

School of Planning and Architecture: Vijayawada

(An institution of National Importance under the Ministry of Human Resource Development, Govt. of India) S.No. 71/1, NH-5, Nidamanuru, Vijayawada – 521 104, Andhra Pradesh, India

| Department of Architecture | | | | | | |
|----------------------------|--|---|--|--|--|--|
| Course: | 10110406, Building Materials and Construction-IV | Class: IInd Yr B. Arch III Sem A.Y. 2017-18 | | | | |
| Instructors: | D. Srinivas, Yogesh J Parekh, Mitali Madhusmita, P Sitha Mahalakshmi | Internal Assessment: 50 External Theory Exam: 50 | | | | |
| Contact Perio | ds/ week: 05-per week; 2(Theory) +3(studio) | Total Marks: 100 | | | | |
| Time Table: | | Credits: 3 | | | | |
| Attendance: | Ain 75% Min. Passing Marks:50% each in Internal & Ext | ernal Assessment, 50% in Aggregate | | | | |
| Objective | | | | | | |

Objective:

To impart knowledge on various types of floors and flooring material, partitions and panelling, various surface finishes, various modes of vertical transportation. To equip students with the advances in the building construction methods and their applications.

Out Line of the Course:

Floors and Flooring Materials, Staircases, Partitions, panelling and false ceiling, Surface Finishes, Advanced building construction

LECTURE PLAN

| S. No. | Week | TOPIC OF CLASS LECTURE & DISCUSSION | CLASS ACTIVITIES & ASSIGNMENTS |
|--------|--------|---|---|
| 1 | Week 1 | Floors and Flooring Materials Introduction to types of floors.Factors affecting selection of flooring material Mud, brick, stone, | Drawing(s) on Flooring and Fixing Details: Jack-arch |
| 2 | Week 2 | Floors and Flooring Materials Various floor finishes and fixing details | Drawing(s) on Flooring and Fixing Details wooden flooring, timber floor supported on |
| 3 | Week 3 | Staircases Parts of Staircase and Definitions Types of staircases | Drawing(s) on: Types of staircase: Straight, Dog legged, Open Well & