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Report on PO Attainment

Bachelor of Engineering Batch 2017

Department of Civil Engineering

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Department of Civil Engineering

Dated: 19/07/2021

Overview

An outcome is a result of learning that reveals what the student should be able to do at the end of a course. Outcome-based curriculum is a performance-based education system which is crucial in determining the type of graduates we want. In this approach, the desired educational outcomes should be clearly specified. Having an unequivocal outcome facilitates the nature of course offered, its content and also the teaching plans. Constructive alignment is a principle used for devising teaching and learning activities and assessment tasks that directly address the course outcomes (COs) intended. The outcome-based approach provides a mechanism to ensure the accountability and quality assurance to an educational programme.

Course mapping shows the educational relationship (Level of Learning achieved) between Course Outcomes and Program Outcomes for a Course. The result strongly indicates whether the students are able to achieve the course learning objectives. The method can be used for any course and is a good way to evaluate a course syllabus.

The below mentioned steps shall address the procedure for assessing the percentage achievement of Program Outcomes.

Program Outcome

The Program Outcomes for the Civil Engineering Program are the following:

PO-01: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization for the solution of complex engineering problems.

PO-02: Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO-03: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

PO-04: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-05: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex.

PO-06: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO-07: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-08: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO-09: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-010: Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO-011: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO-012: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes mapping with Program Outcomes:

The course outcomes were mapped with the program outcomes of Bachelor of Engineering (Department of Civil Engineering) on the scale of High, Medium and Low. Thereafter, the mapped values were allocated with weights i.e., High: 3; Medium: 2; and Low: 1. The subject wise result was compiled for 1st, 2nd, 3rd, 4th, 5th, 6th, 7th & 8th semester.

PO Attainment of subjects: B.E. Civil Engineering

Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	-	-	-	-	-	82	-	-	-	-	-	82
PYL5101	82	82	-	-	-	-	-	72	72	72	-	72
AML5101	72	72	-	72	72	-	-	-	-	98	-	98
MEP1102	98	98	-	98	-	-	98	-	-	-	-	100
EEP1102	100	100	-	-	-	-	100	-	-	-	-	96
PYP1101	96	96	-	96	-	96	-	-	-	-	-	95
HUL2101	95	95	95	-	-	-	95	95	95	95	-	95
MEL4102	82	84	-	-	-	-	81	-	-	81	-	81
EEL5102	85	85	-	-	85	-	-	-	-	-	-	85
GEL4101	94	94	-	94	-	-	-	94	94	-	-	94
CEP1215	99	99	-	99	-	-	99	-	-	-	-	99
ASE3101	94	94	94	-	-	-	94	-	-	-	-	94
MEW2101	100	100	-	100	100	-	-	-	-	-	-	100
CHP1101	98	98	-	-	-	-	-	-	-	-	-	98
EL3205	84	84	-	84	-	-	-	-	-	-	84	84
AML5102	75	75	-	-	75	-	75	75	75	-	-	75
CEL5102	85	85	-	85	-	-	-	85	85	-	85	85
CHL4101	82	82	-	-	82	82	-	-	-	-	-	82
CEL3209	81	-	-	81	-	-	-	81	81	-	-	81
CLP2401	96	-	-	-	-	-	96	-	-	-	-	96
CEP2209	96	96	-	96	-	-	96	-	-	-	-	96
CEP1227	98	98	-	-	98	-	98	-	-	-	-	98
CEP1211	97	97	-	97	-	-	-	-	-	-	97	97
CEP1203	91	-	-	91	91	-	-	-	-	91	-	91
HUL3301	81	-	-	-	-	-	81	-	-	-	-	-
CEL3208	63	-	-	63	-	-	-	-	-	-	-	63
CEL3207	87	87	87	87	87	-	-	-	-	-	-	87
CEL3203	83	-	-	83	83	-	-	83	83	-	83	83
CLP2402	100	-	-	-	-	-	100	-	-	-	-	-
AS102	100	100	100	-	-	-	100	-	-	-	-	100
CEP1202	98	-	-	-	98	-	-	-	-	98	-	98
EP1212	97	-	97	97	-	-	-	97	97	97	-	97
CEP1206	98	-	-	98	-	-	-	-	-	-	-	98
CEL3202	83	-	-	83	-	-	-	83	83	-	-	83
CEL4212	79	79	-	-	-	79	-	-	-	-	79	79
CEL4206	71	-	-	71	-	-	-	-	-	-	-	71
HUL2401	90	90	90	90	-	-	90	-	-	-	-	90
CEP1311	95	95	-	-	95	95	-	-	-	-	-	95
CEP 2309	94	94	-	94	-	-	-	-	-	-	-	94
CET5301	97	-	-	97	-	-	-	-	-	-	-	97
CEP1308	95	95	-	-	95	-	95	95	95	-	-	95
CEP1303	95	95	95	95	-	-	-	95	95	-	-	95
CEL4305	77	77	-	77	-	77	-	77	77	77	77	77
CEL3303	83	83	83	-	-	83	-	-	83	-	-	83
CEL3311	84	-	84	84	84	-	84	84	84	-	84	84

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Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CEL3311	84	-	84	84	84	-	84	84	84	-	84	84
CEL5308	73	73	73	73	73	73	73	73	73	73	-	73
CEL3302	99	99	-	99	-	-	-	-	-	99	-	99
AS103	99	99	99	-	-	-	99	-	-	-	-	99
GTI4301	73	-	72	-	-	72	74	74	-	72	-	73
CEP1310	99	99	99	99	-	-	-	99	99	-	-	99
CEL5314	87	-	87	87	87	-	-	87	87	87	87	87
CEL4304	75	75	-	-	75	-	75	75	75	75	-	75
CEL 3308	97	97	-	97	-	-	97	-	-	97	-	97
CEL3310	99	99	99	99	-	99	-	-	99	-	-	99
CEL4306	99	-	-	99	-	99	-	99	99	99	99	99
CEL3427	97	97	97	97	97	-	97	-	-	-	-	97
CEL3408	99	99	99	99	-	-	-	-	-	99	99	99
CEP1302	99	99	-	-	99	-	99	99	99	-	-	99
CEP1427	93	-	-	93	-	-	93	-	-	93	-	93
CEP3431	100	-	100	100	100	-	-	100	100	100	-	-
GTI2401	97	97	-	97	-	97	-	97	97	-	-	97
04	92	-	-	92	-	-	-	92	92	-	-	92
CET9403	99	99	99	-	99	-	99	-	-	99	-	-
POA	90.42	91.45	92.05	90.61	88.75	86.17	91.52	87.43	88.29	89.58	87.40	90.09

Representation of PO attainment:

PO Attainment %
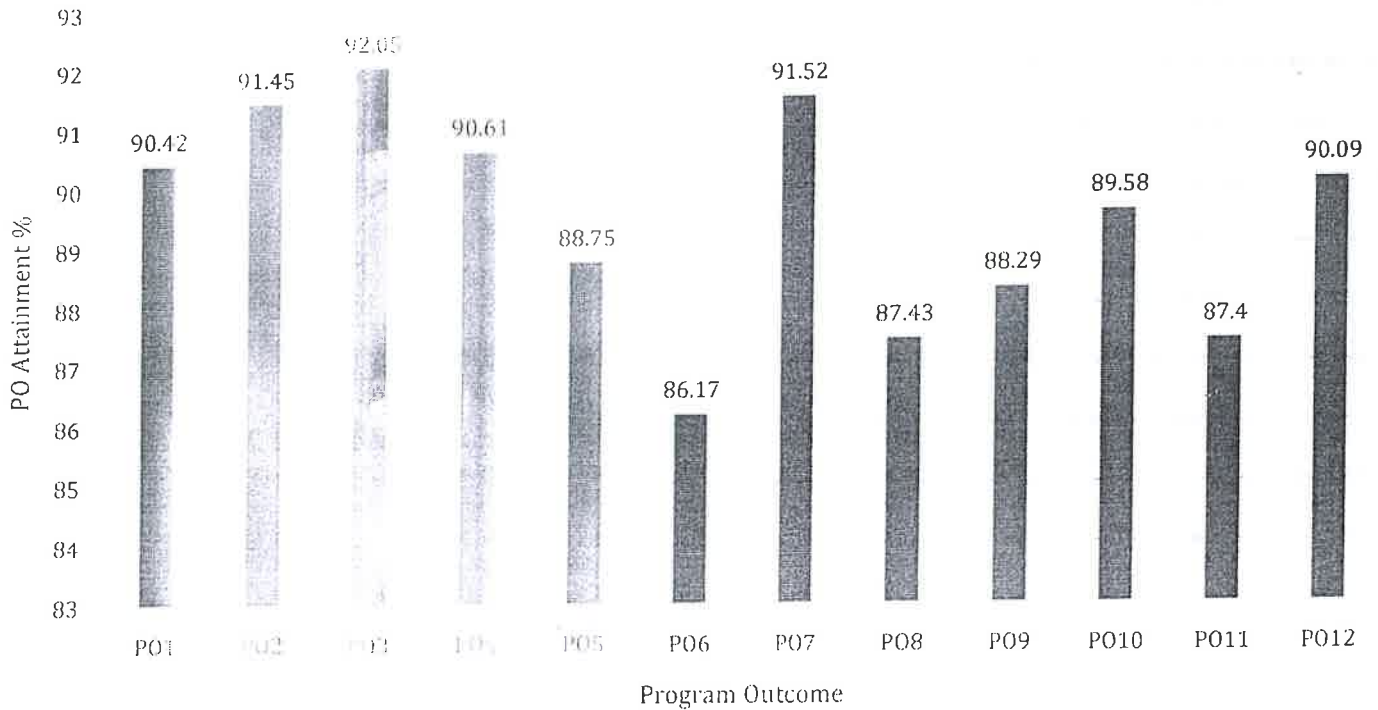
Bar chart of PO Attainment % by Program Outcome:

- PO1: 90.42
- PO2: 91.45
- PO3: 92.05
- PO4: 90.61
- PO5: 88.75
- PO6: 86.17
- PO7: 91.52
- PO8: 87.43
- PO9: 88.29
- PO10: 89.58
- PO11: 87.4
- PO12: 90.09

Program Outcome

Analysis -

The representation shows that the students of Bachelor of Engineering batch 2017 have successfully attained a minimum of 90% in 6 program outcomes and more than 85% in the rest of the 6 program outcomes. The PO attainment percentage reflects on the requirement of reassessing the evaluation strategies and also the reforms are required in the examinations w.r.t designing the question papers to achieve normal distribution of PO attainment.

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Head of Department
HOD Department of Civil Engineering
School of Engineering & Technology
Chitkara University, Himachal Pradesh
Department of Civil Engineering

Course Outcome Attainment Report

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Programme

B.E. [Civil Engineering]
Batch 2017

Subject

Environmental Engineering-I

Code *CEL3303*

Semester *5*

Subject Assessment: *Environmental Engineering-I*

#	Tools	Task	Task-Id	Marks	Wt (%)	Weighted Marks (%)
1	Internal	1	22	40	100	40
2	External	1	52	60	100	60

Course Outcome: *Environmental Engineering-I*

SNo	Course Outcome	Wt(%)
CO1	Identify various water demands and select suitable source of water	20
CO2	Demonstrate a firm understanding of various water quality parameters	20
CO3	Enhancing skills to develop relevant design criteria procedures and methods for various water treatment processes	20
CO4	Describe structure of drinking water supply system water transport and its distribution.	20
CO5	Able to determine the population forecast for a city to meet its water requirement enhancing skills for employability in town planning projects	20

CO-PO Map: *Environmental Engineering-I*

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Identify various water demands and select suitable source of water	M	M	-	-	-	-	-	-	-	-	-	M
Demonstrate a firm understanding of various water quality parameters	L	-	M	-	-	-	-	-	-	-	-	-
Enhancing skills to develop relevant design criteria procedures and methods for various water treatment processes	-	-	H	-	-	-	-	-	H	-	-	-
Describe structure of drinking water supply system water transport and its distribution	-	-	-	-	-	L	-	-	-	-	-	M
Able to determine the population forecast for a city to meet its water requirement enhancing skills for employability in town planning projects	-	-	H	-	-	-	-	-	M	-	-	-

Course Outcome Contribution in Each Question

Tool	Task No.	QNo	Marks	DL	BT Level	Percentage Contribution of Course Oucome
Internal	1	1	40	Average	Understanding	CO1 [20] CO2 [20] CO3 [20] CO4 [20] CO5 [20],
External	1	1	60	Average	Understanding	CO1 [20] CO2 [20] CO3 [20] CO4 [20], CO5 [20].

CO-Assessment-Marks: *Environmental Engineering-I*

We would consider 40% weightage for Internal Marks and 60% weightage for external marks for calculating attainment level of Student Course Outcome. In case of either only internal or external components we would consider 100%.

CO1: Identify various water demands and select suitable source of water

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1	1711983001	3	2.4	5	30	1
2	1711983002	6	9	15	75	3
3	1711983004	6	5.6	11.8	60	3
4	1711983005	4	0	0	0	1
5	1711983006	5	8	13	65	3
6	1711983007	5	6	11.2	56	2
7	1711983008	4	5.2	9.6	48	2
8	1711983009	4	6	9.6	48	2

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#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
9	1711983010		5.8	9.6	48	2
10	1711983011		7.8	14.6	73	3
11	1711983012		7.2	12.6	63	3
12	1711983014		9.6	16.2	81	3
13	1711983016		0	0	0	1
14	1711983017		7.4	14	70	3
15	1711980702		9.6	15.6	78	3
16	1711983020		8.6	15.2	76	3
17	1711983021		8	13.2	66	3
18	1711980704		5.6	10.4	52	2
19	1711983025		7.6	10.8	54	2
20	1711983026		7.6	14.2	71	3
21	1711983027		9.2	15	75	3
22	1711983030		5.2	9.4	47	2
23	1711983061		1.4	6	30	1
24	1711983031		9.8	16	80	3
25	1711983059		9	15.2	76	3
26	1711983033		8	14.6	73	3
27	1711983034		11.4	18.2	91	3
28	1711983035		9.6	16.2	81	3
29	1711983036		8.4	13.8	69	3
30	1711983037		8	14.6	73	3
31	1711983038		7.8	12.6	63	3
32	1711983039		9.2	16.8	85	3
33	1711983040		10	17.6	89	3
34	1711983041		6.2	14.4	72	3
35	1711983042		0	2	10	1
36	1711983043		5.2	10	50	2
37	1711983044		8.4	15.2	76	3
38	1711983046		7.6	14.6	73	3
39	1711983047		8	15.2	76	3
40	1711983048		0	0	0	1
41	1711983049		2.2	5.8	29	1
42	1711983060		9.4	15.8	79	3
43	1711983051		8.2	14.4	72	3
44	1711980703		7.2	12.6	64	3
45	1711983052		9.8	16.8	85	3
46	1711983053		6.6	11.6	58	2
47	1711983054		6	11.4	58	2
48	1711983055		9	15.8	79	3
49	1711983056		5	10.6	53	2
50	1711983057		9.6	15	75	3

