

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
M E (Civil) CONSTRUCTION ENGINEERING AND MANAGEMENT  
**ADVANCED CIVIL ENGINEERING MATERIALS**

**Objectives :**

To give knowledge to students to select proper materials for desired performance, durability, minimum maintenance & repair for construction projects.

**Course content:**

**Classification, specification, properties, tests as per IS for various civil engineering materials**

Walling units, binding materials and additives, aggregates, gypsum products, wood base products, ferrous and non-ferrous metal products, concrete and its various varieties, fly-ash bricks.

Durability, mechanical, deformational behaviour and thermo physical properties for thermal insulation, sound insulation and damp prevention application materials, Adhesives and sealants.

Recent developments and market awareness regarding applications, varieties, sizes and specification for various materials.

**References :**

- (i) Materials of Construction by D.N. Ghose - Tata Mc Graw Hill
- (ii) Civil Engineering Materials by Jackson N. Ed. – ELBS, London.
- (iii) Material of Construction by S.Z. Haider - Oxford University Press
- (iv) Building Materials by BRE Digest - The Construction Press, London.
- (v) Building Materials and Components by CBRI - Tata Mc Graw Hill