



Department of Architecture

Course: 10110206: Building Materials & Construction-II	Class: I Yr. II Sem. B.Arch, 2017-18 A.Y
Instructors: M.Kranti kumar, G.Karteek, Mohan Vamsi, Ch.Karthik.	Internal Assessment: 50
External Theory I	External Theory Exam: 50
Contact Periods/ week: 05 Slots each of 50 min. per week; 2 (Theory) + 3 (Studio)	Total Marks: 100
Time Table:	Credits: 4
Attendance: Min 75%	Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

Objective: Focus on various building materials and construction techniques would be based on the performing standards and codes, wherein application of each material would be discussed in detail, both in the context of historical and contemporary methodology. With time, each topic can also focus on latest trends in practice and usage of new technology/materials. Emphasis is given on load bearing building construction.

Each material would be taught in a manner such that, its application would be discussed starting from foundation, lintel, sunshades, window/door openings, walling material, and floor & flooring and culminating at roof and parapet wall.

LECTURE PLAN

S. No.	Week	TOPIC OF CLASS LECTURE & DISCUSSION	CLASS ACTIVITIES & ASSIGNMENTS
1	Week 1	INTRODUCTION Importance of the Materials and Components to be discussed in the Semester Necessary drawing and drafting equipment, Stationery material Expectations and Learning outcomes UNIT-1: Brick Masonry: Types of bricks Uses of the Materials in Building Industry	Lecture + Observations Drawing Assignment-1 : Types of Bricks
2	Week 2	Brick Masonry: Manufacturing Process Types of Bonds	Lecture + Studio
3	Week 3	Brick Masonry: Types of Bonds Workshop on Brick Bonds	Lecture + Studio Drawing Assignment-2: Types of Brick Bonds (Header, Stretcher, English, Flemish, T-Junctions and Cross Junctions) Drg. Submission of Assignment -1
4	Week 4	Brick Masonry: Physical and Chemical properties	Lecture + Studio
5	Week 5	UNIT-2: Stone Masonry: Geological Classification of stones Types and availability of stones Types of Stone Masonry Uses of the Materials in Building Industry	Lecture + Studio Drg. Submission of Assignment -2
6	Week 6	TEST-1	Internal Assessment -1
7	Week 7	Stone Masonry: Properties and application Preservation of Stones	Lecture and Studio Drawing Assignment-3: Types of Stone Masonry

8	Week 8	UNIT-3: Foundations: Purpose of Foundation Types of Foundation Methods of Exploration Testing of soil	Lecture and Studio Drawing Assignment-4: Load bearing Foundations(Stone and Brick) Dr. Submission of Assignment -3
9	Week 9	Site Visit	
10	Week 10	UNIT-4: Cement Concrete: Specifications Types of Concrete Grades of Concrete Properties Equipment's Used Uses of the Materials in Building Industry	Lecture + Studio Dr. Submission of Assignment -4
11	Week 11	TEST - 2	Internal Assessment -2
12	Week 12	UNIT-5; Roofs and Roof Coverings: Characteristics of Roof Types of Roofs Materials used	Lecture + Studio Drawing Assignment-5: Types of Trusses
13	Week 13	Roofs and Roof Coverings: Types of Trusses	Lecture + Studio Dr. Submission of Assignment -5
14	Week 14	Review	
15	Week 15	TEST - 3	Internal Assessment -3
16	Week 16	Review	

Tentative break-up of Internal Assessment Marks:

S.No.	CATEGORIES OF EVALUATION	MARKS
1	Drawing Assignments^^ (1)	20
2	Test ##	30
	Total	50

Note: ## Appearing for Test-1,Test-2 and Test-3 is mandatory
^^ Drawing Assignments must be done in the Studio only

References:

- Barry, R. (1999). The Construction of Buildings Vol. 2. 5th Ed. New Delhi : East-West Press.
- Bindra, S.P. and Arora, S.P. (2000). Building Construction: Planning Techniques and Methods of Construction, 19th Ed. New Delhi : Dhanpat Rai Publications.
- Ching, F. D. K. (2000). Building Construction Illustrated. 3rd Ed. New York : Wiley.
- Edward, A. and Piano, J. (2009). Fundamentals of Building Construction: Materials and Methods. 5th Ed. Hoboken : John Wiley & Sons.
- Foster, J. S. (1963). Mitchell Building Construction: Elementary and Advanced. 17th Ed. London : B.T. Batsford Ltd.
- Hailey and Hancork, D. W. (1979). Brick Work and Associated Studies Vol.II. London : MacMillan.
- McKay, W. B. (2005). Building Construction Metric Vol. 1–IV, 4th Ed. Mumbai :Orient Longman.
- Moxley, R. (1961). Mitchell's Elementary Building Construction. London : B. T. Batsford.
- Rangwala, S. C. (1963). Building Construction: Materials and types of Construction, 3rd Ed. New York : John Wiley and Sons.
- Rangwala, S. (2004). Building Construction. 22nd Ed. Anand.: Charotar Pub. House.
- Sushil-Kumar, T. B. (2003). Building Construction, 19th Ed. Delhi : Standard Publishers.

sd/-
(M.Kranti kumar)

sd/-
(G.Karteek)

sd/-
(Mohan Vamsi)

sd/-
(Karthik.Ch)

sd/-
(Krishna Kumar)

Course Instructor:

Head of the Department: