



SYNERGY SCHOOL OF ENGINEERING, DHENKANAL
LAB LESSON PLAN & PROGRESS
SESSION 2026-2027 (WINTER)
DEPARTMENT OF CIVIL ENGINEERING

Discipline: Civil Engineering	Semester: 3rd/Winter 2026	Name of the Faculty: Kiranbala Behera Email: kiranabalabehera5@gmail.com
Subject: Geotechnical Engineering Lab	No. of Days/week class: 04	Start Date: 01/07/2026 End Date: 05/11/2026

No. of Week	No. of Lab Classes	Topics to be Taught	Date of Delivery	
			G1	G2
1st	1st	Determine water content of given soil sample by oven drying method as per IS: 2720		
	2nd	Determine water content of given soil sample by oven drying method as per IS: 2720		
2nd	1st	Determine specific gravity of soil by pycnometer method as per IS 2720		
	2nd	Determine specific gravity of soil by pycnometer method as per IS 2720		
3rd	1st	Determine dry unit weight of soil in field by core cutter method as per IS 2720		
	2nd	Determine dry unit weight of soil in field by core cutter method as per IS 2720		
4th	1st	Determine dry unit weight of soil in field by core cutter method as per IS 2720		
	2nd	Determine dry unit weight of soil in field by sand replacement method as per IS 2720		
5th	1st	Determine dry unit weight of soil in field by sand replacement method as per IS 2720		
	2nd	Determine Plastic and Liquid Limit along with Plasticity Index of given soil sample as per IS 2720		
6th	1st	Determine Plastic and Liquid Limit along with Plasticity Index of given soil sample as per IS 2720		
	2nd	Determine Shrinkage limit of given soil sample as per IS		
7th	1st	Determine Shrinkage limit of given soil sample as per IS		
	2nd	Determine grain size distribution of given soil sample by mechanical sieve analysis as per IS2720		
8th	1st	Determine grain size distribution of given soil sample by mechanical sieve analysis as per IS2720		
	2nd	Use different types of soil to identify and classify soil by conducting field tests through Visual inspection, Dry strength test, Dilatancy test and Toughness test.		
9th	1st	Use different types of soil to identify and classify soil by conducting field tests through Visual inspection, Dry strength test, Dilatancy test and Toughness test.		
	2nd	Use different types of soil to identify and classify soil by		

K. Behera
11/11/22



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		conducting field tests through Visual inspection, Dry strength test, Dilatancy test and Toughness test.		
10th	1st	Determine coefficient of permeability by constant head test as per IS 2720		
	2nd	Determine coefficient of permeability by constant head test as per IS 2720		
11th	1st	Determine coefficient of permeability by falling head test as per IS 2720		
	2nd	Determine coefficient of permeability by falling head test as per IS 2720		
12th	1st	Determine shear strength of soil by direct shear test as per IS 2720		
	2nd	Determine shear strength of soil by direct shear test as per IS 2720		
13th	1st	Determine shear strength of soil by vane shear and triaxial shear test as per IS 2720		
	2nd	Determine shear strength of soil by vane shear and triaxial shear test as per IS 2720		
14th	1st	Determine MDD and OMC by standard proctor test and modified proctor test of given soil sample as per IS 2720		
	2nd	Determine MDD and OMC by standard proctor test and modified proctor test of given soil sample as per IS 2720		
15th	1st	Determination of CBR value on the field as per IS 2720		
	2nd	Determination of CBR value on the field as per IS 2720		

PREPARED BY

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11/6/26

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VERIFY BY HOD