

A. CO PO mapping of courses of curriculum for 2015-19

Sr. No.	Course Name	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
1	Soil Engineering I	CO1	2	1	1	3	1	1
		CO2	2	1	3	1	1	1
		CO3	2	1	3	1	1	1
		CO4	2	1	3	1	1	1
2	Earth Dam and Retaining Structures	CO1	3	--	--	--	--	--
		CO2	3	--	--	--	--	--
		CO3	3	2	3	2	--	--
		CO4	3	2	3	3	3	2
		CO5	3	2	3	3	3	2
3	FEM in Geomechanics	CO1	1	1	3	2	1	---
		CO2	1	1	3	2	1	---
		CO3	1	1	3	2	1	---
		CO4	1	1	3	2	1	---
4	Geotechnical Aspects in Earthquake Engineering	CO1	3	3	1	2	3	1
		CO2	3	3	3	2	3	1
		CO3	3	3	1	2	3	3
		CO4	3	3	1	2	3	3
		CO5	3	3	1	2	3	3
5	Analysis and Design of Foundations	CO1	3	1	3	1	2	--
		CO2	3	1	3	2	--	--
		CO3	3	1	3	2	2	--
		CO4	3	1	3	--	3	--
		CO5	3	1	3	--	3	--
6	Soil Dynamics	CO1	3	--	3	3	--	--
		CO2	3	--	3	3	--	--

		CO3	3	2	3	3	3	1
		CO4	3	2	3	3	3	1
7	Advanced Mathematical Methods	CO1	3	3	2	3	3	--
		CO2	3	3	2	3	2	--
		CO3	3	2	3	3	2	--
		CO4	3	2	3	3	2	1
8	Rock Mechanics	CO1	3	3	3	3	3	3
		CO2	3	3	1	3	3	3
9	Environmental Geotechnology	CO1	2	1	1	1	3	1
		CO2	2	1	1	1	3	1
		CO3	2	1	1	3	1	1
		CO4	2	1	1	3	1	1
10	Reinforced Earth and Geotextiles	CO1	1	3	1	1	3	--
		CO2	2	3	3	1	3	--
		CO3	3	3	1	3	3	1
		CO4	3	3	1	3	3	1
11	Ground Improvement	CO1	3	3	1	3	3	3
12	Soil Engineering II	CO1	2	1	1	3	1	--
		CO2	2	1	1	3	1	--
		CO3	2	1	1	3	1	--
		CO4	2	1	1	3	1	--
		CO5	2	1	1	1	1	--
13	Geotechnical Centrifuge Modelling	CO1	3	3	3	1	3	---
		CO2	3	3	3	1	3	---
		CO3	3	3	3	1	3	---
		CO4	3	3	3	1	3	2

14	Soil Structure Interaction	CO1	3	2	---	3	---	----
		CO2	3	2	---	3	---	----
		CO3	3	2	3	3	---	----
		CO4	3	2	---	3	---	----
		CO5	3	2	---	3	---	----
15	Pavement analysis and Design	CO1	3	1	3	2	----	1
		CO2	3	3	3	2	----	2
		CO3	3	---	3	2	3	3
		CO4	3	3	3	2	----	3
16	Lab. Practice-I	CO1	3	2	2	1	1	1
		CO2	3	2	3	2	1	1
		CO3	3	2	3	--	1	--
		CO4	3	2	3	--	3	1
17	Lab. Practice-II	CO1	3	2	2	1	1	1
		CO2	3	2	3	2	1	1
		CO3	3	2	3	--	1	--
		CO4	3	2	3	--	3	1
18	Dissertation I	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
19	Dissertation II	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
20	Communication Skills	CO1	---	1	---	3	1	---
		CO2	---	1	---	3	1	---
		CO3	---	3	---	2	3	---

		CO4	---	3	---	2	3	---
		CO5	---	3	---	3	3	---
21	Environmental Awareness	CO1	---	3	---	1	3	2
		CO2	---	3	---	1	3	2
		CO3	---	3	---	1	3	3
		CO4	---	3	2	1	3	3
		CO5	---	3	---	1	3	3

B. CO PO mapping of courses of curriculum for 2019-23

Sr. No.	Course Code	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6
1	Computational Methods in Geotechnical Engineering	CO1	--	3	2	3	3	3
		CO2	--	3	2	3	2	3
		CO3	--	2	3	3	2	2
		CO4	--	2	3	3	2	3
		CO5	--	3	2	3	3	2
2	Analysis and Design of Foundations	CO1	3	1	3	1	2	--
		CO2	3	1	3	2	--	--
		CO3	3	1	3	2	2	--
		CO4	3	1	3	--	3	--
		CO5	3	1	3	--	3	--
3	DE –I (Rock Mechanics)	CO1	3	2	1	2	3	3
		CO2	3	2	3	3	3	1
		CO3	3	2	2	3	2	1
		CO4	3	2	3	2	2	1
		CO5	3	2	3	2	3	2

4	DE-I (Ground Improvement)	CO1	3	3	2	2	3	3
		CO2	3	3	2	2	3	3
		CO3	3	3	2	2	3	2
		CO4	3	3	2	2	3	2
		CO5	3	3	2	2	3	2
5	DE-I (Reinforced Earth and Slopes)	CO1	1	3	1	1	3	--
		CO2	2	3	3	1	3	--
		CO3	3	3	1	3	3	1
		CO4	3	3	1	3	3	1
		CO5	3	3	1	1	3	--
6	DE -I (Environmental Geotechnology)	CO1	2	1	1	1	3	1
		CO2	2	1	1	1	3	1
		CO3	2	1	1	3	1	1
		CO4	2	1	1	3	1	1
		CO5	2	1	1	3	1	1
7	DE -I (Pavement Analysis and Design)	CO1	3	1	3	2	----	1
		CO2	3	3	3	2	----	2
		CO3	3	---	3	2	3	3
		CO4	3	3	3	2	----	3
		CO5	3	---	3	2	3	3
8	FEM in Geomechanics	CO1	1	1	3	2	1	---
		CO2	1	1	3	2	1	---
		CO3	1	1	3	2	1	---
		CO4	1	1	3	2	1	---
		CO5	1	1	3	2	1	---
9	Soil Engineering	CO1	2	1	1	3	1	1
		CO2	2	1	3	1	1	1

		CO3	2	1	3	1	1	1
		CO4	2	1	3	1	1	1
		CO5	2	1	3	1	1	1
10	Earth & Rockfill Dam and Slope Stability	CO1	3	--	--	--	--	--
		CO2	3	--	--	--	--	--
		CO3	3	2	3	2	--	--
		CO4	3	2	3	3	3	2
		CO5	3	2	3	3	3	2
11	Geotechnical Engineering Lab Practice-I	CO1	3	1	3	---	2	---
		CO2	3	1	3	2	2	---
		CO3	3	1	3	2	2	---
		CO4	3	1	3	1	2	---
		CO5	3	1	3	1	1	---
12	Seminar	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
		CO5	3	3	3	3	3	3
13	Interdisciplinary Open Course (Solid waste management technologies)	CO1	1	1	1	2	1	2
		CO2	1	1	1	2	1	2
		CO3	1	2	1	2	1	2
		CO4	1	2	1	2	1	2
		CO5	1	2	2	2	1	2
14	DE-II (Centrifuge Modeling)	CO1	3	3	3	1	3	---
		CO2	3	3	3	1	3	---
		CO3	3	3	3	1	3	---
		CO4	3	3	3	1	3	---
		CO5	3	3	3	1	3	2

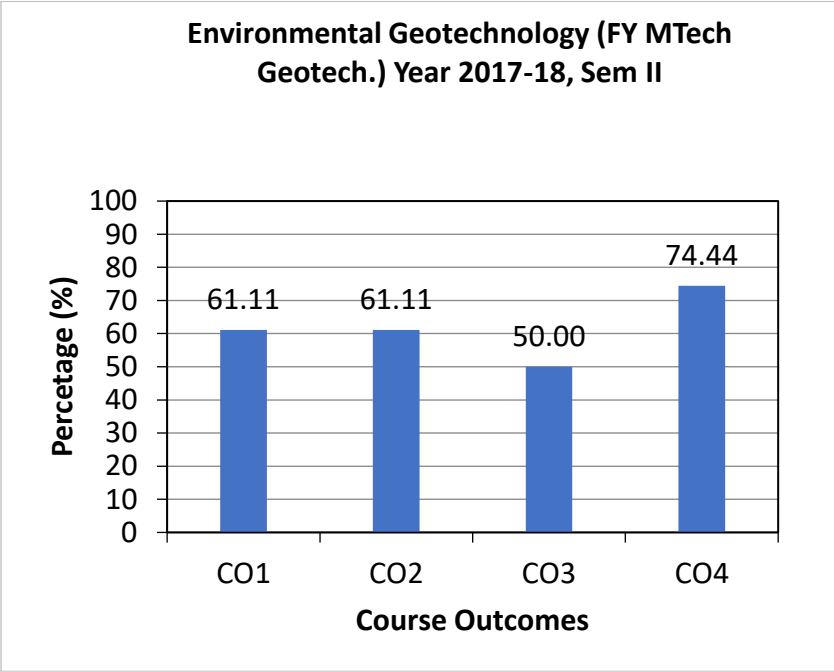
15	DE-II (Critical State Soil Mechanics)	CO1	2	1	1	3	1	--
		CO2	2	1	1	3	1	--
		CO3	2	1	1	3	1	--
		CO4	2	1	1	3	1	--
		CO5	2	1	1	3	1	--
16	DE-II (Geotechnical Exploration & Instrumentations)	CO1	3	3	3	2	3	---
		CO2	3	3	3	2	3	---
		CO3	3	3	3	3	3	---
		CO4	3	3	3	2	3	---
		CO5	3	3	3	2	3	---
17	DE-II (Applications of Geosynthetics in Geotechnical engineering)	CO1	2	1	2	1	1	1
		CO2	3	2	3	1	---	2
		CO3	2	---	3	1	---	---
		CO4	2	2	3	---	---	2
		CO5	3	---	2	---	---	---
18	DE-II (Offshore Geotechnical Engineering)	CO1	3	3	1	2	3	---
		CO2	3	3	3	2	2	---
		CO3	3	3	3	2	3	---
		CO4	3	1	3	3	3	---
		CO5	3	1	3	2	1	---
19	DE-III (Geotechnical)	CO1	3	3	1	2	3	1
		CO2	3	3	3	2	3	1

	Eathquake Engineering)	CO3	3	3	1	2	3	3
		CO4	3	3	1	2	3	3
		CO5	3	3	1	2	3	3
20	DE-III (Software Applications in Geotechnical Engineering)	CO1	3	3	3	1	3	---
		CO2	3	3	3	1	3	---
		CO3	3	3	3	1	3	---
		CO4	3	3	3	1	3	---
		CO5	3	3	3	1	3	1
21	DE-III (Geotechnical Engineering for Underground Structures)	CO1	3	3	1	1	3	---
		CO2	3	3	1	1	3	---
		CO3	3	3	3	1	3	3
		CO4	3	3	3	1	3	3
		CO5	3	3	3	1	3	---
22	DE-III (Forensic Geotechnical Engineering)	CO1	3	3	3	1	2	---
		CO2	3	3	3	1	2	---
		CO3	3	1	3	1	2	---
		CO4	3	2	3	2	1	---
		CO5	3	3	2	1	2	---
23	DE-III (Geophysical Exploration Methods)	CO1	3	1	1	3	---	1
		CO2	2	1	1	---	---	1
		CO3	---	2	1	---	1	2
		CO4	---	1	3	---	1	1