CO Attainment on Scale :

2.5

Percentage of Students Scored above 60%

64

CO2: Demonstrate a firm understanding of various water quality parameters

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1	1711983001		2.4	6	30	1
2	1711983002		9	15	75	3
3	1711983004		6.6	11.8	60	3
4	1711983005		0	0	0	1
5	1711983006		8	13	65	3
6	1711983007		8	11.2	56	2
7	1711983008		5.2	9.6	48	2
8	1711983009		5	9.6	48	2
9	1711983010		5.8	9.6	48	2
10	1711983011		7.8	14.6	73	3
11	1711983012		7.2	12.6	63	3
12	1711983014		9.6	16.2	81	3

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#	RollNo	Internal	External	Total	MO(%)	Scale
13	1711983016		0	0	0	1
14	1711983017		7.4	14	70	3
15	1711980702		9.6	15.6	78	3
16	1711983020		6.6	15.2	76	3
17	1711983021		8	13.2	66	3
18	1711980704		5.6	10.4	52	2
19	1711983025		7.6	10.8	54	2
20	1711983026		7.6	14.2	71	3
21	1711983027		9.2	15	75	3
22	1711983030		5.2	9.4	47	2
23	1711983061		1.4	6	30	1
24	1711983031		9.8	16	80	3
25	1711983058		9	15.2	76	3
26	1711983033		8	14.6	73	3
27	1711983034		11.4	18.2	91	3
28	1711983035		9.6	16.2	81	3
29	1711983036		8.4	13.8	69	3
30	1711983037		8	14.6	73	3
31	1711983038		7.8	12.6	63	3
32	1711983039		9.2	16.8	85	3
33	1711983040		10	17.6	89	3
34	1711983041		8.2	14.4	72	3
35	1711983042		0	2	10	1
36	1711983043		5.2	10	50	2
37	1711983044		8.4	15.2	76	3
38	1711983046		7.6	14.6	73	3
39	1711983047		8	15.2	76	3
40	1711983048		0	0	0	1
41	1711983049		2.2	5.8	29	1
42	1711983060		9.4	15.8	79	3
43	1711983051		8.2	14.4	72	3
44	1711980703		7.2	12.8	64	3
45	1711983052		9.8	16.8	85	3
46	1711983053		6.6	11.6	58	2
47	1711983054		5	11.4	58	2
48	1711983055		9	15.8	79	3
49	1711983056		5	10.6	53	2
50	1711983057		9.6	15	75	3

CO Attainment on Scale of 3   Percentage of Students Scored above 60%

2.6   64

CO3: Enhancing skills to develop relevant design criteria procedures and methods for various water treatment processes

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1	1711983001		2.4	6	30	1
2	1711983002		9	15	75	3
3	1711983004		6.6	11.8	60	3
4	1711983005		0	0	0	1
5	1711983006		8	13	65	3
6	1711983007		6	11.2	56	2
7	1711983008		5.2	9.6	48	2
8	1711983009		6	9.6	48	2
9	1711983010		5.8	9.6	48	2
10	1711983011		7.8	14.6	73	3
11	1711983012		7.2	12.6	63	3
12	1711983014		9.6	16.2	81	3
13	1711983016		0	0	0	1
14	1711983017		7.4	14	70	3
15	1711980702		9.6	15.6	78	3
16	1711983020		8.6	15.2	76	3

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
17	1711983021		5	13.2	66	3
18	1711980704		5.6	10.4	52	2
19	1711983025		7.6	10.8	54	2
20	1711983026		7.6	14.2	71	3
21	1711983027		9.2	15	75	3
22	1711983030		5.2	9.4	47	2
23	1711983061		1.4	6	30	1
24	1711983031		9.8	16	80	3
25	1711983069		9	15.2	76	3
26	1711983032		8	14.6	73	3
27	1711983034		11.4	18.2	91	3
28	1711983035		9.6	16.2	81	3
29	1711983036		8.4	13.8	69	3
30	1711983037		8	14.6	73	3
31	1711983038		7.8	12.6	63	3
32	1711983039		9.2	16.8	85	3
33	1711983040		10	17.6	89	3
34	1711983041		8.2	14.4	72	3
35	1711983042		0	2	10	1
36	1711983043		5.2	10	50	2
37	1711983044		8.4	15.2	76	3
38	1711983046		7.6	14.6	73	3
39	1711983047		8	15.2	76	3
40	1711983048		0	0	0	1
41	1711983049		2.2	5.8	29	1
42	1711983060		9.4	15.8	79	3
43	1711983051		8.2	14.4	72	3
44	1711980705		7.2	12.8	64	3
45	1711983052		9.8	16.8	85	3
46	1711983053		6.6	11.6	58	2
47	1711983054		6	11.4	58	2
48	1711983055		9	15.8	79	3
49	1711983056		5	10.6	53	2
50	1711983057		9.6	15	75	3

CO Attainment on Scale of 3

2.5

Percentage of Students Scored above 60%

54

CO4: Describe structure of drinking water supply system water transport and its distribution.

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1	1711983001		2.4	6	30	1
2	1711983002		9	15	75	3
3	1711983004		6.6	11.8	60	3
4	1711983005		0	0	0	1
5	1711983006		8	13	65	3
6	1711983007		6	11.2	56	2
7	1711983008		5.2	9.6	48	2
8	1711983009		6	9.6	48	2
9	1711983010		5.8	9.6	48	2
10	1711983011		7.8	14.6	73	3
11	1711983012		7.2	12.6	63	3
12	1711983014		9.6	16.2	81	3
13	1711983016		0	0	0	1
14	1711983017		7.4	14	70	3
15	1711980702		9.6	15.6	78	3
16	1711983020		8.6	15.2	76	3
17	1711983021		5	13.2	66	3
18	1711980704		5.6	10.4	52	2
19	1711983025		7.6	10.8	54	2
20	1711983026		7.6	14.2	71	3

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#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
21	1711983027		9.2	15	75	3
22	1711983030		5.2	9.4	47	2
23	1711983061		1.4	6	30	1
24	1711983031		9.8	16	80	3
25	1711983059		9	15.2	76	3
26	1711983033		8	14.6	73	3
27	1711983034		11.4	18.2	91	3
28	1711983035		9.6	16.2	81	3
29	1711983036		8.4	13.8	69	3
30	1711983037		8	14.6	73	3
31	1711983038		7.8	12.6	63	3
32	1711983039		9.2	16.8	85	3
33	1711983040		10	17.6	89	3
34	1711983041		8.2	14.4	72	3
35	1711983042		0	2	10	1
36	1711983043		5.2	10	50	2
37	1711983044		8.4	15.2	76	3
38	1711983046		7.6	14.6	73	3
39	1711983047		8	15.2	76	3
40	1711983048		0	0	0	1
41	1711983049		2.2	5.8	29	1
42	1711983060		9.4	15.8	79	3
43	1711983051		8.2	14.4	72	3
44	1711980703		7.2	12.8	64	3
45	1711983052		9.8	16.8	85	3
46	1711983053		8.6	11.6	58	2
47	1711983054		8	11.4	58	2
48	1711983055		9	15.8	79	3
49	1711983056		5	10.6	53	2
50	1711983057		9.6	15	75	3

