9,PO10, PO11,PO12,PSO2	Apply	Conceptual, Procedural
CO4	Select the best suited construction equipments as per job requirement and site conditions.	PO1,PO2,PO4,PO5,PO9,PO10,PO11, PO12,PSO2	Understand	Conceptual
CO5	Apply the methods of project cost management.	PO1,PO2,PO3,PO4,PO5,PO9,PO10, PO11,PO12,PSO2	Apply	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	1	2	1	-	-	1	1	1	1	2	-	2
CO2	-	1	-	1	-	-	-	1	1	1	1	2	-	2
CO3	2	2	-	3	1	-	-	2	1	1	1	2	-	2
CO4	3	3	-	3	1	-	-	-	1	1	2	1	-	2
CO5	3	3	1	2	2	-	-	-	1	1	3	1	-	2
PO Target	**2.75**	**2.4**	**1**	**2.2**	**1.25**	**-**	**-**	**1.33**	**1**	**1**	**1.6**	**1.6**	**-**	**2**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: V

Course Name: Quantity Estimation and Management Lab, Course Code: KCE 553

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Compute the quantities of material for construction of Building.	PO1,PO10	Apply	Conceptual, Procedural
CO2	Prepare the bill of quantities for project.	PO3,PO2,PO9,PO10,PO11, PO12	Apply	Conceptual, Procedural
CO3	Draft the tender documents for project**.**	PO1,PO3,PO4,PO9,PO10, PO11,PO12	Apply	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	-	-	-	-	-	-	-	-	1	-	-	-	-
CO2	-	-	3	2	-	-	-	-	1	2	1	1	-	-
CO3	-	-	3	2	-	-	-	-	1	3	1	1	-	-
PO Target	3	-	3	2	-	-	-	-	1	2	1	1	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 5th

Course Name: Structural Analysis, Course Code: KCE 502

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Identify determinacy and indeterminacy of structure.	PO1,PO2,PO3,PO4,PO12,PSO1	Analyze	Conceptual & Procedural
CO2	Analyze different types of trusses for member forces.	PO1,PO2,PO3,PO4,PO12,PSO1	Analyze	Conceptual & Procedural
CO3	Define strain energy and its application.	PO1,PO2,PO3,PO4,PO12,PSO1	Apply	Conceptual & Procedural
CO4	Interpret Influence line diagram and its detail application.	PO1,PO2,PO3,PO4,PO12,PSO1	Apply	Conceptual & Procedural
CO5	Analyze determinate arches for different loading conditions.	PO1,PO2,PO3,PO4,PO12,PSO1	Analyze	Conceptual & Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	1	-	-	-	-	-	-	-	3	3	-
CO2	3	3	2	1	-	-	-	-	-	-	-	3	2	-
CO3	3	3	3	3	-	-	-	-	-	-	-	2	2	-
CO4	3	3	3	3	-	-	-	-	-	-	-	3	3	-
CO5	3	3	1	2	-	-	-	-	-	-	-	2	1	-
PO Target	**3**	**3**	**2.2**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2.6**	**2.2**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 5th
Course Name: CAD Lab, Course Code: KCE 551

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply GIS software for georeferencing, digitizing and interpreting satellite images.	PO1; PO2; PO3; PO4; PO5; PO9; PO10; PO12	Apply	Conceptual; Procedural
CO2	Apply software tools for numerical solution for the stress analysis of soil in geotechnical engineering problems	PO1; PO2; PO3; PO4; PO5; PO9; PO10; PO12; PSO1	Apply	Conceptual; Procedural
CO3	Apply software tools for numerical solution for the determination of soil settlement in geotechnical engineering problems.	PO1; PO2; PO3; PO4; PO5; PO9; PO10; PO12; PSO1	Apply	Conceptual; Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	1	3	3	-	-	-	1	1	-	1	-	-
CO2	3	3	3	3	3	-	-	-	1	1	-	1	2	-
CO3	3	3	3	3	3	-	-	-	1	1	-	1	2	-
PO Target	**3**	**3**	**2.33**	**3**	**3**	**-**	**-**	**-**	**1**	**1**	**-**	**1**	**2**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: V
Course Name: Concrete Technology Course Code: KCE 051

Course Outcome

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Characterize the properties of materials for the production of concrete.	PO1, PO2, PSO2	Analyze	F, C, P
CO2	Apply suitable admixtures to augment the properties of concrete.	PO1, PO2, PO5, PO7, PO12, PSO2	Apply	C
CO3	Design concrete mix proportions as per codal provisions.	PO3, PO8, PSO2	Apply	P
CO4	Analyze the properties of fresh and hardened concrete.	PO1, PO2, PSO2	Analyze	C, P
CO5	Use advanced concrete as per field requirements.	PO1, PO6, PO12, PSO2	Apply	C

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	3	-	-	-	-	-	-	-	-	-	-	-	3
CO2	3	3	-	-	3	-	2	-	-	-	-	3	-	3
CO3	-	-	3	-	-	-	-	3	-	-	-	-	-	3
CO4	3	3	-	-	-	-	-	-	-	-	-	-	-	3
CO5	3	-	-	-	-	2	3	-	-	-	-	3	-	3
PO Target	**2.7**	**3**	**3**	**-**	**3**	**2**	**2.5**	**3**	**-**	**-**	**-**	**3**	**-**	**3**

Department of Civil Engineering

Program: B.Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 5th
Course Name: Engineering Hydrology, Course Code: KCE-055

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the basic concept of hydrological cycle and its various phases.	PO-1, PO-2	Understand	Factual
CO2	Understand the concept of runoff and apply the knowledge to construct the hydrograph.	PO-1, PO-2, PO-3,PO-4, PO-10, PO-12	Analyse	Conceptual
CO3	Apply the various methods to assess the flood.	PO-1, PO-2, PO-3,PO-4, PO-6, PO-10, PO-12	Create	Conceptual
CO4	Assess the quality of various forms of water and their aquifer properties.	PO-1, PO-2, PO-3,PO-4, PO-6, PO-10	Analyse	Conceptual
CO5	Understand the well hydraulics and apply ground water modelling techniques.	PO-1, PO-2, PO-3,PO-4, PO-5, PO-6 PO-7, PO-8, PO-9,PO-10, PO-12, PSO-2	Create	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	-	-	-	-	-	-	-	-	-	-	-	-
CO2	3	3	3	2	-	-	-	-	-	1	-	2	-	-
CO3	3	3	3	3	-	3	-	-	-	2	-	2	-	-
CO4	3	2	2	2	-	2	-	-	-	2	-	-	-	-
CO5	3	3	3	3	3	2	3	2	1	3	-	2	-	2
PO Target	3	2.4	2.75	2.5	3	2.3	3	2	1	2	-	2	-	2

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 7th
Course Name: Irrigation and Water Resources Engineering, Course Code: KCE079

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Describe the components of hydrological cycle, evaporation process and consumptive use	PO-1, PO-2, PO-3, PO-4, PO-7	Understand	Factual, Conceptual
CO2	Apply the knowledge of stream flow measurement techniques and hydrograph theory for computation of run off.	PO-1, PO-2, PO-3, PO-4, PO-7, PO-9,PO-12	Apply	Factual, Conceptual, Procedural
CO3	Design different types of irrigation channels and water logging preventive measures	PO-1, PO-2, PO-3, PO-4, PO-7, PO-9,PO-11,PO-12,PSO-1,PSO-2	Create	Conceptual, Procedural
CO4	Design the regulatory and control systems of canal and irrigation outlets	PO-1, PO-2, PO-3, PO-4, PO-7, PO-9, PO-12,PSO-1,PSO-2	Create	Conceptual, Procedural
CO5	Apply the knowledge of ground water hydrology and determination of discharge through wells	PO-1, PO-2, PO-3, PO-4, PO-5,PO-6, PO-7, PO-9,PO-12	Apply	Factual, Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	2	1	-	-	1	-	-	-	-	-	-	-
CO2	3	2	1	2	-	-	1	-	1	-	-	1	-	-
CO3	3	3	3	2	-	-	2	-	1	-	1	1	1	1
CO4	3	3	2	2	-	-	2	-	1	-	1	-	1	1
CO5	3	1	1	1	1	1	1	-	1	-	-	1	-	-
PO Target	**2.8**	**2.2**	**1.8**	**1.6**	**1**	**1**	**1.4**	**-**	**1**	**-**	**1**	**1.5**	**1.5**	**1**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 7th
Course Name: Mini Project, Course Code: KCE 752

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Design a system, component or process to meet desired progress of project	PO1; PO2; PO4; PO5; PO6; PO7; PO9; PO11; PO12; PSO1; PSO2	Create	Factual; Conceptual; Procedural
CO2	Formulate solution to the different civil engineering projects.	PO1; PO2; PO4; PO5; PO6; PO7; PO9; PO11; PO12; PSO1; PSO2	Create	Factual; Conceptual; Procedural
CO3	Compose detailed project report for a project in civil engineering domain.	PO1; PO9; PO10; PO12	Create	Factual; Conceptual; Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	-	1	2	1	1	-	1	-	1	1	2	2
CO2	3	3	-	1	2	1	1	-	1	-	1	1	2	2
CO3	-	1	-	-	-	-	-	-	1	3	-	2	-	-
PO Target	**3**	**2.33**	**-**	**1**	**2**	**1**	**1**	**-**	**1**	**3**	**1**	**1.33**	**2**	**2**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VII

Course Name: Railway, Waterway and Airway Engineering, Course Code: KCE070

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the components of railway infrastructure	PO1, PO2, PO10, PO12	Understand	Factual, Conceptual
CO2	Illustrate the factors governing design of railway infrastructures	PO1, PO2, PO10, PO12, PSO1	Apply	Factual, Conceptual, Procedural
CO3	Understand various components of railway track system	PO1, PO2, PO10, PO12	Understand	Conceptual, Procedural
CO4	Apply the concepts of airport geometrics in airport engineering	PO1, PO2, PO10, PO12, PSO1	Apply	Factual, Conceptual, Procedural
CO5	Understand the various concepts of water transport system.	PO1,PO2, PO10, PO12	Understand	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	1	-	-	-	-	-	-	-	1	-	1	-	-
CO2	3	1	-	-	-	-	-	-	-	2	-	1	1	-
CO3	1	1	-	-	-	-	-	-	-	1	-	1	-	-
CO4	3	2	-	-	-	-	-	-	-	2	-	1	1	-
CO5	1	1	-	-	-	-	-	-	-	1	-	1	-	-
PO Target	1.8	1.2	-	-	-	-	-	-	-	1.4	-	1	1	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 7

Course Name: Renewable Energy Resources, Course Code: KOE074

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Identify various non-conventional energy resources and their applications	2	Remember	Conceptual
CO2	Interpret various methods of solar energy applications	2,6	Understand	Conceptual & Procedural
CO3	Apply concept of geothermal conversion processes, magnate hydrodynamics and fuel cells	2,6	Apply	Conceptual & Procedural
CO4	Apply concept of wind energy conversion and thermionic conversions	2,6	Apply	Conceptual & Procedural
CO5	Explain the conversion methodology and biomass and ocean energy.	2,6	Understand	Conceptual & Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	-	-	-	-	-	-	-	-	-	2	-	-
CO2	3	1	2	-	2	2	2	-	-	-	-	2	-	-
CO3	3	1	2	2	2	2	2	-	2	1	1	2	-	-
CO4	3	1	2	2	2	2	2	-	2	1	1	2	-	-
CO5	3	1	2	2	2	2	2	-	-	-	-	2	-	-
PO Target	**3**	**1**	**1.6**	**1.2**	**1.6**	**1.6**	**1.6**	**-**	**0.8**	**0.4**	**0.4**	**2**	**-**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VII

Course Name: Rural Development Administration and Planning, Course Code: KHU701

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the definitions, concepts and components of Rural Development	PO-1, PO-2, PO-3, PO-4, PO-6, PO-12,PSO-1	Understand	Conceptual
CO2	Describe the importance,structure,significance,resources of Indian rural economy	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Understand	Conceptual
CO3	Understand about the area development programmes and its impact	PO-1, PO-2, PO-3, PO-4,PO-6, PO-12,PSO-1	Understand	Conceptual
CO4	Apply the concepts of Rural Development in rural entrepreneurship	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Apply	Conceptual
CO5	Understand about the using of different methods for human resource planning.	PO-1, PO-2, PO-3, PO-4,PO-12,PSO-1	Understand	Conceptual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**2**	**2**	**1**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	-
CO2	**2**	**2**	**2**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	-
CO3	**2**	**2**	**2**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	-
CO4	**2**	**2**	**2**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	-
CO5	**2**	**2**	**2**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	-
PO Target	**2**	**2**	**1.8**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	

Department of Civil Engineering

Program: B.Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: _VII

Course Name: Solid Waste Management, Course Code: KCE 075

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Adapt the concept of solid waste management.	PO6,PO7,PO8,	Apply	Conceptual, Procedural
CO2	Apply the various handling & processing methods for solid waste management.	PO1,PO6,PO7,PO8,PO12	Apply	Procedural
CO3	Apply the concept of land filling for disposal of solid waste.	PO2,PO3,PO4,PO6,PO7,PO8,PO9,PO10,PO12	Apply	Procedural
CO4	Design composting and other solid waste conversion units	PO1,PO2,PO3,PO4,PO6,PO7,PO8,PO9,PO10,PO12	Apply	Procedural
CO5	Understand the various hazardous waste, risk assessment and legislation.	PO6,PO7, PO8,PO12	Understand	Conceptual, Factual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	-	-	-	-	-	3	3	2	-	-	-	-	-	-
CO2	1	-	-	-	-	3	3	2	-	-	-	2	-	-
CO3	-	2	2	1	-	3	3	2	1	2	-	1	-	-
CO4	2	2	2	1	-	3	3	2	1	2	-	2	-	-
CO5	-	-	-	-	-	3	3	2	-	-	-	2	-	-
PO Target	**1.5**	**2**	**2**	**1**		**3**	**3**	**2**	**1**	**2**		**1.8**		

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 7th
Course Name: Concrete Lab, Course Code: KCE751

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Conduct Quality Control tests on concrete making materials.	PO1,PO2,PSO2	Apply	Procedural
CO2	Conduct Quality Control tests on fresh & hardened concrete.	PO1,PO2,PSO2	Apply	Procedural
CO3	Design and test concrete mix.	PO1,PO2,PO3, PO4,PSO2	Create	Procedural

CO - PO/PSO Matrix

Course Code: KCE751	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	-	-	-	-	-	-	-	-	-	-	2
CO2	3	2	-	-	-	-	-	-	-	-	-	-	-	2
CO3	3	2	3	2	-	-	-	-	-	-	-	-	-	3
PO Target	**3**	**2**	**3**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2.33**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: VII
Course Name: Design of Steel Structures, Course Code: KCE076

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand properties of steel and types of loads acting on steel structures.	PO1	Understand	Conceptual, Factual
CO2	Apply the basic concept to design welded and bolted type of simple connections for steel structures.	PO1,PO3,PO4,PO9,PO12,PSO1,PSO2	Apply	Procedural
CO3	Apply the basic concept to design tension member for simple steel structures.	PO1,PO3,PO4,PO9,PO12,PSO1,PSO2	Apply	Procedural
CO4	Apply the basic concept to design compression members for simple steel structures.	PO1,PO3,PO4,PO9,PO12,PSO1,PSO2	Apply	Procedural
CO5	Apply the basic concept to design flexural members.	PO1,PO3,PO4,PO9,PO12,PSO1,PSO2	Apply	Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	3	-	3	2	-	-	-	-	1	-	-	1	2	2
CO3	3	-	3	2	-	-	-	-	1	-	-	1	2	2
CO4	3	-	3	2	-	-	-	-	1	-	-	1	2	2
CO5	3	-	3	2	-	-	-	-	1	-	-	1	2	2
PO Target	2.6	-	3	2	-	-	-	-	1	-	-	1	2	2

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: VII
Course Name: Project Course Code: KCE 753

Course Outcome

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Work effectively as an individual and member of the team to solve complex engineering problems.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	F,C,P
CO2	Apply engineering knowledge to solve real life problems and involve in self-learning process.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	C,P
CO3	Apply research based knowledge and methods to arrive at valid conclusions.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	F,C,P
CO4	Apply modern tools for analysis and design of complex engineering problems.	PO1, PO2, PO3, PO4,PO5,PO6, PO7, PO11, PO12, PSO1	Apply	C, P
CO5	Develop ethical solutions of engineering problems taking into account its impact on society, environment and sustainability.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Create	C, P
CO 6	Compose and present detailed project report of his/her work and defend effectively.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	P

