

**CN5211 ADVANCED CONSTRUCTION ENGINEERING AND COMPUTING
TECHNIQUES LABORATORY**

DETAILED SYLLABUS

(A) ADVANCED CONSTRUCTION ENGINEERING LABORATORY

OBJECTIVES

This course provides a thorough knowledge of material selection through the material testing based on specification.

LIST OF EXPERIMENTS

1. Mix design of concrete as per IS, ACI & BS methods for high performance concrete.
2. Flow Characteristics of Self Compacting concrete.
3. Effect of minerals and chemical admixtures in concrete at fresh and hardened state with relevance to workability, strength and durability.
4. NDT on hardened concrete - UPV, Rebound hammer and core test.
5. Permeability tests on hardened concrete – Demonstration

(B) ADVANCED COMPUTING TECHNIQUES LABORATORY

OBJECTIVES

This course gives an exposure to students in utilizing the sophisticated spread sheets programs, estimation software and other package programs.

LIST OF EXPERIMENTS

1. Quantity takeoff, Preparation and delivery of the bid or proposal of an engineering construction project.
2. Design of a simple equipment information system for a construction project.
3. Scheduling of a small construction project using Primavera scheduling systems including reports and tracking.
4. Scheduling of a small construction project using tools like MS project scheduling systems including reports and tracking.
5. Simulation models for project risk analysis.