CO Attainment on Scale of 3	Percentage of Students Scored above 60%
2.5	64

CO5: Able to determine the population forecast for a city to meet its water requirement enhancing skills for employability in town planning projects

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1	1711983001		2.4	6	30	1
2	1711983002		9	15	75	3
3	1711983004		6.6	11.8	60	3
4	1711983005		0	0	0	1
5	1711983006		8	13	65	3
6	1711983007		8	11.2	56	2
7	1711983008		5.2	9.6	48	2
8	1711983009		5	9.6	48	2
9	1711983010		5.8	9.6	48	2
10	1711983011		7.8	14.6	73	3
11	1711983012		7.2	12.6	63	3
12	1711983014		9.6	16.2	81	3
13	1711983016		0	0	0	1
14	1711983017		7.4	14	70	3
15	1711980702		9.6	15.6	78	3
16	1711983020		8.6	15.2	76	3
17	1711983021		8	13.2	66	3
18	1711980704		5.6	10.4	52	2
19	1711983025		7.6	10.8	54	2
20	1711983026		7.6	14.2	71	3
21	1711983027		9.2	15	75	3
22	1711983030		5.2	9.4	47	2
23	1711983061		1.4	6	30	1
24	1711983031		9.8	16	80	3

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25	1711983059		9	15.2	76	3
26	1711983033		8	14.6	73	3
27	1711983034		11.4	18.2	91	3
28	1711983035		9.6	16.2	81	3
29	1711983036		8.4	13.8	69	3
30	1711983037		8	14.6	73	3
31	1711983038		7.6	12.6	63	3
32	1711983039		9.2	16.8	85	3
33	1711983040		10	17.6	89	3
34	1711983041		8.2	14.4	72	3
35	1711983042		0	2	10	1
36	1711983043		5.2	10	50	2
37	1711983044		8.4	15.2	76	3
38	1711983046		7.6	14.6	73	3
39	1711983047		8	15.2	76	3
40	1711983048		0	0	0	1
41	1711983049		2.2	5.8	29	1
42	1711983060		9.4	15.8	79	3
43	1711983051		8.2	14.4	72	3
44	1711980703		7.2	12.8	64	3
45	1711983052		9.8	16.8	85	3
46	1711983053		6.6	11.6	58	2
47	1711983054	5.4	6	11.4	58	2
48	1711983055	6.6	9	15.8	79	3
49	1711983056	6.6	5	10.6	53	2
50	1711983057		9.6	15	75	3

CO Attainment on Scale of 3

2.5

Percentage of Students Scored above 60%

64

Attainment on Scale of 3

2.50

Percentage Attainment

83.33

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Head of Department
Department of Civil Engineering
School of Engineering & Technology
Chitkara University Himachal Pradesh

CO Attainment - PO Map: B.E. Civil Engineering

Subject	Course Outcome	Score	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
AM101	Introduce and form matrices to present mathematical solutions in a concise and informative manner. Use matrices to solve the problems of system of linear equations and solve various live problems using matrices.	2.62	-	2	-	2	3	-	-	-	-	-	-	3
PH101	Possess an ability to apply knowledge of fundamental physical concepts and appropriate mathematics involved in the course.	2.69	-	3	-	-	-	1	-	-	-	-	-	-
ME102	Understand the fundamentals of engineering drawing and geometrical objects.	2.83	3	3	-	-	-	-	-	-	-	-	-	-
CL101	Student will be able to apply grammatical structures in presenting contextual ideas clearly to aid communication skills	2.59	-	-	-	2	-	3	-	-	-	-	-	-
PH103	Possess an ability to apply knowledge of fundamental physical concepts and appropriate mathematics involved in the course.	2.97	3	1	-	-	-	-	-	-	-	-	-	-
ME153	Introduce CAD computer aided drafting software and its utilities in the engineering field.	3	3	3	-	-	-	-	-	-	-	-	-	-
AM101	Find local extreme values of functions of several variables test for saddle points examine the conditions for the existence of absolute extreme values. Solve constraint problems using Lagrange multipliers and solve related application problems.	2.62	2	-	-	-	2	-	-	-	-	-	-	2
PH101	Possess an ability to analyze a physical problem and suggest the possible solution of that problem.	2.69	2	-	-	-	-	-	-	-	-	-	-	2
ME102	Construct the technical letters and different types of scales.	2.83	3	-	-	-	-	-	2	-	-	-	-	-
CL101	Student will be able to elucidate vocabulary progressively and effectively use as per the social condition.	2.59	3	-	-	-	-	3	-	-	-	-	-	-
PH103	Possess an ability to analyze a physical problem and suggest the possible solution of that problem.	2.97	-	2	-	1	-	-	-	-	-	-	-	-
ME153	Perform initial software setting and able to draw 2D entities. Edit the edit the drawings using modify commands skills.	3	3	-	-	-	-	-	2	-	-	-	-	-
AM101	Apply the principles of Integral Calculus to solve a variety of practical problems in Engineering and applied Sciences.	2.62	1	-	3	3	-	-	-	-	-	1	-	3
PH101	Apply fundamental principles of physics together with analytic tools to evaluate and describe physical situations appropriate to address a scientific problem.	2.69	-	2	-	-	-	-	-	-	-	-	-	-
ME102	Develop the ability of drawing a wide range of geometrical figures.	2.83	-	-	-	-	-	-	-	-	-	2	-	3
CL101	Student will be able to exhibit the language functionally in real life situations and social settings.	2.59	-	-	-	-	-	2	-	-	-	-	-	-
PH103	Apply fundamental principles of physics together with analytic tools to evaluate and describe physical situations appropriate to address a research problem.	2.97	-	-	-	-	-	1	-	-	-	-	-	2
ME153	Draw basic isometric drawings using auto CAD will achieve perfectness in experimental.	3	-	-	-	-	-	-	-	-	-	2	-	3

Code	Outcome	Value																
AM101	To interpret statistical inference tasks with the help of probability & distributions and hypothesis testing for means variances and proportions of large as well as small data and employ appropriate regression models in determining statistical relationships.	2.65						2										
PH101	Apply the fundamental principles involved in Physics to solve a variety of practical problems in engineering domain.	2.69		1														
ME102	High accuracy in constructing complex engineering curves.																	
CL101	Student will be able to determine and demonstrate the usage of the language effectively in both academic and professional setup.	2.59							1								2
PH103	Develop the skill to explore physical systems by setting up experiments collecting and analyzing data identifying sources of uncertainty and interpreting their results in terms of the fundamental principles and concepts of physics.	2.97	3	1													
AM101	To equip with the techniques to understand advanced level mathematics and its applications that would enhance analytical thinking to solve engineering problems.	2.62	2				2			3						
PH101	Develop skills for critical thinking and problem solving involving the various concepts of physics.	2.69		2												3
ME102	Improves the basic sketching and drawing.																	
CL101	Students will be effectively able to appear in group discussions for employability enhancement.																	
PH103	Possess an ability to evaluate and analyze scientific measurement and error	2.97		2		1										
ME102	Drafting skills beneficial for civil drafting and intensifying employability.	2.83			1											2
PH103	Apply the fundamental concepts of physics to related engineering problems.	2.97						1								2
AS101	Students will able to apply material from their discipline to the design of community-based projects.	2.9	3	3		3										
AM102	To analyze and correlate many real life problems mathematically and thus find the appropriate solution for them using Fourier series and Transforms Fourier and Laplace transform.	2.76	3				2							
CE101	Determine resultants and apply conditions of static equilibrium to plane force systems.	2.52	2	2		1										1
EE103	Students would have the basics skills pertaining to electronics elements their functionality and applications. They would be able to perceive the concept of logic gates and integrated circuits in electronics.	2.66	1	1											
CE102	Skills enhanced to carry out preliminary surveying in the field of civil engineering applications such as structural highway engineering and geotechnical engineering	2.66			3										
EE104	After completing the course students would have skills to know the basics of electronics elements their functionality and applications and would be able to design basic electronics projects	2.79	1												
CE103	Survey an area under various topographical feature and obstructions	2.69	3				2								
AS101	Students will get an appreciation of the role that their discipline can play in social contexts	2.9														
AM102	Using ordinary differential equations student will be able to solve various practical problems in Science and Engineering.	2.76								2	2				
CE101	Identify and quantify all forces associated with a static framework.	2.52	1			3									

