SESSION 2020-24

FACULTY NAME :	Mr. TARUN KUMAR NARNAURE, Ms. NAMRATA KHEDE	SESSION :	2020-24
SUBJECT	CE21004		B.TECH YEAR II
SUBJECT :	ENGINEERING MATERIALS		SEM : A

COURSE OUTCOME	
CO1 :	Analyze cement properties through standardized tests.
CO2 :	Evaluate aggregate characteristics and behavior.
CO3 :	Assess concrete workability and strength parameters.
CO4 :	Examine various construction materials properties.
CO5 :	Apply concrete mix design principles and methods.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	0	0	3	0	0	3	3	3	0	3	3	3	0	0
CO2	3	3	2	0	3	0	0	3	3	3	0	3	2	3	0	0
CO3	3	3	3	0	3	0	0	3	3	3	0	3	3	3	0	0
CO4	3	3	0	0	3	0	0	3	3	3	0	3	0	3	0	0
CO5	3	3	2	0	0	0	0	3	3	3	0	3	3	3	0	0
TARGET	3.00	3.00	2.30	-	3.00	-	-	3.00	3.00	3.00	-	3.00	2.80	3.00	-	-

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.90	2.90	0.00	0.00	0	0	0.00	2.9	2.9	2.90	0.00	2.90	2.9	2.90	0.00	0.00
CO2	2.90	2.90	1.90	0.00	0	0	0.00	2.9	2.9	2.90	0.00	2.90	1.9	2.90	0.00	0.00
CO3	3.00	3.00	2.90	0.00	2	0	0.00	3.0	3.00	3.00	0.00	3.00	3	3.00	0.00	0.00
CO4	3.00	3.00	0.00	0.00	3	0	0.00	3.0	3.00	3.00	0.00	3.00	0.0	3.00	0.00	0.00
CO5	2.90	2.90	1.90	0.00	1.9	0	0.00	2.9	2.90	2.90	0.00	2.90	2.9	2.90	0.00	0.00
ATTAIN	2.9	2.9	1.3	-	1.4	0.0	0.0	2.9	2.9	2.9	0.0	2.9	2.1	2.9	-	-

FACULTY NAME :				SESSION :	JULY DEC 2022
SUBJECT CODE :	CE21004			B.TECH YEAR :	II YEAR
SUBJECT NOMN :	Material Technology			SEM :	III

COURSE OUTCOME	
CO1 :	Demonstrate the composition, manufacturing and properties of brick, lime and clay products.
CO2 :	Describe and explain the type's uses and properties of glasses, timber and plastics in buildings.
CO3 :	Discuss and explain the properties of decorative materials such as rubber, organic coating, and laminates water proofing etc.
CO4 :	Classify the properties of fresh and hardened concrete. Design and recommend the proportion of concrete mix using the specification of ingredients.
CO5 :	Discuss Alternate & Innovative Construction Material for Housing and classify the properties of heat insulating materials and behavior of various materials under compression, tension, bending, fatigue, creep and hardness under different loading.

CO- PO TARGET MATRIX																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	1	0	0	0	2	0	0	0	1	0	3	2	2	0	0
CO2	3	1	0	0	0	2	0	0	0	1	0	3	2	2	0	0
CO3	3	1	0	0	0	2	0	0	0	1	0	3	2	2	0	0
CO4	3	2	2	0	0	2	0	0	0	1	0	3	3	2	0	0
CO5	3	2	1	0	0	2	0	0	0	2	0	3	3	2	0	0
TARGET	3	1.4	1.5	-	-	2	-	-	-	1.2	-	3	2.4	2	-	-

CO- PO ATTAIN MATRIX																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.9	1.0	0	0	0	1.9	0	0	0	1.0	0	2.9	1.9	1.9	0	0
CO2	2.9	1.0	0	0	0	2.0	0	0	0	1.0	0	2.9	2.0	2.0	0	0
CO3	2.5	0.8	0	0	0	1.7	0	0	0	0.8	0	2.5	1.7	1.7	0	0
CO4	2.5	1.7	1.7	0	0	1.7	0	0	0	0.8	0	2.5	2.5	1.7	0	0
CO5	1.9	1.3	0.6	0	0	1.3	0	0	0	1.3	0	1.9	1.9	1.3	0	0
ATTAIN	2.6	1.1	1.2	-	-	1.7	-	-	-	1.0	-	2.6	2.0	1.7	-	-

FACULTY NAME :	Dr. S.K. AHIRWAR		SESSION :	2021-22
SUBJECT CODE :	CE 21007		B.TECH YEAR :	II nd YEAR
SUBJECT NOMN :	BUILDING PLANNING & ARCHITECTURE		SEM :	3rd

COURSE OUTCOME

CO1 :	Identify building components and apply regulations in site planning
CO2 :	Utilize environmental design principles in architectural planning
CO3 :	Implement functional planning and integrate basic building services.
CO4 :	Describe architectural history and the architect's professional role.
CO5 :	Create architectural compositions and produce technical drawings.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	2	0	0	0	0	0	3	0	0	0	3	1	2	0	0
CO2	2	3	0	2	0	0	0	3	0	0	0	3	1	2	1	1
CO3	3	2	0	2	0	0	0	3	0	0	0	3	1	3	0	0
CO4	2	1	0	2	0	0	0	3	0	0	0	3	1	0	0	0
CO5	2	2	0	3	0	0	0	3	0	0	0	3	1	0	0	0
TARGET	2.4	2	0	2.25	0	0	0	3	0	0	0	3	1	2.333	1	1

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.92	1.95	0.00	0.00	0.00	0.00	0.00	2.92	0.00	0.00	0.00	2.92	0.97	1.95	0.00	0.00
CO2	1.95	2.92	0.00	1.95	0.00	0.00	0.00	2.92	0.00	0.00	0.00	2.92	0.97	1.95	0.97	0.97
CO3	2.94	1.96	0.00	1.96	0.00	0.00	0.00	2.94	0.00	0.00	0.00	2.94	0.98	2.94	0.00	0.00
CO4	1.81	0.91	0.00	1.81	0.00	0.00	0.00	2.72	0.00	0.00	0.00	2.72	0.91	0.00	0.00	0.00
CO5	1.94	1.94	0.00	2.91	0.00	0.00	0.00	2.91	0.00	0.00	0.00	2.91	0.97	0.00	0.00	0.00
ATTAINED	2.31	1.93	0.00	2.16	0.00	0.00	0.00	2.88	0.00	0.00	0.00	2.88	0.96	2.28	0.97	0.97

20-24

FACULTY NAME :	Dr. S.K. AHIRWAR		SESSION :	2021-22

SUBJECT CODE : CE 21007

BUILDING PLANNING & ARCHITECTURE

SUBJECT NOMN : LAB

B.TECH YEAR : II nd YEAR

SEM : 3rd

COURSE OUTCOME

CO1 :	Interpret and apply architectural drawing conventions, including sign conventions,
CO2 :	Create accurate architectural drawings for various residential structures, including doors,windows, staircases, and different house types
CO3 :	Utilize AutoCAD software to produce professional-quality plans, elevations, and sections

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	3	0	0	0	0	2	2	0	0	3	3	2	1	2
CO2	3	3	3	0	0	0	0	2	3	0	0	3	3	3	1	2
CO3	3	3	3	0	0	0	0	2	3	0	0	3	3	3	1	2
TARGET	3	3	3	0	0	0	0	2	2.667	0	0	3	3	2.667	1	2

