

BALASORE SCHOOL OF ENGINEERING, BALASORE

LESSON PLAN/SEMESTER:- 3RD

SUBJECT:- GEOTECHNICAL ENGG.(TH-2)

NAME OF THE FACULTY :- S.L.Rout

Branch-civil engg

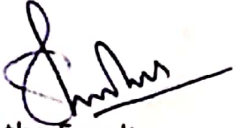
section:-A & B

Sl. No	CH. NO.	Month	DATE	NAME OF THE CHAPTER/OBJECTIVES	NO. OF PERIOD AVAIL. AS PER SYLLABUS	NO. OF PERIODS AVAILAB LE AS PER PLAN
1	CH-1	AUG (17)	05/08	Introduction 1.1 Soil and Soil Engineering 1.2 Scope of Soil Mechanics	02	01
2			08/08	1.3 Origin and formation of soil		
3	CH-2		09/08	Preliminary Definitions and Relationship 2.1 Soil as a three Phase system.		
4			10/08	2.2 Water Content, Density, Specific gravity,		
5			11/08	Voids ratio, Porosity, Percentage of air voids, air content,		
6			12/08	degree of saturation, density Index, Bulk/Saturated/dry/submerged density		
7			16/08	Interrelationship of various soil parameters		
8			17/08	PROBLEM		
9			18/08	PROBLEM		
10			19/08	PROBLEM		
11			22/08	PROBLEM		
12			CH-3	23/08	Index Properties of Soil 3.1 Water Content	04
13	24/08			3.2 Specific Gravity		
14	25/08			3.3 Particle size distribution: Sieve analysis, wet mechanical analysis,		
15	26/08			particle size distribution curve and its uses		
16	29/08			3.4 Consistency of Soils,		
17	31/08			Atterberg's Limits, Plasticity Index, Consistency Index, Liquidity Index		
18	CH-4	SEPT (16)		01/09	PROBLEM	
19			02/09	PROBLEM		
20			05/09	PROBLEM		
21			07/09	Classification of Soil 4.1 General concept		
22	08/09		4.2 I.S. Classification Plasticity chart			
23	09/09		PROBLEM...			
24	12/09	PROBLEM...				

25			13/09	PROBLEM...		
26			14/09	PROBLEM...		
27	CH-5		15/09	Permeability and Seepage 5.1 Concept of Permeability, Darcy's Law	07	07
28		23/09	5.2 Factors affecting Permeability.			
29		26/09	5.3 Constant head permeability			
30		27/09	and falling head permeability Test.			
31		28/09	5.4 Seepage pressure, effective stress, phenomenon of quick sand			
32		29/09	PROBLEM.....			
33		30/09	PROBLEM....			
34	CH-6	OCT (08)	03/10	Compaction and Consolidation 6.1 Compaction: Compaction, Light and heavy compaction Test, Optimum Moisture Content of Soil,	06	07
35	CH-7		04/10	Maximum dry density, Zero air void line, Factors affecting Compaction,		
36			05/10	Field compaction methods and their suitability		
37			06/10	6.2 Consolidation: Consolidation, distinction between compaction and consolidation		
38			07/10	Terzaghi's model analogy of compression		
39			10/10	springs showing the process of consolidation – field implications		
40			11/10	Shear Strength 7.1 Concept of shear strength,		
41			12/10	Mohr- Coulomb failure theory,		
42	CH-8	NOV (12)	01/11	Cohesion, Angle of internal friction,		
43			02/11	strength envelope for different type of soil,	07	06
44			03/11	Measurement of shear strength;- Direct shear test, Triaxial shear test		
45	CH-9		04/11	unconfined compression test and vane-shear		
46			07/11	Earth Pressure on Retaining Structures 8.1 Active earth pressure, Passive earth pressure, Earth pressure at rest		
47			08/11	8.2 Use of Rankine's formula for the following cases (cohesion-less soil only)		
48			09/11	(i) Backfill with no surcharge,		
49			10/11	(ii) backfill with uniform surcharge		
50			14/11	Foundation Engineering 9.1 Functions of foundations, shallow and deep foundation	08	04
51			15/11	different type of shallow and deep foundations with sketches. Types of failure (General shear, Local shear & punching shear		
52			16/11	9.2 Bearing capacity of soil, bearing capacity of soils using Terzaghi's formulae & IS Code formulae for strip, Circular		
53			17/11	9.3 Plate load test and standard penetration		

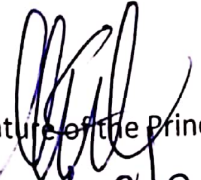
Brief Summary of the Plan

SL NO	MONTH	UNITS/CHAPTER TO BE COVERED	% OF COVERAGE
1	AUG	Ch-1,CH-2,CH-3.....	15%
2	SEPT	CH-3.... ,CH-4,CH-5	35%
3	OCT	CH-6,CH-7....	30%
4	NOV	CH-7.....,CH-8,CH-9	20%



Signature of the Faculty

Date 04.08.23



Signature of the Principal

Date 4/08/23