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	2	2	2	3	3	2	2	2	1	-
CO2	3	3	3	2	2	2	2	2	2	2	1	2	3	-
CO3	3	3	3	3	3	1	2	-	-	-	1	2	3	-
CO4	3	3	3	3	3	2	2	2	2	2	1	3	3	-
CO5	3	3	3	2	2	2	3	3	2	2	1	2	2	-
CO6	2	2	2	1	1	1	1	3	2	3	3	1	1	-
PO Target	**2.8**	**2.8**	**2.8**	**2.3**	**2.1**	**1.6**	**2.0**	**2.6**	**2.2**	**2.2**	**1.5**	**2.0**	**2.1**	**-**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: IV

Course Name: Hydraulic Engineering & Machines Course Code: KCE 403

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply their knowledge of fluid mechanics in addressing problems in open channels.	PO1, PO2, PO3, PO4, PO9, PO12	Apply	Factual, Conceptual, Procedural
CO2	Apply knowledge in solving problems of uniform, gradually and rapidly varied flows in steady state conditions.	PO1, PO2, PO3, PO4, PO9, PO12	Apply	Factual, Conceptual, Procedural
CO3	Apply knowledge in hydraulic machineries like pumps and turbines.	PO1, PO2, PO3, PO4, PO9, PO12, PO5	Apply	Factual, Conceptual, Procedural
CO4	Apply the concepts of impulse momentum equation in solving problems of impact of jet	PO1, PO2, PO3, PO4, PO9, PO12	Apply	Factual, Conceptual, Procedural
CO5	Apply the knowledge of different parts of turbine in solving complex problems	PO1, PO2, PO3, PO4, PO9, PO12	Apply	Factual, Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**2**	**2**	**2**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**2**	**-**	-
CO2	**3**	**3**	**3**	**3**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**2**	**-**	-
CO3	**3**	**3**	**2**	**2**	**1**	**-**	**-**	**-**	**1**	**-**	**1**	**2**	**-**	-
CO4	**3**	**2**	**2**	**2**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	-
CO5	**3**	**2**	**1**	**2**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	-
PO Target	**3**	**2.4**	**2**	**2.2**	**1**	**-**	**-**	**-**	**1**	**-**	**1**	**0.8**	**-**	-

Signature of Course Coordinator **Signature of HoD**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 4

Course Name: Energy Science and Engineering, Course Code: KOE043

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Identify and understand about energy usage and conversion	2	Remember	Conceptual
CO2	Understand the concepts of nuclear energy	2,6	Understand	Conceptual & Procedural
CO3	Understand and Apply the concepts of solar energy	2,6	Understand, Apply	Conceptual & Procedural
CO4	Identify the difference between conventional and nonconventional energy sources among all other energy resources.	2,6	Understand	Conceptual & Procedural
CO5	Understand and apply the concepts of energy audit for optimization of energy consumption.-	2,6	Understand, Apply	Conceptual & Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	-	-	-	-	-	-	-	-	-	2	-	-
CO2	3	1	2	-	2	2	2	-	-	-	-	2	-	-
CO3	3	1	2	2	2	2	2	-	2	1	1	2	-	-
CO4	3	1	2	2	2	2	2	-	2	1	1	2	-	-
CO5	3	1	2	2	2	2	2	-	-	-	-	2	-	-
PO Target	**3**	**1**	**1.6**	**1.2**	**1.6**	**1.6**	**1.6**	**-**	**0.8**	**0.4**	**0.4**	**2**	**-**	**-**

Signature of Course Coordinator **Signature of HoD**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: IV

Course Name: Material Testing and Construction Practices, Course Code: KCE401

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Identify various building materials and to understand their basic properties.	PO1, PO2, PSO2	Analyze	F, C, P
CO2	Understand the use of non-conventional civil engineering materials.	PO1, PO2, PO5, PO7, PO12, PSO2	Apply	C
CO3	Study suitable type of flooring and roofing in the construction process.	PO1, PO2, PSO2	Apply	P
CO4	Characterize the concept of plastering, pointing and various other building services.	PO1, PO2, PSO2	Apply	C, P
CO5	Exemplify the various fire protection, sound and thermal insulation techniques, maintenance and repair of buildings.	PO1, PO6, PO12, PSO2	Apply	C

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	-	-	2	-	-	-	-	1	-	-	1	-	-
CO2	3	-	-	2	-	2	2	-	1	-	-	1	-	-
CO3	3	-	-	2	-	2	2	2	1	-	-	2	-	-
CO4	3	-	-	2	2	2	2	2	1	-	-	2	-	-
CO5	3	-	-	2	3	2	2	2	1	-	-	2	-	2
PO Target	**3**	**-**	**-**	**2**	**2.5**	**2**	**2**	**2**	**1**	**-**	**-**	**1.6**	**-**	2

Signature of Course Coordinator **Signature of HoD**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 4th

Course Name: Introduction to Solid Mechanics, Course Code: KCE 402

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the concepts and principles of stresses and strains.	PO 1,PO2, PO-3, PO-4, PO-6, PO-11,PO12,PSO-1, PSO -2	Apply	Factual, Conceptual, Procedural
CO2	Apply the concept of Shear Force and Bending Moment to solve solid mechanics problems	PO-1, PO-2, PO-3, PO-4, PO-11, PO12,PSO-1,PSO-2	Apply	Factual, Conceptual, Procedural
CO3	Apply the principle of flexural stress, shear stress and torsion on structural members subjected to combined stresses.	PO-1, PO-2, PO-3, PO-4, PO-11, PO12,PSO-1,PSO-2	Apply	Factual, Conceptual, Procedural
CO4	Apply the moment area method and Macaulay's method to calculate the deflections at any point on a beam subjected to a combination of loads	PO-1, PO-2, PO-3, PO-4, PO-6, PO12,PSO-1	Apply	Factual, Conceptual, Procedural
CO5	Apply the Rankine theory and lame's theory to solve the problems of columns, springs and cylinders against loads	PO-1, PO-2, PO-3, PO-4, PO-6, PO-11, PO12,PSO-1,PSO-2	Apply	Factual, Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**2**	**3**	**2**	**1**	-	**1**	-	-	-	-	**1**	**2**	2	2
CO2	**3**	**3**	**2**	**2**	-	-	-	-	-	-	**1**	**2**	2	2
CO3	**3**	**3**	**3**	**2**	-	-	-	-	-	-	**1**	**2**	2	2
CO4	**2**	**3**	**2**	**3**	-	**1**	-	-	-	-	**1**	**1**	2	2
CO5	**2**	**2**	**2**	**3**	-	**1**	-	-	-	-	**1**	**2**	2	2
PO Target	**2.4**	**2.8**	**2.2**	**2.2**		**1**					**1**	**1.8**	**1.8**	2