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.86	2.86	2.86	0	0	0	0	1.91	1.91	0	0	2.86	2.86	1.91	0.95	1.91
CO2	2.86	2.86	2.86	0.00	0.00	0.00	0.00	1.91	2.86	0.00	0.00	2.86	2.86	2.86	0.95	1.91
CO3	2.80	2.80	2.80	0	0	0	0	1.87	2.80	0	0	2.80	2.80	2.80	0.93	1.87
ATTAINED	2.84	2.84	2.84	0.00	0.00	0.00	0.00	1.89	2.52	0.00	0.00	2.84	2.84	2.52	0.95	1.89

FACULTY NAME :	Pranav Thepe / Suninda Parmar	SESSION :	JAN JUNE 2022
SUBJECT CODE :	CE21502	B.TECH YEAR :	II YEAR
SUBJECT NOMN :	Construction Technology -1	SEM :	IV

COURSE OUTCOME

CO1 :	Describe the various available conventional and new construction materials and techniques.
CO2 :	Explain the suitability of materials required for various structural elements.
CO3 :	Describe the suitability different construction techniques
CO4 :	Apply the suitability of locally available material in building constructions.
CO5 :	Explain the application of globally available equipment's in construction technology.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	0	0	0	0	2	2	0	0	0	0	2	3	2	0	0
CO2	3	0	0	0	0	2	2	0	0	0	0	2	3	0	0	0
CO3	3	0	0	0	0	2	2	0	0	0	0	2	2	2	0	0
CO4	3	0	0	0	0	2	2	0	0	0	0	2	2	2	0	0
CO5	3	0	0	0	2	2	2	0	0	0	0	2	2	2	0	0
TARGET	3	0	0	0	2	2	2	0	0	0	0	2	2.4	2	0	0

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.9	0	0	0	0	2.0	2.0	0	0	0	0	2.0	2.94	1.96	0	0
CO2	3.0	0	0	0	0	2.0	2.0	0	0	0	0	2.0	2.97	0	0	0
CO3	3.0	0	0	0	0	2.0	2.0	0	0	0	0	2.0	1.97	1.97	0	0
CO4	2.6	0	0	0	0	1.7	1.7	0	0	0	0	1.7	1.71	1.71	0	0
CO5	1.7	0	0	0	1.2	1.2	1.2	0	0	0	0	1.2	1.15	1.15	0	0
ATTAIN	2.6	-	-	-	1.2	1.8	1.8	-	-	-	-	1.8	2.1	1.7	-	-

FACULTY NAME :	Suminda Parmar / Pranav Thepe	SESSION :	JAN JUNE 2022
SUBJECT CODE :	CE21801	B.TECH YEAR :	II YEAR
SUBJECT NOMN :	CONSTRUCTION TECHNOLOGY-I LABORATORY	SEM :	IV

COURSE OUTCOME

CO1 :	Analyze and apply fundamental concepts in building construction, including foundations, masonry techniques, and structural elements
CO2 :	Evaluate and compare different types of construction materials and methods used in flooring, roofing, and staircase design.
CO3 :	Develop practical skills in interpreting and creating technical drawings related to various building components and systems.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	0	0	0	0	0	2	0	0	0	3	3	3	0	0
CO2	3	3	0	0	0	0	0	0	0	0	0	3	2	2	0	0
CO3	3	3	0	0	0	0	0	2	0	0	0	3	3	2	0	0
TARGET	3	3	0	0	0	0	0	2	0	0	0	3	2.7	2.3	0	0

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3.0	3.0	0	0	0	0	0	2.0	0	0	0	3.0	3.00	3.00	0	0
CO2	3.0	3.0	0	0	0	0	0	0	0	0	0	3.0	2.00	2.00	0	0
CO3	3.0	3.0	0	0	0	0	0	2.0	0	0	0	3.0	3.00	2.00	0	0
ATTAIN	3.0	3.0	-	-	-	-	-	2.0	-	-	-	3.0	2.7	2.3	-	-

FACULTY NAME :	Dr. S.K. AHIRWAR		SESSION :	2021-22
SUBJECT CODE :	CE 21508		B.TECH YEAR :	II nd YEAR
SUBJECT NOMN :	ENGINEERING GEOLOGY		SEM :	4th

COURSE OUTCOME

CO1 :	Comprehend fundamental geological concepts and their relevance to civil engineering.
CO2 :	Analyze rock properties and structural geology for engineering applications.
CO3 :	Evaluate geological hazards, particularly landslides and earthquakes
CO4 :	Apply geological investigation techniques for various civil engineering projects.
CO5 :	Utilize remote sensing, GPS, and GIS technologies in civil engineering and resource mapping.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	2	0	0	0	2	0	0	0	3	0	3	2	2	1	1
CO2	2	3	0	0	0	2	0	0	0	3	0	3	2	3	1	1
CO3	3	2	0	0	2	2	0	0	0	3	0	3	2	2	2	2
CO4	2	1	0	0	2	2	0	0	0	3	0	3	3	2	2	2
CO5	2	2	0	3	2	2	0	0	0	3	0	3	3	2	2	2
TARGET	2.4	2	0	3	0	0	0	0	0	0	0	3	2.4	2.2	1.6	1.6

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.88	1.92	0.00	0.00	0.00	1.92	0.00	0.00	0.00	2.88	0.00	2.88	1.92	1.92	0.96	0.96
CO2	1.91	2.86	0.00	0.00	0.00	1.91	0.00	0.00	0.00	2.86	0.00	2.86	1.91	2.86	0.95	0.95
CO3	2.84	1.89	0.00	0.00	1.89	1.89	0.00	0.00	0.00	2.84	0.00	2.84	1.89	1.89	1.89	1.89
CO4	1.92	0.96	0.00	0.00	1.92	1.92	0.00	0.00	0.00	2.88	0.00	2.88	2.88	1.92	1.92	1.92
CO5	1.89	1.89	0.00	2.84	1.89	1.89	0.00	0.00	0.00	2.84	0.00	2.84	2.84	1.89	1.89	1.89
ATTAINED	2.29	1.91	0.00	2.84	1.90	1.91	0.00	0.00	0.00	2.86	0.00	2.86	2.29	2.10	1.52	1.52

FACULTY NAME :	Dr. S.K. AHIRWAR
SUBJECT CODE :	CE 21508
SUBJECT NOMN :	ENGINEERING GEOLOGY LAB

COURSE OUTCOME

CO1 :	Analyze geological structures including folds, faults, and unconformities
CO2 :	Interpret geological features relevant to civil engineering projects.
CO3 :	Develop skills in geological map reading and cross-section drawing

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	2	0	0	0	0	2	0	0	0	0	2	0	2	2	2
CO2	2	3	0	2	0	0	2	0	2	0	0	2	2	2	2	2
CO3	3	2	0	2	0	0	0	0	2	0	0	2	3	2	1	2
TARGET	2.667	2.333	0	2	0	0	2	0	2	0	0	2	2.5	2	1.667	2

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.06	1.37	0.00	0.00	0.00	0.00	1.37	0.00	0.00	0.00	0.00	1.37	0.00	1.37	1.37	1.37
CO2	1.37	2.05	0.00	1.37	0.00	0.00	1.37	0.00	1.37	0.00	0.00	1.37	1.37	1.37	1.37	1.37
CO3	2.09	1.39	0.00	1.39	0.00	0.00	0.00	0.00	1.39	0.00	0.00	1.39	2.09	1.39	0.70	1.39
ATTAINED	1.84	1.60	0.00	1.38	0.00	0.00	1.37	0.00	1.38	0.00	0.00	1.38	1.73	1.38	1.14	1.38

FACULTY NAME:	DR. R.K. KHARE		SESSION:	2020-2024
SUBJECT CODE:	CE 21554		B.TECH YEAR:	II
SUBJECT NOMN:	STRUCTURAL MECHANICS		SEM:	IV

CO	Statement
1	Determine the deflection of determinate structures using energy methods.
2	Analyze axially loaded and eccentric columns and calculate buckling loads.
3	Analyze curved flexural members, springs, shells and pressure vessels.
4	Compute stresses in beams subjected to unsymmetrical bending.
5	Analyze and interpret response of single degree of freedom systems subjected to harmonic loading.

