

DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan For Winter 2023-24 (From: 01.08.2023 To: 30.11.2023)

Subject: Geotechnical Engineering 3rd Semester			Name of The Faculty: Lopamudra Nayak No. of Days/Pr week Class Alloted: 04 hrs	
Month	Week	Date/Class Day	Periods Available	Topic To Be Covered
AUGUST	1ST	02.08.2023	02 nos.	Briefing of syllabus , introduction about the subject, books required, classroom rules 1.1 soil and soil engineering
		04.08.2023	1 nos.	1.2 scope of soil mechanics 1.3 origin of soil CHAPTER 2 - PRILIMINARY DEFINITIONS AND RELATIONSHIP 2.1 description of phase system in soil
		05.08.2023	1 nos.	2.2 description about priliminary elements used in soil mechanics, water content void ratio, porosity of soil, degree of saturation, air content and numerical practice
	2ND	09.08.2023	2 nos.	percentage air voids, unit weight of soil, relationship between various parameters, specific gravity Numerical practice and Question answer discussion (Ch 1 & 2)
		11.08.2023	1 nos.	CHAPTER 3 - INDEX PROPERTIES OF SOIL 3.1 water content, specific gravity 3.2 particle size distribution
		12.08.2023	1 nos.	3.2 sieve analysis and numerical practice
	3RD	16.08.2023	2 nos.	3.3 consistency of soil, atterberg's limits, plasticity, liquidity and consistency index, numerical practice
		18.08.2023	1 nos.	Quiz test
		19.08.2023	1 nos.	Question answer discussion (Ch 3) CHAPTER 4 - CLASSIFICATION OF SOIL 4.1 different classification of soil
	4TH	23.08.2023	2 nos.	4.2 Description about indian standard classification system Numerical practice and Question answer discussion (Ch 4)
		25.08.2023	1 nos.	CHAPTER 5 - PERMEABILITY AND SEEPAGE 5.1 definition of permiability , Darcy's law, coefficient of permiability
		26.08.2023	1 nos.	Monthly Test (August)
	SEPTEMBER	01.09.2023	1 nos.	5.2 Factors affecting permeability, 5.3 constant head permeabiliy test
		02.09.2023	1 nos.	5.4 Seepage pressure, effective stress and phenomenon of quick sand
		08.09.2023	1 nos.	Numerical practice and Question answer discussion (Ch 5)
6TH		09.09.2023	1 nos.	CHAPTER 6 - COMPACTION AND CONSOLIDATION 6.1 Compaction: compaction, light and heavy compaction test, Optimum moisture content of soil
		13.09.2023	2 nos.	Optimum moisture content of soil maximum dry density, zero air voin line, factors affecting compaction, field compaction method and their suitability, Numerical practice
7TH		15.09.2023	1 nos.	6.2 Consolidation: Consolidation, distinction between compaction and consolidation, Terzaghi's model analogy method of compression/ springs showing the process of consolidation - field implications
		16.09.2023	1 nos.	Question answer discussion (Ch 6)
8TH		22.09.2023	1 nos.	CHAPTER 7 - SHEAR STRENGTH 7.1 concept of shear strength
		on to mohr's coulumb theory	1 nos.	introduction to mohr's coulumb theory
9TH		27.09.2023	2 nos.	Cohesion, angle of internal friction, strength envelope for different type of soil
	30.09.2023	1 nos.	Monthly Test (September)	
OCTOBER	10TH	04.10.2023	2 nos.	basic numericals, Direct shear test, triaxial test
		06.10.2023	1 nos.	<i>Vane shear test and Unconfined compression test</i>
		07.10.2023	1 nos.	Question answer discussion (Ch 7)
	11TH	11.10.2023	2 nos.	CHAPTER 8 - EARTH PRESSURE RETAINING STRUCTURES 8.1 Concept of earth pressure
		11.10.2023	1 nos.	Internal assesment
		13.10.2023	1 nos.	8.1 active earth pressure, passive earth pressure, earth pressure at rest
		14.10.2023	1 nos.	8.1 active earth pressure, passive earth pressure, earth pressure at rest
	12TH	18.10.2023	2 nos.	Numerical practice on active, passive and earth pressure at rest
		20.10.2023	1 nos.	Monthly Test (October)
		01.11.2023	2 nos.	CHAPTER 9 - FOUNDATION ENGINEERING 9.1 introduction to foundation, functions of foundaions, classification, different type of shallow and deep foundation with neet sketch

NOVEMBER	13TH	03.11.2023	1 nos.	Quiz Test
		04.11.2023	1 nos.	Types of failure in foundations 9.2 Bearing capacity of soil
	14TH	08.11.2023	2 nos.	Terzaghi's formulae and IS code formulae for strip, circular and square footing
		10.11.2023	1 nos.	Numerical practice of bearing capacity of soil
		11.11.2023	1 nos.	Numerical practice of bearing capacity of soil
		15.11.2023	2 nos.	9.3 Plate load test and standard penetration test
	15TH	17.11.2023	1 nos.	Numerical practice
		18.11.2023	1 nos.	Question answer discussion (Ch 8 & 9)
		22.11.2023	2 nos.	Doubt clearing class
	16TH	24.11.2023	1 nos.	Revision of entire syllabus
		25.11.2023	1 nos.	Mock Test
		29.11.2023	2 nos.	Mock Test
	TOTAL		58 nos.	

[Signature]
31-07-2023
Signature of the Faculty

[Signature]
31.7.23
Signature of the Principal