Signature of Course Coordinator **Signature of HoD**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 1V
Course Name: Material Testing Lab, Course Code: KCE 451

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Determine the quality of bricks, cement, fine aggregate and coarse aggregate and its suitability for construction purpose.	PO-1, PO-2, PO-5, PO-8, PO-9, PO-10, PO-12, PSO-1	Apply	Conceptual, Procedural
CO2	Design the mix, make the specimens and test the same for the strength for comparison with design strength.	PO-1, PO-2, PO-5, PO-8, PO-9, PO-10, PO-12, PSO-1	Apply	Conceptual, Procedural
CO3	Develop ability to function as a member of a team to complete the assigned task	PO-1, PO-9, PO-10, PO-12	Understand	Conceptual

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**1**	**-**	**1**	1	1	1	-	1	1	1	2	-	2
CO2	**3**	**2**	**2**	**2**	2	1	1	-	1	1	1	2	-	2
CO3	-	-	-	-	-	-	-	-	3	1	-	1	-	2
PO Target	**3**	**1.5**	**2**	**1.5**	1.5	1.0	1.0	-	1.7	1.0	1.0	1.7	-	2.0

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: IV

Course Name: Hydraulics & Hydraulic Machines Lab, Course Code: KCE 453

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the knowledge of open channel flow to understand flow characteristics	PO-1, PO-2, PO-3, PO-9, PO-10, P0-12	Apply	Conceptual, Procedural
CO2	Evaluate the performance test of different turbines for various head, speed and load.	PO-1, PO-2, PO-3, PO-9, PO-10, P0-12	Analyze	Conceptual, Procedural
CO3	Evaluate the performance test on pumps and plotting of operating characteristics	PO-1, PO-2, PO-3, PO-9, PO-10, P0-12	Analyze	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**1**	**-**	-
CO2	**3**	**2**	**1**	-	-	-	-	-	**1**	**1**	-	**1**	-	-
CO3	**3**	**2**	**1**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**1**	**-**	-
PO Target	**3**	**1.66**	**1**	**-**	**-**	**-**	**-**	**-**	**1**	**1**	**-**	**1**	**-**	-

Department of Civil Engineering

Program: B.Tech (Civil Engineering)
Academic Session: 2021-22 Semester: 4th
Course Outcomes
Course Name: Solid Mechanics Lab, Course Code : KCE 452

After completion of this course, the student will be able to

CO-1: Verify the deflection in different structural members by using apparatus
CO-2: Determine the engineering properties of solid Materials.
CO-3: Explain the behaviour of beams and columns under different end conditions.

CO-PO Mapping

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2
CO-1	3	2	2	2	-	1	-	-	1	1	-	2	2	-
CO-2	3	2	2	2	2	1	-	-	1	1	-	2	2	-
CO-3	3	2	2	2	-	1	-	-	1	1	-	2	2	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VI

Course Name: GIS & Remote Sensing, Course Code: KOE 066

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the components, concepts, principle and possible uses of Remote Sensing.	PO-1, PO-7, PO-12	Understand	Conceptual
CO2	Apply the principle of photogrammetry and stereoscopy to obtain the position and height of objects.	PO-1, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Apply	Conceptual, Procedural
CO3	Apply remote sensing techniques using suitable data for solution of engineering problems.	PO-1, PO-2, PO-4, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Apply	Conceptual, Procedural
CO4	Understand spatial and attribute data, map projections and basic components of GIS.	PO-1, PO-7, PO-12	Understand	Conceptual
CO5	Apply GIS for the management of land & water resources.	PO-1, PO-2, PO-4, PO-5, PO-6, PO-7, PO-9, PO-10, PO-12	Apply	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**2**	**-**	**-**	**-**	**-**	**-**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	-
CO2	**3**	**-**	**-**	**-**	**3**	**2**	**2**	**-**	**2**	**2**	**-**	**3**	**-**	-
CO3	**3**	**2**	**-**	**2**	**3**	**2**	**2**	**-**	**2**	**2**	**-**	**3**	**-**	-
CO4	**2**	**-**	**-**	**-**	**-**	**-**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	-
CO5	**3**	**2**	**-**	**2**	**3**	**2**	**2**	**-**	**2**	**2**	**-**	**3**	**-**	-
PO Target	**2.6**	**2**	**-**	**2**	**3**	**2**	**2.4**	**-**	**2**	**2**	**-**	**2.6**	**-**	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VI

Course Name: Constitution of India, Law & Engineering, Course Code: KNC 601

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Discuss the basic features and modalities about the Indian constitution.	PO6, PO7	Understand	Conceptual/Factual
CO2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level	PO6, PO7,	Understand	Conceptual/Factual
CO3	Differentiate different aspects of the Indian Legal System and its related bodies.	PO6, PO7, PO8	Understand	Conceptual/Factual
CO4	Compare different laws and regulations related to engineering practices.	PO1, PO6, PO7, PO8, PO10	Understand	Conceptual/Factual
CO5	Articulate the role of engineers with different organizations and governance models	PO1, PO6, PO7, PO8, PO9, PO10, PO11, PO12	Understand	Conceptual/Factual