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO2	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO3	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO4	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO5	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
Average PO/PSO Attainment		3.0	3.0	3.0	-	-	-	-	-	-	-	-	3.0	3.0	3.0	-	-

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	2.1	2.1	2.1	0	0	0	0	0	0	0	0	2.1	2.1	2.1	0	0
	CO2	2.5	2.5	2.5	0	0	0	0	0	0	0	0	2.5	2.5	2.5	0	0
	CO3	1.9	1.9	1.9	0	0	0	0	0	0	0	0	1.9	1.9	1.9	0	0
	CO4	1.7	1.7	1.7	0	0	0	0	0	0	0	0	1.7	1.7	1.7	0	0
	CO5	2.5	2.5	2.5	0	0	0	0	0	0	0	0	2.5	2.5	2.5	0	0
Average PO/PSO Attainment		2.1	2.1	2.1	-	-	-	-	-	-	-	-	2.1	2.1	2.1	-	-

FACULTY NAME:	DR. R.K. KHARE
SUBJECT CODE:	CE 21554
SUBJECT NOMN:	STRUCTURAL MECHANICS

SESSION:	2020-2024
B.TECH YEAR:	II
SEM:	IV

CO	Statement
1	Determine the deflection of determinate structures using energy methods.
2	Analyze axially loaded and eccentric columns and calculate buckling loads.
3	Analyze curved flexural members, springs, shells and pressure vessels.
4	Compute stresses in beams subjected to unsymmetrical bending.
5	Analyze and interpret response of single degree of freedom systems subjected to harmonic loading.

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO2	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO3	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO4	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
	CO5	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	0.0
Average PO/PSO Attainment		3.0	3.0	3.0	-	-	-	-	-	-	-	-	3.0	3.0	3.0	-	-

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	2.1	2.1	2.1	0	0	0	0	0	0	0	0	2.1	2.1	2.1	0	0
	CO2	2.5	2.5	2.5	0	0	0	0	0	0	0	0	2.5	2.5	2.5	0	0
	CO3	1.9	1.9	1.9	0	0	0	0	0	0	0	0	1.9	1.9	1.9	0	0
	CO4	1.7	1.7	1.7	0	0	0	0	0	0	0	0	1.7	1.7	1.7	0	0
	CO5	2.5	2.5	2.5	0	0	0	0	0	0	0	0	2.5	2.5	2.5	0	0
Average PO/PSO Attainment		2.1	2.1	2.1	-	-	-	-	-	-	-	-	2.1	2.1	2.1	-	-

FACULTY NAME:		
SUBJECT CODE:	CE 21554 / CE 21804	
SUBJECT NOMN:	STRUCTURAL MECHANICS LAB	

SESSION:	2020-2024
B.TECH YEAR:	II
SEM:	IV

CO	Statement
1	Develop a thorough understanding of the behavior of various structural elements (beams, trusses, and columns) under different loading conditions.
2	Apply theoretical principles such as strain energy methods, Euler's theory, and Castigliano's theorem to analyze and predict structural responses.
3	Enhance analytical and computational skills by verifying experimental results through analytical methods and developing computer programs for structural analysis.
4	Develop proficiency in conducting experiments related to deflection, bending, shear force, and moment of inertia and verify results with theoretical calculations.
5	Gain hands-on experience in using experimental and computational tools to analyze structural elements, enhancing the ability to apply these techniques in real-world engineering problems.

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-
	CO2	3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-
	CO3	3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-
	CO4	3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-
	CO5	3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-
Average PO/PSO Attainment		3.0	3.0	3.0	-	-	-	-	-	3.0	-	-	3.0	3.0	3.0	-	-

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-
	CO2	2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-
	CO3	2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-
	CO4	2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-
	CO5	2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-
Average PO/PSO Attainment		2.9	2.9	2.9	-	-	-	-	-	2.9	-	-	2.9	2.9	2.9	-	-

FACULTY NAME : MR. TARUN KUMAR NARNURE, MS. NAMRATA KHEDE
SUBJECT CODE : CE 31201
SUBJECT NOMN : ADVANCE HIGHWAY AND AIRPORT ENGINEERING

SESSION : 2021-22
B.TECH YEAR : III YEAR
SEM : 5th

COURSE OUTCOME

CO1 :	Identify and evaluate the properties of highway materials relevant to pavement performance and construction.Describe the various available conventional and new
CO2 :	Solve design problems related to flexible and rigid pavements using standard methods and guidelines.Explain the suitability of materials required for various
CO3 :	Analyze key factors influencing pavement design and compare different design methodologies.Describe the suitability different construction techniques.
CO4 :	Interpret aircraft characteristics and integrate them into airport planning, highway construction procedures, and maintenance practices.Apply the suitability of locally
CO5 :	Develop airport layout plans and perform structural design of airport pavements based on technical criteria.Explain the application of globally available equipments in

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	2	2	0	0	0	0	0	0	0	0	3	3	1	2
CO2	3	3	2	2	0	0	0	0	0	0	0	0	3	3	1	1
CO3	2	2	3	3	0	0	0	0	0	0	0	0	2	3	2	2
CO4	2	2	3	2	0	2	0	0	0	0	0	0	2	3	1	2
CO5	2	3	3	3	0	2	0	0	0	0	0	0	3	3	1	1
TARGET	2.4	2.6	2.6	2.4	-	0.8	-	-	-	-	-	-	2.6	3.0	1.2	1.6

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.34	2.34	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.67	1.33
CO2	2.34	2.34	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.36	2.36	0.79	0.79
CO3	1.55	1.55	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	2.03	1.35	1.35
CO4	1.33	1.33	2.00	1.33	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	1.57	2.36	0.79	1.57
CO5	1.33	1.33	2.00	2.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	1.96	1.96	0.65	0.65
ATTAIN	1.8	1.8	1.9	1.8	-	0.5	-	-	-	-	-	-	1.8	2.1	0.8	1.1
TARGET	2.4	2.6	2.6	2.4	-	0.8	-	-	-	-	-	-	2.6	3.0	1.2	1.6

FACULTY NAME : MR. TARUN KUMAR NARNURE, MS. NAMRATA KHEDE
SUBJECT CODE : CE31201
SUBJECT NOMN : ADVANCE HIGHWAY AND AIRPORT ENGINEERING

SESSION : 2022-23
B.TECH YEAR : III YEAR
SEM : 5 th

COURSE OUTCOME

CO1 :	Master the evaluation of physical properties of aggregates.
CO2 :	Analyze the mechanical properties and durability of aggregates.
CO3 :	Study the rheological properties and behavior of bituminous materials.
CO4 :	Develop expertise in designing bituminous concrete mixes and road drainage systems.s
CO5 :	Evaluate pavement performance and design rehabilitation strategies.