Code	Outcome	Avg														
EE10?	Skills to interpret the characteristics of various types of diodes and transistors to describe the operation of related circuits for evolving engineering solutions.	2.66	3	3			2									
CE102	Plan a survey taking accurate measurements field booking plotting and adjustment of traverse.	2.66	2			1										
EE104	They would be able to analyze and characterize the electronic circuits and have basic understanding for their implementation.	2.79							1							
CE103	Skill development to prepare the plan or map of the area surveyed	2.69		3						2						
AS101	To get awareness of professional ethics and responsibility.	2.9			2									2		
AM102	Possess an ability to recognize and find families of solutions for most real physical processes such as heat transfer elasticity quantum mechanics water flow and others which are governed by partial differential equations subject to boundary conditions.	2.76		2												
CE101	Solve problems in kinematic and dynamic systems to develop analytical skills.	2.52	3	3								1	1			2
EE103	Students would be able to apply fundamental principles of electronics together with analytic tools to evaluate and describe physical situations appropriate to address a scientific problem.	2.66		3												3
CE102	Use various conventional instruments involved in surveying with respect to utility and precision.	2.66		2		3										
EE104	They would possess a skill to perceive the concept of logic gates like XOR and X-NOR and integrated circuits in electronics.	2.79	3	3												
CE103	Analyze report and where appropriate distribute the survey errors	2.69	3				2									
AS101	To enhance team working and leadership skills to facilitate employability	2.9		3		2										
AM102	Student will be able to analyze functions of complex variables techniques of complex integrals and compute integrals over complex surfaces.	2.76	2													
CE101	Understand basic kinematics concepts displacement velocity and acceleration.	2.52				2										
EE103	Function on multidisciplinary teams to strengthen leadership and team working skills.	2.66				3										
CE102	Plan a survey for applications such as road alignment and height of the building.															
EE104	Simulate laboratory experiments in the software.	2.79														
CE103	Perform instruments checks to ensure they meet the specifications.	2.69														
AS101	Demonstrate the ability to work in a team based small projects and effectively use.															
AM102	To develop skills required to find the appropriate differential equations that can be used as mathematical models.															
CE101	Understand basic dynamics concepts force momentum work and energy with a focus on employability	2.52	3			2									1	
EE103	Students would possess a skill to explore physical systems by setting up experiments collecting and analyzing data identifying sources of uncertainty and interpreting their results in terms of the fundamental principles and concepts of electronics.															
CE102	Undertake measurement and plotting as field surveyor with focus on employability.	2.66	2													
EE104	Perform tests on motor-generator set.	2.79	2													
CE103	Surveying practice skills enhanced	2.69	2	3												

Code	Course Outcome	Mean	1	2	3	4	5	6	7	8	9	10	11	12	13
CE101	To make student ready for industry in field of surveying and thus enhances employability.	2.69				3									3
CE201	Solve hydrostatic problems to enhance analytical skills.	2.8	3										2	2	2
CE202	Determine resultants and apply conditions of static equilibrium to plane force systems to develop analytical skills	2.67	3										2	2	2
CE203	Evaluate various properties of concrete to gain the construction skills	2.83	3												2
CE204	Calculate deformation of statically determinate structures using geometric and energy methods	2.53	3			2									3
HU201	The students will be able to get awareness on human values and professional ethics	2.7	2							1					
CE205	Identify name and characterize flow patterns and regimes	3	3					2							
CE206	Calculate deformation of statically determinate structures using geometric and energy methods	3	3											1	2
CE207	Able to check the quality of building materials	3	2			3									
CE208	Distinguish between statically determinate and indeterminate structures.	3	2												1
CE209	Demonstrate basic concepts of the AutoCAD software to gain employability.	2.67				1									2
CL201	Demonstrate Body Language including facial expressions and voice modulation intonation via role plays	2.9	2							1					
CE201	Describe the physical properties of a fluid	2.8				2									2
CE202	Identify and quantify all forces associated with a static framework	2.67				2									2
CE203	Evaluate various properties of the basic construction materials such as brick stone timber metals	2.83			2	2									
CE204	Analyze statically indeterminate beams using classical and conventional methods	2.53	2												2
HU201	The students will enhance the skills on human values and professional ethics that shape their ethical behavior	2.7				3									
CE205	Understand basic units of measurement convert units and appreciate their magnitudes.	3	2					1							
CE206	Conduct compression tests on spring wood and concrete	3		2		2									
CE207	Able to impart the knowledge about the characteristics sources and defects in various materials used for construction purposes	3		3					1						1
CE208	Apply equations of equilibrium to structures and compute the reactions	3	1	2											1
CE209	Apply basic skills to develop construction drawing techniques	2.67		2											
CL201	Team Dynamics via text-based group presentations	2.9			3										
CE201	Calculate the pressure distribution for incompressible fluids.	2.8	2												
CE202	Analyze different load cases with different loading conditions	2.67	2												
CE203	Develop skills to work in the field of building materials quality control to produce the employability	2.83				2									2
CE204	CLO3 Develop qualitative diagrams showing the displaced shape bending moments and support reactions for an indeterminate plane frame	2.53				2									
HU201	The Students will be able to take active part in social political economic and cultural activities with responsibility	2.7													
CE205	Utilize basic measurement techniques of fluid mechanics														