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CO2	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CO3	-	-	-	-	-	2	2	1	-	-	-	-	-	-
CO4	-	-	-	-	-	1	1	-	-	-	-	-	-	-
CO5	-	-	-	-	-	1	1	-	-	-	-	-	-	-
PO Target	**-**	**-**	**-**	**-**	**-**			**1**	**-**	**-**	**-**	**-**	**-**	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VI

Course Name: Environmental Engineering, Course Code: KCE 603

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Interpret the water demand and major components for transmission of water.	PO-1, PO-2,PO-4, PO-7, PO-8, PO-11	Apply	Conceptual & Procedural
CO2	Apply the concepts of storage & distribution of water.	PO-1, PO-2, PO3, PO4, PO-6, PO-7,	Apply	Factual
CO3	Assess the physical, chemical & biological parameters of water.	PO-1, PO-2, PO3, PO4, PO5, PO-6, PO7, PO-8, PO-9, PO-10, PO-11, PO-12,	Apply	Factual
CO4	Apply the process and operations in water treatment units	PO-1, PO-2, PO3, PO4, PO5, PO-6, PO7, PO-8, PO-9, PO-10, PO-11, PO-12,	Apply	Procedural
CO5	Apply the process and operations in wastewater treatment units.	PO-1, PO-2, PO3, PO4, PO5, PO-6, PO7, PO-8, PO-9, PO-10, PO-11, PO-12,	Apply	Procedural

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	2	-	-	2	1	-	-	2	-	-	-
CO2	2	2	2	1	-	2	2	-	-	-	-	-	-	-
CO3	3	3	3	3	3	3	3	2	2	2	2	3	-	-
CO4	3	3	3	3	3	3	3	3	3	3	3	3	-	-
CO5	3	3	3	3	3	3	3	3	3	3	3	3		

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: VI
Course Name: Foundation Engineering B.Tech , Course Code: KCE 064
Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply the process of soil exploration using various methods.	PO1,PO2, PO4,PO5, PO6,PO9, PO12	Apply	Factual, Conceptual
CO2	Analyze bearing capacity and settlement of soil for shallow foundation.	PO1,PO2,PO3, PO5,PO9,PSO1	Analyze	Factual, Conceptual, Procedural
CO3	Design the various types of shallow and deep foundation.	PO1,PO2,PO3,PO9,PO10,PSO1	Apply	Factual, Conceptual, Procedural
CO4	Understand the characteristics of well foundations and retaining wall.	PO1,PO2,PO9	Understand	Factual, Conceptual
CO5	Understand the concept of soil reinforcement	PO1,PO2,PO7, PO9,PO12	Understand	Factual, Conceptual

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**2**	**-**	**2**	**1**	**1**	**-**	**-**	**1**	**-**	**-**	**1**	**-**	-
CO2	**3**	**3**	**2**	**-**	**3**	**-**	**-**	**-**	**1**	**-**	**-**	**-**	**2**	-
CO3	**3**	**3**	**3**	**-**	**-**	**-**	**-**	**-**	**1**	**2**	**-**	**-**	**2**	-
CO4	**3**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	-
CO5	**3**	**2**	**-**	**-**	**-**	**-**	**2**	**-**	**1**	**-**	**-**	**2**	**-**	-
PO Target	**3**	**2.4**	**2.5**	**2**	**2**	**1**	**2**	**-**	**1**	**2**	**-**	**1.5**	**2**	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

AcademicSession:2021-2022

Semester: VI
Course Name: Design of Concrete Structures,
Course Code: KCE601

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/PSOs	Bloom's Cognitive Process Level(BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Analyze and Design RCC beams for flexure by IS methods.	PO1,PO2, PO3,PO4 /PSO1	Analyze	Conceptual, Procedural
CO2	Analyze and Design RCC beams for shear by IS methods.	PO1,PO2,PO3, PO4/PSO1	Analyze	Conceptual, Procedural
CO3	Analyze and Design RCC slabs and stair case by IS methods.	PO1,PO2,PO3,PO4/PSO1	Analyze	Conceptual, Procedural
CO4	Design the RCC compression members by IS methods.	PO1,PO2,PO3, PO4/PSO1	Analyze	Conceptual, Procedural
CO5	Design various types of footings and cantilever retaining wall.	PO1,PO2,PO3, PO4/PSO1	Analyze	Conceptual, Procedural

CO-PO/PSO Matrix

Course Code:	Program Outcome(PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	2	2	1	-	2	1	1	-	2	2	-
CO2	3	3	3	2	2	1	-	2	1	1	-	2	2	-
CO3	3	3	3	2	2	1	-	2	1	1	-	2	2	-
CO4	3	3	3	2	2	1	-	2	1	1	-	3	2	-
CO5	3	3	3	2	2	1	-	2	1	1	-	2	2	-
PO Target														

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 6th

Course Name: Repair and Rehabilitation of Structures, Course Code: KCE 063

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the fundamentals of maintenance and repair strategies.	PO-1, PO-2, PO-3, PO-4, PO-5, PO6, PO-9, PO-10, PO-12	Apply	Factual, Conceptual, Procedural
CO2	Identify for serviceability and durability aspects of concrete.	PO-1, PO-2, PO-4, PO-5, PO6, PO-9, PO-10, PO-12	Apply	Factual, Conceptual, Procedural
CO3	Identify the materials and techniques used for repair of structures.	PO-1, PO-2, PO-4, PO-5, PO6, PO-9, PO-10, PO-12	Apply	Factual, Conceptual, Procedural
CO4	Decide the appropriate repair and retrofitting techniques.	PO-1, PO-2, PO-3, PO-4, PO-5, PO6, PO-9, PO-10, PO-12	Apply	Factual, Conceptual, Procedural
CO5	Use appropriate health monitoring technique and demolition methods.	PO-1, PO-2, PO-3, PO-4, PO-5, PO6, PO-9, PO-10, PO-12	Apply	Factual, Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**2**	**2**	**2**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**2**	**-**	-
CO2	**3**	**3**	**-**	**2**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**2**	**-**	-
CO3	**3**	**1**	**-**	**2**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**2**	**-**	-
CO4	**3**	**3**	**3**	**2**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**2**	**-**	-
CO5	**3**	**3**	**2**	**2**	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**3**	**-**	-
PO Target	**3**	**3**	**1.8**	**2.6**			**-**	**-**	**-**	**-**	**-**	**2.2**	**-**	-

