

UGMIT, Rayagada			
LESSON PLAN: 2026-27			
Name of the Faculty: Chinmaya Maharana			
Subject: Th.4- GEOTECHNICAL ENGINEERING (Course code- CEPC207) , 3rd Sem			
	Total Contact Hours:45	Total Marks:100	Assessment:30+70 Credits:3

Course Outcomes:

- 1.Determine soil properties
- 2.Estimate permeability & shear strength
- 3.Identify bearing capacity
- 4.Explain stabilization & compaction
- 5.Use IS codes

Unit I (5 Classes)		
Class	Topic	CO
1	Overview of geology	CO1
2	Branches/importance	CO1
3	Rock classification	CO1
4	Soil as construction material	CO1
5	Applications	CO1
Unit II (8 Classes)		
Class	Topic	CO
1	3 phase soil	CO1
2	Unit weights	CO1
3	Specific gravity	CO1
4	Atterberg limits	CO1
5	PSD	CO1
6	Grading	CO1
7	BIS classification	CO1
8	Numericals	CO1
Unit III (8 Classes)		
Class	Topic	CO
1	Permeability	CO2
2	Darcy law	CO2
3	Const head	CO2
4	Falling head	CO2
5	Seepage	CO2
6	Flow net	CO2
7	Effective stress	CO2
8	Quick sand	CO2
Unit IV (8 Classes)		
Class	Topic	CO
1	Compaction	CO3
2	Proctor test	CO3
3	Consolidation	CO3
4	Stabilization	CO3
5	CBR	CO3
6	Site investigation	CO3
7	Exploration	CO3
8	Field identification	CO3

Unit V (8 Classes)		
Class	Topic	
		CO
1	Shear failure	CO4
2	Shear strength	CO4
3	Cohesion/friction	CO4
4	Mohr Coulomb	CO4
5	Direct shear	CO4
6	Triaxial	CO4
7	Vane shear	CO4
8	Applications	CO4
Unit VI (8 Classes)		
Class	Topic	
		CO
1	Bearing capacity	CO5
2	Terzaghi	CO5
3	Water table	CO5
4	Plate load	CO5
5	SPT	CO5
6	Earth pressure	CO5
7	Rankine	CO5
8	Foundations	CO5

Chinnmaye Mahapatra
D-20/7/26
Signature of the Faculty

P. K. 20/07/26
Signature of the HOD