Code	Course Outcome	Avg														
CE206	Conduct flexural and torsion test to determine elastic constants.	3				2										2
CE207	Able to design and test the materials either in the laboratory or in the field before their actual use at the site.	3		2												2
CE208	Draw the shearing force and bending moment diagrams.	3		2												
CE209	Ability to manipulate drawings through editing and plotting techniques.	2.67							2							
CL201	Leadership Skills via flipped classrooms	2.9							2							
CE201	Calculate the hydrostatic pressure and force on plane and curved surfaces.	2.8				2									2	
CE202	Understand the basic concept of simple stress and strain theory of flexure and torsion springs and strain energy.	2.67				2									2	
CE203	Evaluate the properties of miscellaneous materials such as bitumen paints distempering and materials for structural repairs	2.83	3													
CE204	Develop effective structural analysis skills for building design activities.	2.53	2													
HU201	The students will gain thorough knowledge in the field of human rights and this will add to the academic qualification to achieve the employability.	2.7	1						2							
CE205	Enhancing skills to differentiate among measurement techniques their relevance and applications.	3				2										
CE206	Determine hardness of metals	3	3													
CE207	Able to attain the knowledge of different building materials their classification	3														2
CE208	Calculate the internal forces in cable and arch type structures to extent employability skills.	3	3	2												
CE209	Understand geometric construction.	2.67	1						3							
CL201	Research Aptitude via projects to value the employability.	2.9	1						2							
CE201	Demonstrate the application point of hydrostatic forces on plane and curved surfaces to focus on employability	2.8													2	
CE202	Have understanding about failure modes of materials and response to fatigue enhancing employability skills.	2.67													2	
CE203	Perform various quality control tests for the various civil engineering materials by performing different lab tests on materials.	2.83	2													2
CE204	To impart the principles of elastic structural analysis and behaviour of indeterminate structures focusing on employability.	2.53	2													2
HU201	To identify issues and problems relating to the realization of human rights and strengthens the ability to contribute to the resolution of human rights issues and problems.	2.7	2						2							
CE205	Prove good understanding of concepts and their applications in the laboratory.	3				2										
CE206	Analyze the behavior of the solid bodies subjected to various types of loading	3	2													2
CE207	Enhances skills in quality control and thus helps in employability	3						2								2
CE208	Evaluate and draw the influence lines for reactions shears and bending moments in beams and girders due to moving loads	3	3													2
CE209	Produce template drawings	2.67	2													
CL201	Effective communication with emphasis on capturing the attention of the audience.	2.9	2													
AS102	Students will able to apply material from their discipline to the design projects	2.93	2	2												
CE211	Learn the basic elements of a steel structure	0	2	2												

Code	Description													
CE21?	Distinguish statically determinate and redundant structural systems	2.53	3								2	2		
-CE213	Design rain gauge network and calculate depth of precipitation runoff infiltration peak flow over the basin using different methods	2.9												2
CS501	Ability to analyse a problem and to identify and define the computing requirements appropriate to its solution	2.87	2											
CE216	Able to check quality of constituent material of concrete.	2.93									3	3		2
CE217	Statistically analyse and interpret laboratorial results	2.93		1				1						2
CE214.	Identify various water demands and select suitable source of water	2.93	2	2										2
AS102	Students will get an appreciation of the role that their discipline can play in social contexts	2.93	1		2									
CE21?	Learn the fundamentals of structural steel fasteners	0		2										1
CE212	Choose a suitable method for the analysis of structural system pin-jointed as well as rigid jointed while designing	2.53						3				2		
CE213	Estimate peak flows and fix design flood by different methods to enhance analytical skills.	2.9	2				3							
501	Skills to design implement and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline.	2.87			3									
CE216	Able to design a concrete mix.	2.93			3						3	3		3
CE217	Apply the laboratorial results to problem identification quantification and basic environmental design and technical solutions.	2.93	2		1	2								
CE214.	Demonstrate a firm understanding of various water quality parameters	2.93	1		2									
AS102	To get awareness of professional ethics and responsibility.	2.93			3									
CE211	Able to design basic elements of steel structure like tension members compression members beams and beam-columns.	0						1					2	
CE212	To use the techniques skills and modern engineering methods involved in the analysis of structures	2.53				1								
CE213	Select a suitable type of dam to be constructed according to the site requirements	2.9	3											
CS501	Skills to communicate effectively with a range of audiences about technical information.	2.87						3						
CE216	Able to perform laboratory tests for properties of fresh and hardened concrete.	2.93	2		2									
CE217	Students will achieve perfectness in experimental skills	2.93	2		2				2	2				
CE214	Enhancing skills to develop relevant design criteria procedures and methods for various water treatment processes	2.93			3				1					
AS102	Demonstrate the ability to work in a team based small projects and effectively use	2.53							3					2
CE211	Able to design column splices and bases	0	3											
CE212	Utilize the concept of influence lines for deciding the critical forces and sections while designing	2.53	3											
CE213	Demonstrate the concepts techniques and modernization of Irrigation	2.9	2											
CS501	An ability to make informed judgments in computing practice based on legal and ethical principles.	2.87		2		2								
CE216	Students will achieve perfectness in experimental skills.	2.93				1								

Code	Course Outcome													
CE211	Understand and use the water and wastewater sampling procedures and sample preservations.											3		
CE214	Describe structure of drinking water supply system water transport and its distribution.	2.93							1					
AS102	To enhance team working and leadership skills to facilitate employability.	2.93	2											
CE211	To enhance the skills to analyse and design of simple bolted and welded connections	0	2	2										1
CE212	To impart knowledge about various methods involved in the analysis of indeterminate structures	2.53	1				1							2
CE213	Plan design and execute by applying various concepts in the irrigation structures	2.9				1								2
CS501	An ability to analyse and evaluate systems with respect to maintaining operations in the presence of risks and threats.	2.97	2											1
CE216	Carry out test procedures for major laboratory properties of fresh and hardened concrete	2.93	2		1	2								3
CE217	Able to determine the population forecast for a city to meet its water requirement enhancing skills for employability in town planning projects.	2.93	2						2	2				
CE214	Able to determine the population forecast for a city to meet its water requirement enhancing skills for employability in town planning projects.	2.93					1							2
CE301	Given basic information prepare a horizontal and vertical alignment including super elevation which complies with AASHTO standards.	3	3		1				2					
CE301	Understand the relationship between the environment and transportation infrastructure and the importance the environment plays in project development of transportation projects	3	1				1							1
CE301	Utilize CAD software to prepare a plan profile and x-sections depicting a typical roadway design.	3	2							3	2			
CE301	Prepare well written design narratives documenting the various parameters and standards used in the design process so another individual could review the work and understand what decisions and assumptions were used and why.	3	1			2						3		
CE301	Understand the mathematics behind the development of tables and charts for determining highway design criteria	3	3						2			1		2
CE301	Familiar with professional and ethical issues related to liability and conduct	3	3		2									
CE302	To enhance skills to identify the origin of soil and to identify different types of soil	3	1			3							3	
CE302	To understand the various physical and engineering characteristics of different types of soil	3	1						2	2				
CE302	To understand the concept of slope stability	3					3				2			
CE302	To appreciate the use of modern technology in the field of geotechnical engineering	3		3		1								
CE302	Understand and apply the Principle of Effective Stress to a range of typical geotechnical problems in order to predict the ground response under different conditions of loading soil type and groundwater states.	3												
CE303	Understand and appreciate various aspects of steel construction like different types of steel sections their specifications advantages of steel construction etc	2.6		2										1
CE303	Analyse and design various types of steel connections using rivets bolts and weld to enhance the analytical skills	2.6		3										