Department of Civil Engineering

Program: B.Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: 6th

Course Name: Transportation Engineering, Course Code: KCE-602

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the history of road development, their alignment & Survey.	PO-1,2,3,6,7,10,12	Understand	Factual
CO2	Design the various geometric parameters of road.	PO-1,2,3,4,6,7,10,12	Analyse	Conceptual
CO3	Study the traffic characteristics & design of road intersections & signals.	PO-1,2,3,4,6,7,10,12	Analyse	Conceptual
CO4	Examine the properties of highway materials & their implementation in design of pavements.	PO-1,2,3,4,6,7,10,12	Understand	Factual
CO5	Learn methods to construct various types of roads.	PO-1,2,6,7,10,12	Understand	Factual

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**
CO1	2	2	1	-	-	1	1	-	-	1	-	1	-	-
CO2	3	2	1	1	-	1	2	-	-	2	-	1	-	-
CO3	3	2	1	1	-	1	2	-	-	2	-	1	-	-
CO4	3	2	1	1	-	1	2	-	-	2	-	1	-	-
CO5	3	2	-	-	-	2	2	-	-	1	-	1	-	-
PO Target	2.8	2	1	1	-	1.2	1.8	-	-	1.6	-	1	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021-2022 Semester: VI

Course Name: Transportation Engineering Lab, Course Code: KCE 651

Course Outcomes

CO No.	Statement of Course Outcome	Relevant Pos /PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Determine properties of aggregates and assess its suitability in construction for transportation infrastructure	PO-1, PO-2, PO-6, PO-9, PO-10	Understand	Conceptual
CO2	Determine properties of bitumen and check its suitability for pavement construction	PO-1, PO-2, PO-6, PO-9, PO-10	Apply	Conceptual, Procedural
CO3	Conduct traffic and speed study on highway	PO-1, PO-2, PO-4, PO-5, PO-6, PO-9, PO-10	Apply	Conceptual, Procedural

CO-PO/PSO Matrix

Course Code:	Program Outcome(PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**2**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**2**	**-**	**-**	**-**	**-**
CO2	**3**	**2**	**-**	**-**	**-**	**1**	**-**	**-**	**1**	**2**	**-**	**-**	**-**	**-**
CO3	**3**	**3**	**-**	**2**	**3**	**1**	**-**	**-**	**1**	**2**	**-**	**2**	**-**	**-**
PO Target	**3**	**2.33**	**-**	**2**	**3**	**1**	**-**	**-**	**1**	**2**	**-**	**2**	**-**	**-**

Signature of Course Coordinator **Signature of HoD**

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

Academic Session: 2021- 2022 Semester: VI

Course Name: Structural Detailing Lab, Course Code: KCE 653

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive ProcessLevel (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Apply latest software tools for structural drafting and detailing of building components.	PO-1, PO-2, PO-5, PO-8, PO-9, PO-10, PO-12, PSO-1	Apply	Conceptual, Procedural
CO2	Create bar bending schedule for structural components of a building.	PO-1, PO-2, PO-5, PO-8, PO-9, PO-10, PO-12, PSO-1	Apply	Conceptual, Procedural
CO3	Understand full set of structural drawing of a building	PO-1, PO-9, PO-10, PO-12	Understand	Conceptual

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	**3**	**1**	**-**	**-**	**3**	**-**	**-**	**1**	**1**	**2**	**-**	**2**	**2**	-
CO2	**3**	**1**	**-**	**-**	**3**	**-**	**-**	**1**	**1**	**2**	**-**	**1**	**2**	-
CO3	**3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**1**	**-**	**1**	**-**	-
PO Target	**3**	**1**	**-**	**-**	**3**	**-**	**-**	**1**	**1.33**	**1.66**	**-**	**1.3**	**2**	-

Signature of Course Coordinator **Signature of HoD**

KIET GROUP OF INSTITUTIONS, DELHI – NCR, GHAZIABAD
DEPARTMENT OF CIVIL ENGINEERING

(An ISO – 9001:2008 Certified & 'A' Grade accredited Institution by NAAC)

Program: B.Tech (Civil Engineering)
Academic Session: 2021-22 Semester: 6th
Course Outcomes
Course Name: Environmental Engineering Lab, Course Code : KCE 651

After completion of this course, the student will be able to

CO-1: Measure and compare the physical, chemical and biological properties of water & waste water.
CO-2: Measure the level of air pollution (Particulate Matter) and noise pollution.

CO-PO Mapping

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2
CO-1	3	2	2	1	3	3	3	2	1	1	-	2	-	-
CO-2	3	3	2	1	1	3	3	2	1	1	-	2	-	-

Ayush Kumar

Faculty Incharge

HOD
Civil Engineering

Department of Civil Engineering

Program: B. Tech (Civil Engineering)

AcademicSession:2021-2022

Semester:VIII

CourseName: Quality Manangement,CourseCode:KOE085

CourseOutcomes

CONo.	StatementofCourseOutcome	Relevant POs/PSOs	Bloom'sCognitive ProcessLevel(BL)	Knowledge Category(KC)
Aftercompletionofthe course,the studentwillbeableto				
CO1	To understand the quality concept and its component		2	Conceptual
CO2	To understand the concepts of quality management and performance excellence in organization		2	Conceptual
CO3	To Analyze the quality in organizations such as manufacturing, service, healthcare, education, government, etc.		4	Conceptual
CO4	To apply the several techniques and quality management tools		3	Procedural
CO5	To understand the quality system certification process.		2	Conceptual

CO-PO/PSOMatrix

CourseCode:	ProgramOutcome(PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**2**	-	-
CO2	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**2**	-	-
CO3	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**2**	-	-
CO4	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**2**	-	-
CO5	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**1**	-	-
POTarget	-	-	-	-	-	**1**	**1**	**1**	**1**	**1**	-	**1.8**	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: 8
Course Name: Project Management & Entrepreneurship, Course Code: KHU 801

Course Outcomes

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Understand the theories of entrepreneurship and Entrepreneurial Development Programmes.	6,7,8,9,11 ,12	Understand	Conceptual
CO2	Apply innovative business ideas and market opportunities.	6,7,8,9,11,12	Apply	Conceptual, Procedural
CO3	Understand the importance of Project Management and Project's life cycle	6,7,8,9,11,12	Understand	Conceptual
CO4	Analyze Project Financing and project report.	1,2,6,7,8,9,11,12	Analyze	Conceptual, Procedural
CO5	Analyze Social Sector Perspectives and Social Entrepreneurship.	6,7,8,9,11,12	Analyze	Conceptual, Procedural

CO - PO/PSO Matrix

Course Code:	Program Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	1	1	2	2	-	3	1	-	-
CO2	-	-	-	-	-	2	2	3	3	-	3	2	-	-
CO3	-	-	-	-	-	3	3	2	3	-	3	2	-	-
CO4	1	1	-	-	-	2	3	2	3	-	3	2	-	-
CO5	-	-	-	-	-	2	3	3	**2**	-	3	3	-	-
PO Target	1	1	-	-	-	**2**	**2.4**	**2.4**	**2.6**	-	**3**	**2**	-	-

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session:2021-2022Semester:VIII
Course Name :Human Values in Vedic Darshan, CourseCode:KOE099

CourseOutcomes

CONo.	StatementofCourseOutcome	Relevant POs/PSOs	Bloom'sCognitive ProcessLevel(BL)	Knowledge Category(KC)
Aftercompletionofthe course,the studentwillbeableto				
CO1	Understand the philosophy of Vedic Darśana and Nyāya Darśan	PO7, PO8 & PO9	2	Factual & Conceptual
CO2	Understand the philosophy of Vaiśeṣika Darśana (Philosophy of Matter)	PO7, PO8 & PO9	2	Factual & Conceptual
CO3	Understand the philosophy of Sāṃkhya-Yoga Darśana & Vedanta Darshan (Philosophy of Spirituality)	PO7, PO8 & PO9	2	Factual & Conceptual
CO4	Understand the philosophy of Upaniṣad and Vedanta Darśana (Philosophy of God)	PO7, PO8 & PO9	2	Factual & Conceptual
CO5	Apply the philosophy of vedic darshan in Human life	PO7, PO8 & PO9	3	Factual & Conceptual

CO-PO/PSOMatrix

CourseCode:	ProgramOutcome(PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	-	**2**	**2**	-	-	-	**2**	-	-
CO2	-	-	-	-	-	-	**2**	**2**	-	-	-	**2**	-	-
CO3	-	-	-	-	-	-	**2**	**2**	-	-	-	**2**	-	-
CO4	-	-	-	-	-	-	**2**	**2**	-	-	-	**2**	-	-
CO5	-	-	-	-	-	-	**2**	**3**	-	-	-	**2**	-	-
POTarget														

Department of Civil Engineering

Program: B. Tech (Civil Engineering)
Academic Session: 2021- 2022 Semester: VIII
Course Name: Project Course Code: KCE 753

Course Outcome

CO No.	Statement of Course Outcome	Relevant POs/ PSOs	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to				
CO1	Work effectively as an individual and member of the team to solve complex engineering problems.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	F,C,P
CO2	Apply engineering knowledge to solve real life problems and involve in self-learning process.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	C,P
CO3	Apply research based knowledge and methods to arrive at valid conclusions.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	F,C,P
CO4	Apply modern tools for analysis and design of complex engineering problems.	PO1, PO2, PO3, PO4,PO5,PO6, PO7, PO11, PO12, PSO1	Apply	C, P
CO5	Develop ethical solutions of engineering problems taking into account its impact on society, environment and sustainability.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Create	C, P
CO 6	Compose and present detailed project report of his/her work and defend effectively.	PO1, PO2, PO3, PO4,PO5,PO6, PO7,PO8,PO9, PO10, PO11, PO12, PSO1	Apply	P

CO - PO/PSO Matrix

Course Code:	Programme Outcome (PO)												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	2	2	2	3	3	2	2	2	1	-
CO2	3	3	3	2	2	2	2	2	2	2	1	2	3	-
CO3	3	3	3	3	3	1	2	-	-	-	1	2	3	-
CO4	3	3	3	3	3	2	2	2	2	2	1	3	3	-
CO5	3	3	3	2	2	2	3	3	2	2	1	2	2	-
CO6	2	2	2	1	1	1	1	3	2	3	3	1	1	-
PO Target	**2.8**	**2.8**	**2.8**	**2.3**	**2.1**	**1.6**	**2.0**	**2.6**	**2.2**	**2.2**	**1.5**	**2.0**	**2.1**	**-**

Signature of Course Coordinator **Signature of HoD**