



School of Planning and Architecture: Vijayawada
(An Institution of National Importance under the Ministry of Education, Govt. of India)
Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture

Course: MBEM116 - Construction Materials and Technology Lab **Class:** I Yr MBEM I Sem A.Y. 2026-27
Instructors: Dr. P. Siva Prasad **Internal Assessment:** 50
External Theory Exam: 50
Contact Periods/ week: 04 periods (55 min each) **Total Marks:** 100
Time Table: **Credits:** 4

Attendance: Min 75% **Min. Passing Marks:** 50% each in Internal & External Assessment, 50% in Aggregate

Objective: A thorough knowledge of material selection through the material testing based on specification.

Out Line of the Course:

LIST OF EXPERIMENTS

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK & ASSIGNMENTS / REMARKS
1	Week-1	Casting and Testing of Concrete Cubes	Demo and Experiment
2	Week-2	Casting and Testing of Concrete Cylinders	Demo and Experiment
3	Week-3	Tests on Cement	Demo and experiment
4	Week-4	Tests on Fine Aggregate and Tests on Coarse Aggregate	Demo and experiment
5	Week-5	Tests on Concrete	Demo and experiment
6	Week-6	Mix design of concrete as per IS Code	Demo and experiment
7	Week-7	Mid-Semester examination	Mid-semester examination
8	Week-8	Mix design of high-performance concrete as per IS Code.	Demo and experiment
9	Week-9	Flow Characteristics of Self Compacting concrete.	Demo and experiment
10	Week-10	Effect of minerals and chemical admixtures in concrete at fresh and hardened state with relevance to workability, strength and durability.	Demo and experiment
11	Week-11	NDT on hardened concrete - Ultra sonic Pulse Velocity Test- - Demonstration	Demo and experiment
12	Week-12	NDT on hardened concrete - Rebound Hammer Test	Demo and experiment
13	Week-13	NDT on hardened concrete - Core Extraction- - Demonstration	Demo and experiment
14	Week-14	Permeability tests on hardened concrete - Demonstration	Demo and experiment
15	Week-15	Flexural Test on Beams- Demonstration	Demo and experiment

S. No.	Stages of Evaluation	Weightage
1	First stage: Assessment -1	15
2	Second stage: Mid-semester Examination	20
3	Third stage: Assessment -3	15
	Total	50

Course Instructor:

sd/-

(Dr. P. Siva Prasad)

Head of Department :

sd/-