CO-PO TARGET MATRIX

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	PSO1	PSO2	PSO3	PSO4
CO1	3	0	0	0	0	0	0	2	2	0	2	3	3	1	2	2
CO2	3	0	0	0	0	0	0	2	2	0	2	3	3	1	1	1
CO3	2	0	0	0	0	0	0	2	2	0	3	2	3	2	2	2
CO4	2	0	0	0	0	2	2	2	0	0	3	2	3	2	2	2
CO5	2	0	0	0	0	2	3	2	0	0	3	2	3	1	1	1
TARGET	2.40	0.00	0.00	0.00	0.00	1.20	1.40	2.00	0.80	0.00	2.60	2.40	3.00	1.40	1.60	1.60

CO-PO ATTAIN MATRIX

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.90	0.00	0.00	0	0.00	0.00	0	1.95	1.90	0.00	1.90	2.90	2.92	1.00	1.90	1.90
CO2	3.00	0.00	0.00	0	0.00	0.00	0	1.99	2.00	0.00	1.90	3.00	2.98	1.00	1.00	1.00
CO3	1.90	0.00	0.00	0	0.00	1.90	1.90	1.93	0.00	0.00	2.90	1.90	2.90	1.90	1.90	1.90
CO4	1.90	0.00	0.00	0	0.00	1.90	2.90	1.93	0.00	0.00	2.90	1.90	2.90	1.90	1.90	1.90
CO5	2.00	0.00	0.00	0	0.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	3.00	1.00	1.00	1.00
ATTAIN	2.3	-	-	-	-	1.2	1.7	2.0	1.2	-	1.9	2.3	2.9	1.4	1.5	1.5
TARGET	2.4	0.0	0.0	0.0	0.0	1.2	1.4	2.0	0.8	0.0	2.6	2.4	3.0	1.4	1.6	1.6

FACULTY NAME :	Mr. TARUN KUMAR NARNAURE.		SESSION : 2020-24	
	Ms. NAMRATA KHEDE			
SUBJECT CODE :	CE31201			
SUBJECT NOMN :	ADVANCE HIGHWAY AND AIRPORT ENGINEERING		B.TECH YEAR :	III
			SEM : B	

COURSE OUTCOME

CO1 :	Identify and evaluate the properties of highway materials relevant to pavement performance and construction.
CO2 :	Solve design problems related to flexible and rigid pavements using standard methods and guidelines.
CO3 :	Analyze key factors influencing pavement design and compare different design methodologies.
CO4 :	Interpret aircraft characteristics and integrate them into airport planning, highway construction procedures, and maintenance practices.
CO5 :	Develop airport layout plans and perform structural design of airport pavements based on technical criteria.

CO-PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	2	0	0	0	0	0	0	0	0	3	3	1	2
CO2	3	3	2	2	0	0	0	0	0	0	0	0	3	3	1	2
CO3	2	2	3	3	0	0	0	0	0	0	0	0	3	3	1	1
CO4	2	2	3	2	0	2	0	0	0	0	0	0	2	3	2	2
CO5	2	3	3	3	0	2	0	0	0	0	0	0	2	3	1	1
TARGET	2.4	2.6	2.6	2.4	-	0.8	-	-	-	-	-	-	2.6	3.0	1.2	1.6

CO-PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	2.3	2.3	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.8	1.6
CO2	2.3	2.3	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.8	1.6
CO3	1.6	1.6	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.8	0.8
CO4	1.3	1.3	2.0	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.3	1.6	1.6
CO5	1.3	1.3	2.0	2.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.0	0.7	1.3
ATTAIN	1.8	1.8	1.9	1.8	-	0.5	-	-	-	-	-	-	1.0	2.2	0.9	1.2

LAB

FACULTY NAME :	Mr. TARUN KUMAR NARNAURE, Ms. NAMRATA KHEDE	SESSION :	2020-24
SUBJECT CODE :	CE31201	B.TECH YEAR :	III
SUBJECT :	ADVANCE HIGHWAY AND AIRPORT ENGINEERING	SEM : B	

COURSE OUTCOME

CO1 :	Master the evaluation of physical properties of aggregates.
CO2 :	Analyze the mechanical properties and durability of aggregates.
CO3 :	Study the rheological properties and behavior of bituminous materials.Study the rheological properties and behavior of bituminous materials.
CO4 :	Develop expertise in designing bituminous concrete mixes and road drainage systems.
CO5 :	Evaluate pavement performance and design rehabilitation strategies

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	0	0	0	0	0	0	2	2	0	2	3	3	1	2	2
CO2	3	0	0	0	0	0	0	2	2	0	2	3	3	1	1	1
CO3	2	0	0	0	0	2	2	2	0	0	2	3	3	1	1	1
CO4	2	0	0	0	0	2	2	2	0	0	3	2	3	2	2	2
CO5	2	0	0	0	0	2	3	2	0	0	3	2	3	2	2	2
TARGET	2.40	0.00	0.00	0.00	0.00	1.2	1.40	0.80	2.00	0.00	2.60	2.40	3.00	1.40	1.60	1.60

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.90	0.00	0.00	0	0	0	0	1.9	1.9	0.00	1.90	2.90	2.9	1.00	1.90	1.90
CO2	3.00	0.00	0.00	0	0	0	0.00	2.0	2.0	0.00	1.90	3.00	3.0	1.00	1.00	1.00
CO3	1.90	0.00	0.00	0	0	1.9	1.90	1.9	0.00	0.00	2.90	1.90	2.9	1.90	1.90	1.90
CO4	1.90	0.00	0.00	0	0	1.9	2.90	1.9	0.00	0.00	2.90	1.90	2.9	1.90	1.90	1.90
CO5	2.00	0.00	0.00	0	0	2	2.00	2.0	2.00	0.00	0.00	2.00	3	1.90	1.90	1.90
ATTAIN	2.3	-	-	-	-	1.2	1.3	0.8	1.2	-	1.9	2.3	2.9	1.4	1.5	1.5

FACULTY	Prof. Devendra Dohare & Prof. Soumya Saklecha
SUBJECT CODE :	CE31703
SUBJECT NOMN :	WATER AND WASTEWATER TREATMENT TECHNOLOGIES

SESSION .	2022-23
B.TECH YEAR :	III
SEM :	VI

COURSE OUTCOME

CO1 :	Explain impact of raw water quality on health and its mitigation, design of sedimentation tank, its types and factors affecting settling.
CO2 :	Analyze coagulants, factors affecting coagulation, jar test. design of Clariflocculator, Filtration unit, its types and multimedia filters.
CO3 :	Apply methods of disinfection, usage of free chlorine and combined chlorine, mechanism of chlorination with their advantage and disadvantage.
CO4 :	Design preliminary, primary and secondary treatment units of conventional sewage treatment plant.
CO5 :	Design biological treatment units viz. Activated sludge plant, SBR and methods of sludge treatment and disposal.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	2	3	1	0	2	2	1	1	0	0	1	2	3	1	3
CO2	3	2	3	1	0	0	1	0	0	0	0	0	3	3	1	2
CO3	3	1	3	1	0	0	2	0	0	0	0	0	2	3	1	2
CO4	3	2	2	1	0	1	2	0	0	0	0	1	1	3	3	2
CO5	3	1	2	1	0	0	1	0	0	0	0	0	3	3	2	2
TARGET	3	1.6	2.6	1	0	1.5	1.6	1	1	0	0	1	2.2	3	1.6	2.2

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.5	1.7	2.5	0.8	0	1.7	1.7	0.8	0.8	0	0	0.8	1.7	2.5	0.8	2.5
CO2	2.1	1.4	2.1	0.7	0	0	0.7	0	0	0	0	0	2.1	2.1	0.7	1.4
CO3	2.1	0.7	2.1	0.7	0	0	1.4	0	0	0	0	0	1.4	2.1	0.7	1.4
CO4	2.5	1.7	1.7	0.8	0	0.8	1.7	0	0	0	0	0.8	0.8	2.5	2.5	1.7
CO5	2.5	0.8	1.7	0.8	0	0	0.8	0	0	0	0	0	2.5	2.5	1.7	1.7
ATTAIN	2.3	1.3	2.0	0.8	-	1.3	1.3	0.8	0.8	-	-	0.8	1.7	2.3	1.3	1.7

FACULTY	Prof. Shruti Bajpai, Prof. Soumya Sakrecha		SESSION :	2022-23
SUBJECT CODE :	CE31703 Lab		B.TECH YEAR :	III
SUBJECT NOMN :	WATER AND WASTEWATER TREATMENT TECHNOLOGIES Lab		SEM :	VI

COURSE OUTCOME

CO1 :	Apply analytical techniques to measure specific contaminants and quality parameters in water and wastewater samples, including arsenic, fluoride, and nitrogen
CO2 :	Conduct jar tests to determine optimal coagulant dosages and analyze sludge characteristics for water and wastewater treatment applications.
CO3 :	Evaluate solid waste properties and utilize Indian and international standards for water quality assessment and management.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3.0	2.0	0.0	1.0	1.0	1.0	2.0	0.0	2.0	2.0	0.0	1.0	2.0	3.0	1.0	3.0
CO2	3.0	3.0	1.0	2.0	0.0	0.0	2.0	2.0	0.0	1.0	3.0	3.0	2.0	2.0	3.0	2.0
CO3	3.0	1.0	0.0	0.0	0.0	2.0	2.0	1.0	2.0	2.0	0.0	2.0	3.0	1.0	3.0	3.0
TARGET	3.0	2.0	1.0	1.5	1.0	1.5	2.0	1.5	2.0	1.7	3.0	2.0	2.3	2.0	2.3	2.7

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3.0	2.0	0	1.0	1.0	1.0	1.9	0	1.9	1.9	0	1.0	1.9	2.9	1.0	2.9
CO2	3.0	3.0	1.0	2.0	0	0	2.0	2.0	0	1.0	3.0	3.0	2.0	2.0	3.0	2.0
CO3	3.0	1.0	0	0	0	2.0	2.0	1.0	2.0	2.0	0	2.0	3.0	1.0	3.0	3.0
ATTAIN	3.0	2.0	1.0	1.5	1.0	1.5	2.0	1.5	2.0	1.6	3.0	2.0	2.3	2.0	2.3	2.6

FACULTY NAME : Ms. Shruti Bajpai, Mr. Devendra Dohare

SUBJECT CODE : (

SUBJECT NOMN : ENVIRONMENTAL ENGINEERING

SESSION : 2022-23

B.TECH YEAR : III

SEM : VI

COURSE OUTCOME

CO1 : Determine types of sources, intake works and common impurities in water, population forecasting methods and examination of physicochemical and bacteriological quality of water.

CO2 : Describe pipes used in water supply scheme-types of joints, valves, fittings etc. including corrosion in pipes.

CO3 : Analyze water distribution network and aspects of leak detection.

CO4 : Determine and analyze quality of wastewater/sewage and significance of variousParameter related to same.

CO5 : Classify types of sewerage system and analyze hydraulic design of sewers.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	2	0	0	2	1	0	0	0	0	0	3	2	1	3
CO2	3	3	1	0	0	0	0	0	0	0	0	0	3	3	1	2
CO3	3	2	1	0	2	0	1	0	0	0	0	0	2	3	2	2
CO4	3	2	0	0	0	2	0	0	0	0	0	0	3	2	2	3
CO5	3	2	1	0	0	0	0	0	0	0	0	0	3	3	2	3
TARGET	3	2.4	1.25	0	2	2	1	0	0	0	0	0	2.8	2.6	1.6	2.6

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1.7	1.7	1.1	0.0	0.0	1.1	0.6	0.0	0.0	0.0	0.0	0.0	1.7	1.1	0.6	1.7
CO2	1.7	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.6	1.1
CO3	2.3	1.5	0.8	0.0	1.5	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.5	2.3	1.5	1.5
CO4	2.5	1.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.7	1.7	2.5
CO5	1.3	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	0.9	1.3
ATTAIN	1.9	1.5	0.6	-	0.3	0.6	0.3	-	-	-	-	-	1.7	1.6	1.1	1.6

FACULTY NAME:	DR. H.K. MAHIYAR, MR. M.K. LAGHATE
SUBJECT CODE:	CE 31007
SUBJECT NOMN:	STRUCTURAL ANALYSIS I

SESSION:	2020-2024
B.TECH YEAR:	III
SEM:	V

CO	Statement
1	Compute deformations using different methods to analyze indeterminate structures with various loads and supports. Differentiate between determinacy/indeterminacy and Stability/Instability.
2	Analyze the two-degree indeterminate problems using the concept of strain energy.
3	Analyze fixed and continuous beams with varying cross-sections and support settlements.
4	Illustrate the influence lines and rolling loads for beams, trusses, and bridges.
5	Analyze arches, cables and suspension bridges with influence lines.

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	3.0	3.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	2.0	0.0
	CO2	3.0	3.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	3.0	2.0	0.0
	CO3	3.0	3.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	2.0	0.0
	CO4	3.0	3.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	1.0	0.0
	CO5	3.0	3.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	1.0	0.0
Average PO/PSO Attainment		3.0	3.0	2.0	-	-	3.0	-	-	-	-	-	1.8	3.0	3.0	1.6	-

	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	PSO1	PSO2	PSO3	PSO4
PO Attainment	CO1	2.9	2.9	1.9	0	0	2.9	0	0	0	0	0	1.9	2.9	2.9	1.9	0
	CO2	1.9	1.9	1.3	0	0	1.9	0	0	0	0	0	0.6	1.9	1.9	1.3	0
	CO3	1.7	1.7	1.1	0	0	1.7	0	0	0	0	0	1.1	1.7	1.7	1.1	0
	CO4	2.5	2.5	1.7	0	0	2.5	0	0	0	0	0	1.7	2.5	2.5	0.8	0
	CO5	2.3	2.3	1.5	0	0	2.3	0	0	0	0	0	1.5	2.3	2.3	0.8	0
Average PO/PSO Attainment		2.3	2.3	1.5	-	-	2.3	-	-	-	-	-	1.4	2.3	2.3	1.2	-

