

**LESSON PLAN OF CIVIL ENGG. LAB- 1 FOR THE SESSION 2024-25**  
**(WINTER-2024) BATCH-2023-26**  
**GOVT. POLYTECHNIC, KANDHIMAL, PHULABANI**

<b>Discipline:</b>	<b>Semester:</b>	<b>Name of the Teaching Faculty: Ashish Nayak, Lecturer in Civil Engineering</b>
civil engineering	3rd	
<b>Subject: CIVIL ENGINEERING LABORATORY-I (Pr-1)</b>	<b>No. of Days/per week class allotted:</b>	<b>Semester From Date: 01/07/2024 to Date: 18/11/2024</b>
		<b>No. of Weeks-15</b>
<b>Week</b>	<b>Class Day</b>	<b>Practical Topics</b>
		<b>I. Material Testing Laboratory:</b>
		<b>1. Test on Steel</b>
<b>1st</b>	<b>1st/2nd</b>	Determination of Young's Modulus of steel in a tensile testing machine.
		<b>2. Tests on Cement, Sands, Bricks, Blocks &amp; Aggregates</b>
<b>2nd</b>	<b>1st</b>	2.1 Determination of fineness of Cement by sieving.
	<b>2nd</b>	2.2 Determination of normal Consistency, initial and final setting time of Cement
<b>3rd</b>	<b>1st</b>	2.3 Determination of soundness of Cement by Le-Chatelier apparatus.
	<b>2nd</b>	2.4 Determination of Compressive Strength of cement.
<b>4th</b>	<b>1st</b>	2.5 Determination of Compressive Strength of Burnt clay, Fly Ash Bricks and Blocks
	<b>2nd</b>	2.6 Grading of Fine & Coarse aggregate by sieving for concrete .
<b>5th</b>	<b>1st</b>	2.7 Determination of Specific Gravity and Bulking of sand
	<b>2nd</b>	2.8 Determination of Specific Gravity and Bulk density of coarse aggregate
<b>6th</b>	<b>1st</b>	2.9 Grading of Road Aggregates
	<b>2nd</b>	2.10 Determination of Flakiness, Elongation of Road aggregates.
<b>7th</b>	<b>1st/2nd</b>	2.11 Determination of Crushing Value Test of aggregates.
<b>8th</b>	<b>1st/2nd</b>	2.12 Los-Angeles Abrasion Test of aggregate
<b>9th</b>	<b>1st/2nd</b>	2.13 Impact test of aggregate.

10th	1st/2nd	2.14 Determination of soundness test of road aggregates
		II. Concrete Laboratory
11th	1st/2nd	3.1 Determination of Compressive Strength of concrete cubes
12th	1st/2nd	3.2 Determination of Workability of concrete by:
		a) Slump Cone method,
13th	1st/2nd	b) Compaction Factor method.
14th	1st/2nd	3.3 Non Destructive tests on Concrete:
		a) Demonstration on Rebound hammer
15th	1 <sup>st</sup> /2nd	b) Ultrasonic Pulse Velocity measuring Instrument

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*[Signature]*  
 30/10/2024  
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