Course	Course Outcome														
CE303	Design basic elements of a steel building like beam column and column bases etc. for given conditions and loading.	2.6	3	-	-	-	-	-	-	-	-	3	3	-	-
CE303	Estimate design loads for a roof truss and then be able to design its various components like top chord members bottom chord members web members purlins etc with focus on employability skills.	2.6	-	1	-	-	-	-	3	-	-	-	-	3	1
CE303	Ability to design steel framing system and connections of a building in a team setting	2.6	-	-	-	-	-	-	-	-	-	-	-	-	2
CE304	Understand the method of preparation of estimates for civil engineering works of various Buildings Masonry tanks and stair case to incorporate mandatory employability skills	3	3	-	-	-	-	-	-	-	-	-	-	-	2
CE304	Understand method of preparation of specifications and their implications	3	3	-	-	-	-	-	-	-	-	-	-	-	1
CE304	Calculate the analysis of rates for different materials	3	1	2	-	-	-	-	-	-	-	-	-	1	-
CE304	Understand about various aspects of civil engineering Tenders and contracts	3	-	-	-	-	2	-	-	-	-	-	-	-	-
CE304	Ability to evaluate and analyse present worth future worth and annual worth analyses on one of more economic alternatives.	3	3	-	-	-	-	-	-	-	2	2	-	-	-
CE306	Student shall be able to apply the scientific method to Transportation Problems Tests on Bituminous Materials	3	2	-	-	-	3	-	-	-	-	-	-	-	-
CE306	Students shall connect theory with field observations and ability to identify limitations in theory models Tests on Pavement Layers.	3	1	1	-	-	-	-	-	-	-	-	-	-	2
CE306	Outline the various properties of bitumen material and mixes by performing various tests on it.	3	3	3	-	-	2	-	-	-	-	-	-	-	-
CE306	Recognize the knowledge about different physical properties of aggregates by performing different test on road aggregates	3	3	3	-	-	-	-	-	-	-	-	-	-	-
CE306	To enhance skills for testing pavement materials	3	2	-	-	-	-	1	-	-	-	-	-	-	2
CE306	Evaluate the strength of subgrade soil by CBR test	3	3	-	-	-	-	-	-	-	-	-	-	-	2
CE307	Have thorough knowledge about the procedures of laboratory tests used for determination of physical index and engineering properties of soils	3	3	3	-	-	-	-	-	-	-	-	-	-	-
CE307	Have the capability to classify soils based on test results and interpret engineering behavior based on test results	3	2	-	-	-	2	-	-	-	-	-	-	-	-
CE307	To enhance the skills to evaluate the permeability and shear strength of soils	3	-	2	-	-	-	-	1	-	-	-	-	-	3
CE307	Be able to evaluate settlement characteristics of soils	3	2	2	-	-	-	-	-	-	-	-	-	-	-
CE307	Be able to evaluate compaction characteristics required for field application	3	3	-	-	-	-	-	-	-	2	2	-	-	-
AS103	Students will able to apply material from their discipline to the design projects	3	2	2	-	-	-	-	-	-	-	-	-	-	-
AS103	Students will get an appreciation of the role that their discipline can play in social contexts	3	1	-	2	-	-	-	-	-	-	-	-	-	-
AS103	To get awareness of professional ethics and responsibility	3	-	-	3	-	-	-	-	-	-	-	-	-	2
AS103	Demonstrate the ability to work in a team based small projects and effectively use	3	-	-	-	-	-	-	-	-	-	3	-	-	-
AS103	To enhance team working and leadership skills to facilitate employability	3	2	2	-	-	-	-	-	-	-	-	-	-	-
CE320	Gain a solid understanding of core concepts of SWM with a focus on municipal solid waste MSW and the importance of the sector on economic development and environmental protection	3	2	2	-	-	-	-	1	-	-	-	2	-	2

Course	Outcome														
CE320	Evaluate various technology options based on the financial technical and operational capacities of each technology and treatment disposal options	3	3	-	2	-	2	-	1	2	1	-	-	-	2
CE320	Familiarize and apply solutions for improvement in the sector while learning from practical examples and case studies.	3	2	2	1	2	-	2	1	2	-	-	-	-	1
CE320	Make physical and chemical analysis of municipal solid wastes	3	2	-	2	1	-	1	1	2	-	-	-	2	2
CE320	Develop skills to collect required data for a Solid Waste Management Plan	3	2	1	-	-	-	-	2	-	2	-	-	1	2
CE___	Apply principles of engineering mechanics and use appropriate tools to solve problems in structural engineering.	3	3	-	-	-	2	-	-	-	-	-	-	-	-
CE308	Design and evaluate structural components and systems to meet the desired needs within realistic constraints such as economic environmental social political ethical health and safety constructability and sustainability.	3	3	-	2	-	-	-	-	1	1	-	-	-	-
CE308	Plan compose and integrate verbal written and graphical communication to technical and non-technical audiences.	3	1	-	-	-	-	-	-	-	-	-	1	-	2
CE308	Function effectively as a skilled member of an engineering team and enhance employability development	3	2	-	-	2	-	-	-	-	-	-	-	-	1
CE	Discuss professional responsibility in light of social context of engineering problems.	3	3	-	-	2	-	-	-	-	-	-	-	2	-
CE309	Apply theoretical and practical aspects of project management techniques to achieve project goals.	2.87	2	-	-	2	-	-	-	-	-	-	-	-	1
CE309	Possess organizational and leadership capabilities for effective management of construction projects.	2.87	2	-	-	-	-	-	1	-	-	-	-	-	3
CE309	Be able to apply knowledge and skills of modern construction practices and techniques.	2.87	-	1	-	-	-	-	-	-	-	-	2	-	3
CE309	Have necessary knowledge and skills in accounting financing risk analysis and contracting to enhance skill and employability development.	2.87	2	1	-	2	-	-	-	-	-	-	-	-	1
CE309	Be capable of using relevant software packages for planning scheduling executing and controlling of construction projects.	2.87	2	-	-	-	-	-	-	-	-	-	-	-	3
CE310	Explain basic physical principles of remote sensing	3	3	-	3	-	-	-	-	-	-	-	-	-	-
310	Understand the basic difference between various kinds of satellites and sensors	3	2	3	-	1	-	-	-	-	-	-	-	-	2
CE310	Know the appropriate use of satellite data for different applications	3	-	2	-	3	-	-	-	-	-	-	-	-	-
CE310	Explain the principles of thermal and microwave satellites sensors and their nature of the data.	3	-	3	-	1	-	-	2	-	-	-	-	-	3
CE310	Apply remote sensing in different thematic studies and enhance skill and Employability development	3	2	-	-	-	-	-	-	-	-	-	-	-	-
CE311	Interpret hard copy satellite FCC images	3	-	-	-	3	-	-	2	-	-	-	-	-	-
CE311	Understand the effect of different resolutions of satellite image on identifying different terrestrial features	3	1	-	-	-	-	-	3	-	-	-	-	-	-
CE311	Generate field spectra for various land cover features and draw inferences	3	2	-	-	3	-	-	1	-	-	-	-	-	2
CE311	Extract different features from satellite image	3	-	-	-	2	-	-	-	-	-	-	-	-	-
CE311	Provides effective learning of industry orientated techniques related to the subject personality development communication and skills for employability development	3	3	1	-	2	-	-	-	-	-	-	-	3	-
CE321	Define and reason about fundamental concepts of industrial wastewater treatment	-	3	-	2										