FACULTY NAME :			SESSION :	2020-24
SUBJECT CODE :	CE-		B.TECH YEAR :	IV YEAR
SUBJECT NOMN :	MINOR PROJECT		SEM :	VII

COURSE OUTCOME

CO1 :	Establish motivation for any topic of interest and define objectives of the project work.
CO2 :	Organize a detailed literature survey and build a document with respect to technical publications
CO3 :	Demonstrate skill of selecting alternative out of all the available choices with reference to functional, aesthetic, social, economic, or environmental consideration.
CO4 :	Apply various tools and techniques needed for project development
CO5 :	Demonstrate effective presentation and soft skills.
CO6 :	Prepare a well-organized report employing elements of technical writing and critical thinking.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1
CO2	2	1	1	2	1	1	1	1	2	1	1	1	1	1	3	1
CO3	2	2	2	2	2	3	3	1	2	1	1	2	2	2	1	3
CO4	2	2	2	1	3	2	2	1	2	1	3	1	2	2	2	2
CO5	1	1	2	1	3	2	1	2	2	3	2	3	2	2	1	1
CO6	2	1	1	1	3	2	1	1	2	2	2	3	1	2	1	1
TARGET	1.8	1.3	1.5	1.3	2.2	1.8	1.5	1.2	2.0	1.5	1.7	1.8	1.5	1.7	1.5	1.5

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CO2	1.9	1.0	1.0	1.9	1.0	1.0	1.0	1.0	1.9	1.0	1.0	1.0	1.0	1.0	2.9	1.0
CO3	1.9	1.9	1.9	1.9	1.9	2.9	2.9	1.0	1.9	1.0	1.0	1.9	1.9	1.9	1.0	2.9
CO4	2.0	2.0	2.0	1.0	2.9	2.0	2.0	1.0	2.0	1.0	2.9	1.0	2.0	2.0	2.0	2.0
CO5	1.0	1.0	2.0	1.0	2.9	2.0	1.0	2.0	2.0	2.9	2.0	2.9	2.0	2.0	1.0	1.0
CO6	2.0	1.0	1.0	1.0	2.9	2.0	1.0	1.0	2.0	2.0	2.0	2.9	1.0	2.0	1.0	1.0
ATTAIN	1.8	1.3	1.5	1.3	2.1	1.8	1.5	1.1	1.9	1.5	1.6	1.8	1.5	1.6	1.5	1.5

FACULTY NAME :	1) Prof. Dr. S.B. AJMERA		2) Ms. IQRA MANSURI	SESSION :	2020-24
SUBJECT CODE :	CE-41006			B.TECH YEAR :	IV YEAR
SUBJECT NOMN :	DESIGN OF HYDRAULIC STRUCTURES			SEM :	VII

COURSE OUTCOME	
CO1 :	Design and analyze gravity dams, including force determination, stability assessment, and profile design.
CO2 :	Evaluate and design earthen dams, focusing on foundation suitability, material selection, and seepage control.
CO3 :	Apply theories to analyze hydraulic structures on pervious foundations.
CO4 :	Apply theories to analyze hydraulic structures on pervious foundations.
CO5 :	Design canal regulation structures, including falls, cross-drainage works, and regulators.

CO- PO TARGET MATRIX																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	2	0	0	0	0	0	0	0	0	3	3	3	2	3
CO2	3	2	2	3	0	0	0	3	0	0	0	3	2	3	3	3
CO3	3	2	3	3	0	0	0	3	0	0	0	3	2	3	3	3
CO4	3	3	3	3	0	0	0	3	0	0	0	3	3	3	2	3
CO5	3	0	2	0	0	0	0	3	0	0	0	3	3	3	2	2
TARGET	3	2.5	2.4	3	0	0	0	3	0	0	0	3	2.6	3	2.4	2.8

CO- PO ATTAIN MATRIX																
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1.92	1.92	1.28	0	0	0	0	0	0	0	0	1.92	1.92	1.92	1.28	1.92
CO2	2.73	1.82	1.82	2.73	0	0	0	2.73	0	0	0	2.73	1.82	2.73	2.73	2.73
CO3	1.10	0.73	1.10	1.10	0	0	0	1.10	0	0	0	1.10	0.73	1.10	1.10	1.10
CO4	1.32	1.32	1.32	1.32	0	0	0	1.32	0	0	0	1.32	1.32	1.32	0.88	1.32
CO5	1.09	0	0.73	0	0	0	0	1.09	0	0	0	1.09	1.09	1.09	0.73	1.32
ATTAIN	1.63	1.45	1.25	1.72	-	-	-	1.56	-	-	-	1.63	1.38	1.63	1.34	1.56

FACULTY NAME :	1) Prof. Dr. S.B. AJMERA		2) Ms. IQRA MANSURI	SESSION :	2020-24
SUBJECT CODE :	CE-41006			B.TECH YEAR :	IV YEAR
SUBJECT NOMN :	DESIGN OF HYDRAULIC STRUCTURES			SEM :	VII

	COURSE OUTCOME
CO1 :	Apply digital tools to design water channels using Kennedy's and Lacey's theories.
CO2 :	Analyze and design gravity dams and earthen dams using spread sheet software.
CO3 :	Develop skills in designing hydraulic structures including vertical drop weirs and barrages.
CO4 :	Calculate reservoir capacity and flood hydrographs using various methods.
CO5 :	Generate and manipulate unit hydrographs using different techniques including Snyder's method and S-curve technique.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	0	3	0	2	0	0	3	0	0	0	3	3	3	2	2
CO2	3	2	3	0	3	0	0	3	0	0	0	3	3	3	2	2
CO3	3	3	3	3	2	0	0	3	0	0	0	3	3	3	3	3
CO4	3	3	0	3	2	0	0	0	0	0	0	3	2	3	3	3
CO5	3	2	0	0	0	0	0	0	0	0	0	3	3	3	3	3
TARGET	3	2.5	3	3	2.25	-	-	3	-	-	-	3	2.8	3	2.8	2.8

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.9	0	2.9	0	1.9	0	0	2.9	0	0	0	2.9	2.9	2.9	1.9	1.9
CO2	2.9	1.9	2.9	0	2.9	0	0	2.9	0	0	0	2.9	2.9	2.9	1.9	1.9
CO3	2.8	2.8	2.8	2.8	1.9	0	0	2.8	0	0	0	2.8	1.9	2.8	2.9	2.9
CO4	2.9	2.9	0	2.9	1.9	0	0	0	0	0	0	2.9	2.9	2.8	2.8	2.8
CO5	2.9	1.9	0	0	0	0	0	0	0	0	0	2.9	2.9	2.9	2.9	2.9
ATTAIN	2.9	2.4	2.9	2.9	2.2	-	-	2.9	-	-	-	2.9	2.7	2.9	2.7	2.7

FACULTY	Prof. Devendra Dohare & Prof. Soumya Saklecha
SUBJECT CODE :	~~CE41315~~ CE41284
SUBJECT NOMN :	INDUSTRIAL WASTEWATER ~~MANAGEMENT~~ Treatment

SESSION :	2023-24
B.TECH YEAR :	IV
SEM :	VII

COURSE OUTCOME

CO1 :	Determine the characteristics, sources and terms related to industrial wastewater treatment and have a better understanding of the effects and disposal of industrial waste on sewers.
CO2 :	Perform auditing with case examples and discuss waste minimization methods and guidelines for environmental management system.
CO3 :	Test various characteristics of industrial wastewater via. different instruments, softwares and their applications.
CO4 :	Characterize different types of industrial waste and determine the appropriate treatment methods for them.
CO5 :	Explain various aspects of common effluent treatment plant, their treatment and disposal.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	2	0	0	0	1	3	0	0	0	0	0	3	3	2	3
CO2	3	2	0	1	0	0	2	1	0	0	2	0	3	3	3	3
CO3	3	0	0	1	3	2	2	0	0	0	0	0	3	3	3	3
CO4	3	0	1	2	0	0	3	0	0	0	0	0	3	3	3	3
CO5	3	0	1	0	0	1	0	0	1	0	0	0	3	3	3	3
TARGET	3	2	1	1.3	3	1.3	2.5	1	1	0	0	2	3	3	2.8	3

