

Course Code	Course Name	L-T-P-Credits	Year of Introduction
CE331	MATERIAL TESTING LAB -II	0-0-3-1	2016

**Pre-requisite: CE204 Construction Technology**

**Course objectives:**

- To enable experimental evaluation of properties of the materials used for concrete
- To obtain the characteristics of the materials.

**List of Experiments:**

1. Determination of the Specific Gravity and Soundness of cement
2. Determination of the Standard Consistency, Initial and Final Setting Times of Cement and the compressive strength of Cement.
3. Tests on fine aggregate – specific gravity, bulking, sieve analysis, fineness modulus, moisture content, bulk density
4. Tests on coarse aggregate - specific gravity, sieve analysis, fineness modulus, bulk density.
5. Tests on Fresh Concrete: Workability : Slump, Vee-Bee, Compaction factor tests, flow test
6. Determination of the Compressive Strength of Concrete by Cube and Cylinder.
7. Carrying out the Split Tensile and Flexural strength of Concrete.
8. Compressive strength of Brick as per IS
9. Transverse strength of tiles
10. Demonstration of Mix Design of Concrete by IS methods
11. Non destructive tests (rebound hammer & ultrasonic pulse velocity)

**Books/Manuals /References:-**

1. Concrete Lab Manual, TTTI Chandigarh
2. M.L. Gambhir, Concrete Manual, Dhanpat Rai & Sons, Delhi.
3. M.S.Shetty, Concrete Technology, Theory and Practice, S.Chand& Company, 2014
4. Relevant latest IS codes on Aggregates, Cement & Concrete [269, 383, 2386, 10262(2009), SP23]