Code	Description	Val											
CE321	Design a component system or process to meet desired needs and imposed constraints	3	1		3			2			1			1
CE321	To be able to understand Environmental Management System EMS approach and knowing the essential elements of an EMS and develop employability skills	3			1			2			3			
CE321	Develop skills for selection process for high organic load of waste water treatment needed.	3			2				1			3		
CE321	Have information about treatment methods pharmaceutical industry and the chemical phenol facilities which produces of wastewater properties of operational problems for employability skills development.	3	2			1			1		2			
CE401	Be able to find the necessary informationlegislationprocedures for an assessment of environmental impact of a Project.	2.87	3	1			2						3	
CE402	Describe the basics of computer and understand the problem-solving aspect.	2.8	3	1			2							2
DM101	Acquire the knowledge disaster management	2.93	2	2										
CE404	Demonstrate basic concepts of the Staad Pro and AutoCAD software.	3	3				2							3
S104	Students will able to apply material from their discipline to the design projects.	3	3			2								
CE405	To know the pattern of Various Examinations.	3	1					2					3	
CE330	Identify a suitable foundation system for a structure	2.97	1			3								3
CE401	Be able to conduct an EIA on a proposed project.	2.87	1									2		3
CE402	Demonstrate the algorithm and flow chart for the given problem.	2.8	2	3					2					
DM101	Understand the vulnerability of ecosystem and infrastructure due to a disaster	2.93	1		2					2	2			
CE404	Apply basic concepts to develop design and analysis techniques.	3				1				3	3			
AS104	Students will get an appreciation of the role that their discipline can play in social contexts.	3	2							1	2			2
CE	To get the information about the exams conducted for the entry into jobs	3	3	2		3								
CE	Students would be able to identify the objects of site investigation and describe the use of different types of samples and samplers	2.97	1							2	2			
CE401	Be able to conduct an environmental audit on a selected companyindustry.	2.87	1			1							1	
CE402	Design and develop C program to evaluate simple expressions and logical operations.	2.8	3										2	
DM101	Acquire the knowledge of disaster management Phases.	2.93			3							1		
CE404	Ability to manipulate drawings through editing and plotting techniques.	3			3					3	3			
AS104	To get awareness of professional ethics and responsibility & develop the skills for employability	3				2								
CE	To become aware about the various soft skills and entrepreneurship skills											2		
CE330	Calculate the dynamic properties of soil and perform relevant tests in laboratory and on field for the analysis & design of foundations which can tolerate dynamic loads by applying the general principles	2.97					3					2		
CE401	Be able to develop a waste reduction and minimization plan for a selected companyindustry	2.87										3		3
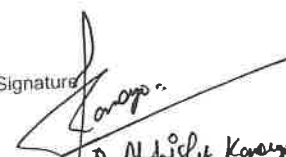
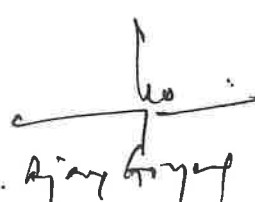| Subject	Description	Value												
CE407	Develop & Implement C programming skills with suitable modules to solve the given problem.	2.8	2							3				2
DM101	Understand the hazard and vulnerability profile of India	2.93												
CE404	Understand geometric construction.	3	2		2									1
AS104	Demonstrate the ability to work in a team based small projects and effectively use.	3	2								1	2		
CE405	To use the time effectively.	3	3			3								
CE230	Capable of finding out strength properties of in-situ soil	2.97		3		1								
CE401	Be able to have skills to develop an EMS for a Project.	2.87	3		2									2
CE402	Demonstrate the concept of pointer and perform IO operations in files.	2.8	2	3					3					
DM101	Knowledge about existing global frameworks and existing agreements for employability and skill development.	2.93			2							2		
CE404	Produce 3D drawings.	3				1								
AS104	Develop skills to communicate with engineers and the community at large in written an oral form.													
CE405	To become aware about the goals of life and employability development.	3	2	1		1								1
CE230	Explain the importance of advanced concepts and theories in soil mechanics.	2.97		2										3
CE401	Be able to conduct a LCA on a selected process.	2.87		2				2						
CE404	To acquire skills in design-analysis and thus make student industry ready for employability development.	3	1	2										
CET 9403	Capability to acquire and apply fundamental principles of engineering.	2.97	2		1									
CET 9403	To get awareness of professional ethics and responsibility. Become master in ones specialized technology.	2.97	2		2				2				1	
CET 9403	To get awareness of professional ethics and responsibility. Become updated with all the latest changes in technological world.	2.97	1							3	3			
CET 9403	To get awareness of professional ethics and responsibility. Ability to communicate efficiently	2.97	2	1			3				1			
CET 9403	To get awareness of professional ethics and responsibility. Knack to be a multi-skilled engineer with good technical knowledge management leadership and entrepreneurship skills.	2.97												

PO Attainment of Subjects: B.E. Civil Engineering

Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
GEL-101										94		94
ME102	94	94	94				94					9?
PH101	90	90				90				100		100
ME153	100	100					100					
PH103	98	90				98						90
CL101	98					98						
AM101											84	
CE101	84	84		84					84			
EE103	89	89		89								89
CE102	89	89	89	89								93
EE104	93	93					93					90
CE103	90	90		90	90		90					97
AS101	97	97	97	97						97		92
AM102	92	92			92		92	92				89
CE209	89	89		89			89					
CL201	97		97				97					

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Course	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
				93	93			93	93		93	93
CE209	9.3	-	-	93	-	-	-	-	-	-	-	100
CE208	100	100	-	100	-		100	-	-	-	-	100
CE207	100	100	-	100	-	-	-	-	-	-	100	100
CE206	100	100	-	100	-	-	-	-	-	100	-	100
CE205	100	-	-	100	100	-	-	-	-	-	-	-
HU201	90	-	90	-	-	-	90	-	-	-	-	84
CE204	84	-	-	84	-	-	-	-	-	-	94	94
CE203	94	94	-	94	-	-	-	89	89	-	89	89
CE202	89	-	-	89	89	-	-	-	-	-	0	0
CE211	0	0	-	-	-	0	-	-	-	84	-	84
CE212	84	84	84	84	84	84	84	84	84	84	-	98
AS102	98	98	98	-	-	-	98	-	-	-	-	97
CE213	97	-	-	97	97	-	-	-	-	-	-	96
CS501	96	96	96	96	-	96	-	-	98	98	-	98
CE216	98	-	98	98	-	-	98	98	-	-	-	98
CE217	98	98	98	98	98	-	-	98	98	-	-	98
CE214	98	98	98	-	98	-	100	100	100	100	-	100
CE301	100	-	100	100	100	100	-	100	100	100	100	100
CE302	100	100	-	100	-	100	-	87	-	87	-	87
CE303	87	87	-	-	87	87	87	100	100	100	-	100
CE304	100	100	-	100	100	-	-	-	-	-	-	100
?06	100	100	-	-	100	100	-	100	100	-	-	100
CE307	100	100	-	-	-	-	100	-	-	-	-	100
AS103	100	100	100	-	-	100	100	100	100	100	100	100
CE320	100	100	100	100	100	-	-	100	100	100	100	100
CE308	100	-	100	100	100	-	-	-	-	96	-	96
CE309	96	96	-	96	-	-	96	-	-	-	-	100
CE310	100	100	100	100	-	-	100	-	-	-	100	100
CE311	100	100	-	100	100	-	100	-	-	-	-	-
CE321	100	-	100	100	-	100	100	100	100	100	-	100
AS104	100	-	-	100	-	-	-	100	100	-	-	-
CE404	100	100	100	100	100	100	-	100	100	100	-	98
DM101	98	98	98	-	-	-	98	98	98	98	93	-
CE402	93	93	-	-	93	-	93	93	93	-	96	-
CE401	96	96	96	96	96	-	-	-	-	96	-	100
CE405	100	100	-	100	-	100	-	100	100	-	-	99
CE330	99	99	-	99	-	99	99	99	99	99	99	-
CET 9403	99	99	99	-	99	-	99	99	99	99	95.92	95.35
POA	95.44	95.62	96.32	95.39	95.18	95.46	95.75	95.70	96.09	96.75		

Signature

Name Dr. Abhishek Kanoyo
(Programme In-charge)

Signature

Name Dr. Ajay Goyay
(Dean/Head)