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.9	1.9	0	0	0	1.0	2.9	0	0	0	0	0	2.9	2.9	1.9	2.9
CO2	2.7	1.8	0	0.9	0	0	1.8	0.9	0	0	1.8	0	2.7	2.7	2.7	2.7
CO3	2.5	0	0	0.8	2.5	1.6	1.6	0	0	0	0	0	2.7	2.7	2.7	2.7
CO4	2.5	0	0.8	1.7	0	0	2.5	0	0	0	0	0	2.5	2.5	2.5	2.5
CO5	2.5	0	0.8	0	0	0.8	0	0	0.8	0	0	0	2.5	2.5	2.5	2.5
ATTAIN	2.6	1.9	0.8	1.1	2.5	0.7	1.8	0.2	0.2	0.0	0.4	0.0	2.6	2.6	2.4	2.6

FACULTY NAME : SARIKA KHEDEKAR										SESSION :	2023-24
SUBJECT CODE :	CE41997									B.TECH YEAR	IV th YEAR
SUBJECT NOMN :	MAJOR PROJECT									SEM :	8 th

COURSE OUTCOME

CO1 : Establish motivation for any topic of interest and define objectives of project work

CO2 : Organize a detailed literature survey and build a document with respect to technical publications

CO3 : Demonstrate skill of selecting a alternative out of all the available choices with reference to functional, aesthetic,

CO4 : Apply various tools and techniques needed for project development.

CO5 : Demonstrate skill to innovate the developed project and convert it in form of product for industrial / societal need

CO6 : Demonstrate skill to present project related activities effectively to peers and mentors

CO7 : Prepare a well-organized report employing elements of technical writing and critical thinking

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1
CO2	2	1	1	2	1	1	1	1	2	1	1	1	1	1	3	1
CO3	2	2	2	2	2	3	3	1	2	1	1	2	2	2	1	3
CO4	2	2	2	1	3	2	2	1	2	1	3	1	2	2	2	2
CO5	1	2	2	2	1	3	2	1	2	2	3	3	2	2	2	2
CO6	1	1	2	1	3	2	1	2	2	3	2	3	2	2	1	1
CO7	2	1	1	1	3	2	1	2	2	2	2	3	1	2	1	1
TARGET	1.71	1.43	1.57	1.43	2.00	2.00	1.57	1.14	2.00	1.57	1.86	2.00	1.57	1.71	1.57	1.57

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1.27	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.27	0.63	0.63	0.63	0.63	0.63	0.63	0.63
CO2	1.27	0.63	0.63	1.27	0.63	0.63	0.63	0.63	1.27	0.63	0.63	0.63	0.63	0.63	0.63	0.63
CO3	1.27	1.27	1.27	1.27	1.27	1.90	1.90	0.63	1.27	0.63	0.63	1.27	1.27	1.27	1.00	1.90
CO4	1.27	1.27	1.27	0.63	1.90	1.27	1.27	0.63	1.27	0.63	1.90	0.63	1.27	1.27	1.27	1.27
CO5	0.63	1.267	1.267	1.267	0.63	1.9	1.267	0.63	1.267	1.267	1.9	1.9	1.267	1.267	1.267	1.267
CO6	0.63	0.63	1.267	0.63	1.9	1.267	0.63	1.267	1.267	1.9	1.267	1.9	1.267	1.267	0.63	0.63
CO7	1.27	0.63	0.63	0.63	1.90	1.27	0.63	0.63	1.27	1.27	1.27	1.90	0.63	1.27	0.63	0.63
ATTAIN	1.09	0.90	0.90	0.90	1.27	1.27	0.99	0.72	1.27	0.99	1.17	1.27	0.99	1.09	1.05	0.99

FACULTY NAME : Ms. Shruti Bajpai, Ms. Namrata Khede

SUBJECT CODE : CE-41882

SUBJECT NAME : (Industrial Training/Internship)

SESSION : 2023-24

B.TECH YEAR : 4 YEAR

SEM : 8 SEM.

COURSE OUTCOME

CO1 : Explain about the project visited/studied during the

CO2 : Describe use of advanced tools and techniques

CO3 : Write the evidences about the interaction with

CO4 : Present successfully the details of internship/ training

CO5 : Prepare professional work reports and presentations.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CO1	1	1	1	2	1	1	1	1	1	1					
CO2	2	2	2	2	3	2	1	1	1	1	3	2	1	1	1
CO3	1	1	1	2	1	2	2	3	1	1	3	2	1	2	2
CO4	1	1	2	1	1	1	1	3	3	3	3	2	1	2	1
CO5	3	2	2	2	2	2	2	2	2	2	3	3	1	1	1
average	1.6	1.4	1.6	1.8	1.6	1.6	1.4	2.0	2.0	1.8	2.8	2.2	1.0	1.4	1.2
TARGET	1	1	1	1	1	1	1	2.0	2.0	1.8	2.8	2.2	1.0	1.4	1.2
									2	1	2	2	1	1	1

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CO1	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0					
CO2	1.9	1.9	1.9	1.9	2.9	1.9	0.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0	0.0
CO3	0.0	0.0	0.0	2.0	0.0	2.0	2.0	3.0	3.0	0.0	2.9	1.9	0.0	1.9	1.9
CO4	0.0	0.0	1.9	0.0	0.0	0.0	0.0	2.9	2.9	3.0	3.0	2.0	0.0	2.0	0.0
CO5	2.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	0.0	0.0	0.0
ATTAIN	2.4	1.9	1.9	2.0	2.4	1.9	2.0	2.6	2.6	2.3	2.7	2.1	-	2.0	1.9

COURSE OUTCOME

CO1 :	Explain about the project visited/studied during the internship
CO2 :	Describe use of advanced tools and techniques encountered in project undertaken during industrial training and visit.
CO3 :	Write the evidences about the interaction with industrial personnel
CO4 :	Exhibit awareness about general workplace behaviour and build interpersonal and team skills.
CO5 :	Prepare professional work reports and presentations.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	1	1	2	1	1	1	1	1	1	3	2	1	1	1	1
CO2	2	2	2	2	3	2	1	1	1	1	3	2	1	2	2	1
CO3	1	1	1	2	1	2	2	3	3	3	3	2	1	2		1
CO4	1	1	2	1	1	1	1	3	3	2	3	3	1	1	1	3
CO5	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
TARGET	1.6	1.4	1.6	1.8	1.6	1.6	1.4	2.0	2.0	1.8	2.8	2.2	1.0	1.4	1.2	1.4