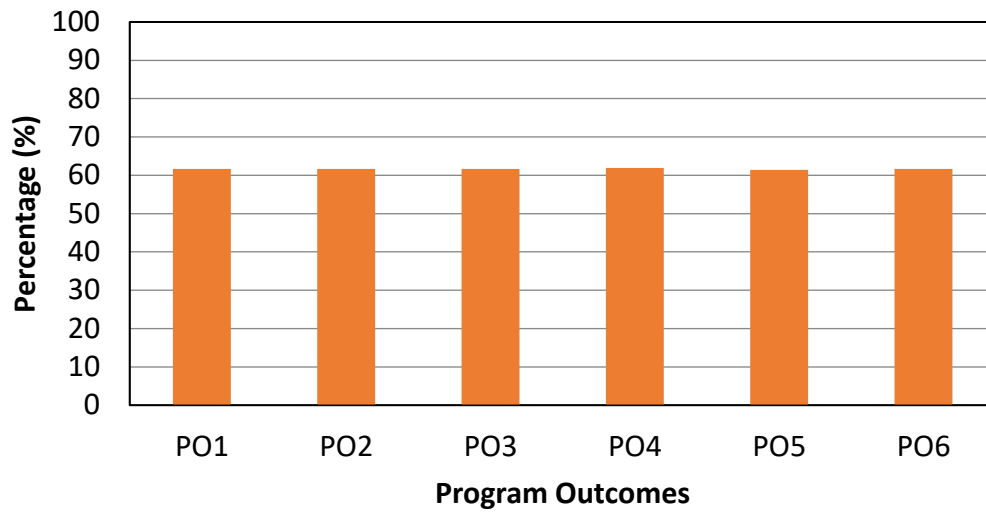
		CO5	1	1	1	---	1	1
24	Liberal Learning Course	CO1	---	1	1	3	1	1
		CO2	---	1	1	1	1	1
		CO3	---	1	---	1	3	1
		CO4	---	1	---	1	2	1
		CO5	---	1	---	2	3	2
25	Research Methodology	CO1	---	2	2	2	1	1
		CO2	---	1	1	1	1	1
		CO3	---	1	2	2	1	1
		CO4	---	3	1	2	2	1
		CO5	---	3	1	2	1	1
26	Intellectual Property Rights	CO1	---	2	2	2	1	1
		CO2	---	1	1	1	1	1
		CO3	---	1	2	2	1	1
		CO4	---	3	1	2	2	1
		CO5	---	3	1	2	1	1
27	Retaining Structures	CO1	3	2	3	2	2	1
		CO2	3	1	2	2	1	2
		CO3	3	1	2	2	2	3
		CO4	3	1	3	2	2	2
		CO5	3	1	3	2	2	2
28	Soil Dynamics and Machine foundations	CO1	3	--	3	3	--	--
		CO2	3	--	3	3	--	--
		CO3	3	2	3	3	3	1
		CO4	3	2	3	3	3	1
		CO5	3	2	3	3	3	1
29		CO1	3	2	---	3	---	----

	Soil Structure Interaction	CO2	3	2	3	3	---	----
		CO3	3	2	---	3	---	----
		CO4	3	2	---	3	---	----
		CO5	3	2	---	3	---	----
30	Mini Project	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
		CO5	3	3	3	3	3	3
31	Geotechnical Engineering Lab Practice-II	CO1	3	2	2	1	1	1
		CO2	3	2	3	2	1	1
		CO3	3	2	3	--	1	--
		CO4	3	2	3	--	3	1
		CO5	3	2	3	--	3	3
32	Dissertation Phase – I	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
		CO5	3	3	3	3	3	3
33	Dissertation Phase – II	CO1	3	3	3	3	3	3
		CO2	3	3	3	3	3	3
		CO3	3	3	3	3	3	3
		CO4	3	3	3	3	3	3
		CO5	3	3	3	3	3	3

		PO linked to CO					
Average CO(%)		PO1	PO2	PO3	PO4	PO5	PO6
CO1	61.11	2	1	1	1	3	1
CO2	61.11	2	1	1	1	3	1
CO3	50.00	2	1	1	3	1	1
CO4	74.44	2	1	1	3	1	1
		61.666667	61.666667	61.667	61.94444	61.389	61.66667



**Environmental Geotechnology (FY MTech Geotech.) Year
2017-18, Sem II**



2.2.2. PO attainment levels with observations (40)

PO Attainment of Typical Subjects for Batch July 16 – June 18							
Name of Course	Credits	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
Open Elective Course	3	74.1	74.1	74.1	63.7	84.5	74.1
Soil Engineering I	3	66.66	66.66	66.66	66.66	66.66	---
Earth Dam and Retaining Structures	3	77.6	74.0	74.0	72.1	66.5	66.5
FEM in Geomechanics	3	37.04	37.04	37.04	37.04	37.04	---
Computational methods in Engg.	4	---	64.7	62.2	63.5	63.00	65.70
MLC 1		---	91.8	91.9	91.9	91.5	91.8
Soil Engineering II	3	63.0	63.0	63.0	60.7	63.0	--
Analysis and Design of Foundations	3	84.7	84.7	84.7	82.4	87.6	--
Elective- I (Core)	3	74.1	74.1	53.3	74.1	74.1	
LLC	1	100	100	100	100	100	100
Dissertation I	14	77.77	77.77	77.77	77.77	77.77	77.77
Dissertation II	18	77.78	77.78	77.78	77.78	77.78	77.78
% PO Attainment		74.45	73.59	72.34	72.64	73.78	76.13

PO Attainment of Typical Subjects for Batch July 17 – June 19							
Name of Course	Credits	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
Open Elective Course	3	61.7	61.7	61.7	61.9	61.4	61.7
Soil Engineering I	3	81.0	81.0	81.1	80.9	81.0	81
Earth Dam and Retaining Structures	3	81.2	76.0	76.0	77.1	80.5	80.5
FEM in Geomechanics	3	70.8	70.8	70.8	70.8	70.8	---
Computational methods in Engg.	4	---	96.2	97.7	96.9	96.9	97.1
MLC 1		---	99.0	99.0	99.0	99.0	99.0
Soil Engineering II	3	48.7	48.7	48.7	47.3	48.7	--
Analysis and Design of Foundations	3	82.2	82.2	82.2	77.8	81.1	--
Soil Dynamics	3	73.5	73.5	73.5	73.5	73.5	73.5
Elective- I (Core)	3	76.5	76.5	76.5	76.5	76.5	76.5
Lab. Practice-II	2	97.1	97.1	96.8	100.0	96.1	98.0
LLC	1	100	100	100	100	100	100
Dissertation I	14	77.78	77.78	77.78	77.78	77.78	77.78
Dissertation II	18	83.33	83.33	83.33	83.33	83.33	83.33
% PO Attainment		79.48	79.03	79.12	78.95	79.19	87.86

PO Attainment of Typical Subjects for Batch July 18 – June 20

Name of Course	Credits	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
Open Elective Course	3	65.2	63.6	65.2	65.2	65.2	65.2
Earth Dam and Retaining Structures	3	65.5	75.8	75.8	74.8	72.0	72.0
FEM in Geomechanics	3	68.9	68.9	68.9	68.9	68.9	---
Computational methods in Engg.	4	---	55.8	51.8	52.9	54.7	57.1
MLC 1		---	74.3	72.3	73.1	73.7	73.0
Soil Engineering II	3	66.3	66.3	66.3	69.7	66.3	--
Soil Dynamics	3	96.5	93.0	96.5	96.5	93.0	93.0
Lab. Practice-II	2	84.4	84.4	84.1	87.5	83.3	85.4
Dissertation I	14	77.78	77.78	77.78	77.78	77.78	77.78
% PO Attainment		75.64	73.82	73.78	74.31	73.44	75.13