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	0.00	0.00	0.00	2.00	0	0	0.00	0.0	0.0	0.00	3.00	2.00	0.0	0.00	0.00	0.00
CO2	1.90	1.90	1.90	1.90	2.9	1.9	0.00	0.0	0.0	0.00	2.90	1.90	0.0	1.90	1.90	0.00
CO3	0.00	0.00	0.00	2.00	0	2	2.00	3.0	3.00	3.00	3.00	2.00	0	2.00	0.00	0.00
CO4	0.00	0.00	1.90	0.00	0	0	0.00	2.9	2.90	1.90	2.90	2.90	0.0	0.00	0.00	2.90
CO5	2.90	1.90	1.90	1.90	1.9	1.9	1.90	1.9	1.90	1.90	1.90	1.90	0	0.00	0.00	0.00
ATTAIN	1.0	0.8	1.1	1.6	1.0	1.2	0.8	1.6	1.6	1.4	2.7	2.1	-	0.8	0.4	0.6

FACULTY NAME :	Mr. TARUN KUMAR NARNAURE, Ms. NAMRATA KHEDE	SESSION :	2020-24
SUBJECT CODE :	CE 41674	B.TECH YEAR IV :	
SUBJECT :	ADVANCE TRANSPORTATION ENGINEERING	SEM : B	

COURSE OUTCOME

CO1 :	Evaluate the economic aspects of highway projects, including cost components and parameters.
CO2 :	Develop and apply transportation demand models to predict and analyze travel behavior and demand.
CO3 :	Analyze traffic and transportation problems in urban areas, and classify various transportation modes and their characteristics.
CO4 :	Analyze various urban public transportation systems, including BRTS, bus lanes, and rail systems, in the context of their advantages and limitations.
CO5 :	Select the different construction equipment for pavement construction, considering factors like selection, cost, and output.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	2	1	0	1	0	0	0	0	1	1	3	3	2	3
CO2	3	3	1	2	3	2	0	0	0	0	0	0	3	3	3	3
CO3	1	2	3	1	0	2	2	0	0	0	1	0	3	3	3	3
CO4	1	1	3	1	0	2	2	2	0	0	3	1	3	3	3	3
CO5	3	1	1	1	0	1	0	0	0	0	0	0	3	3	2	2
TARGET	2.2	2.0	2.0	1.2	3.0	1.6	2.0	2.0	0.0	0.0	1.7	1.0	3.0	3.0	2.6	2.8

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.7	2.7	1.8	0.9	0	0.9	0	0	0	0	0.9	0.9	2.7	2.7	1.8	2.7
CO2	2.9	2.9	1.0	2.0	2.9	2.0	0	0	0	0	0	0	2.9	2.9	2.9	2.9
CO3	0.9	1.8	2.7	0.9	0	1.8	1.8	0	0	0	0.9	0	2.7	2.7	2.7	2.7
CO4	1.0	1.0	2.9	1.0	0	2.0	2.0	2.0	0	0	2.9	1.0	2.9	2.9	2.9	2.9
CO5	2.3	0.8	0.8	0.8	0	0.8	0	0	0	0	0	0	2.3	2.3	1.5	1.5
ATTAIN	2.0	1.8	1.8	1.1	2.9	1.5	1.9	2.0	-	-	1.6	0.9	2.7	2.7	2.4	2.6

COURSE OUTCOME

CO1 : Determine the sources, composition, characteristics and learning of all terms related to general solid waste management including explanation of hierarchical structure in solid waste management and requirement for integrated solution.

CO2 :Examine technical aspects of solid waste segregation, collection and transportation along with route optimization for a solid waste collection and transport system

CO3 : Analyze and design compost and incineration facilities.

CO4 : Plan and design municipal sanitary landfills along with management of Leachate and landfill gas.

CO5 : Identify appropriate technologies for recycle, recovery and reuse of municipal solid waste. Case studies and Solid waste legislation.

CO- PO TARGET MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	0	0	0	0	3	3	0	3	0	0	0	2	1	0	2
CO2	3	0	0	0	3	2	0	0	3	0	2	0	3	3	1	2
CO3	3	0	0	0	3	2	2	0	0	0	0	0	2	3	2	2
CO4	3	0	0	0	0	2	0	0	2	0	1	0	2	3	2	2
CO5	3	0	3	0	0	0	3	0	2	0	2	0	2	2	2	3
TARGET	3	0	3	0	3	2	3	0	3	0	2	0	2	2	1	2

CO- PO ATTAIN MATRIX

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2.7	0.0	0.0	0.0	0.0	2.7	2.7	0.0	2.7	0.0	0.0	0.0	1.8	0.9	2.7	1.8
CO2	2.7	0.0	0.0	0.0	2.7	1.8	0.0	0.0	2.7	0.0	1.8	0.0	2.7	2.7	0.9	1.8
CO3	2.5	0.0	0.0	0.0	2.5	1.7	1.7	0.0	0.0	0.0	0.0	0.0	1.7	2.5	1.7	1.7
CO4	2.1	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0	0.7	0.0	1.4	2.1	1.4	1.4
CO5	2.1	0.0	2.1	0.0	0.0	0.0	0.9	0.0	1.4	0.0	1.4	0.0	1.4	1.4	1.4	2.1
ATTAIN	2.4	-	0.4	-	1.0	1.5	1.1	-	1.6	-	0.8	-	1.8	1.9	1.6	1.8

B.Tech. IV Year CE41311 Traffic Engineering 2023

PO Attainment

CO	CO Attainment	2	1
CO1	1.2	0.8	0.4
CO2	0.5	0.3	0.2
CO3	1.7	1.1	0.6
CO4	1.5	1.0	0.5
CO5	1.7	1.1	0.6

	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	PSO1	PSO2	PSO3	PSO4	AVG CO
PO Attainment	CO1	3	3	0	0	0	0	0	0	0	0	0	2	3	3	3	3	2.86
	CO2	3	0	0	0	0	0	0	0	0	0	0	2	3	3	3	2	2.67
	CO3	3	2	2	3	0	0	0	3	0	0	0	2	3	3	3	3	2.70
	CO4	3	0	0	3	0	3	0	2	0	0	0	2	3	3	2	3	2.67
	CO5	3	0	3	3	0	0	0	0	0	0	2	2	3	3	3	3	2.78
Average PO/PSO Attainment		3.0	2.5	2.5	3.0	0.0	3.0	0.0	2.5	0.0	0.0	2.0	2.0	3.0	3.0	2.8	2.8	0.0

	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	PSO1	PSO2	PSO3	PSO4	AVG CO
PO Attainment	CO1	1.16	1.16	0	0	0	0	0	0	0	0	0	0.77	1.16	1.16	1.16	1.16	1.09
	CO2	0.50	0	0	0	0	0	0	0	0	0	0	0.33	0.50	0.50	0.50	0.33	0.47
	CO3	1.67	1.11	1.11	1.67	0	0	0	1.67	0	0	0	1.11	1.67	1.67	1.67	1.67	1.48
	CO4	1.48	0	0	1.48	0	1.48	0	0.99	0	0	0	0.99	1.48	1.48	0.99	1.48	1.30
	CO5	1.66	0	1.66	1.66	0	0	0	0	0	0	1.11	1.11	1.66	1.66	1.66	1.66	1.52
Average PO Attainment achieved		1.3	1.1	1.4	1.6	-	1.5	-	1.3	-	-	1.1	0.9	1.3	1.3	1.2	1.3	1.3
Target PO		3.0	2.5	2.5	3.0	0.0	3.0	0.0	2.5	0.0	0.0	2.0	2.0	3.0	3.0	2.8	2.8	2.7
GAP		1.7	1.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.7	1.7	0.0	0.0	1.4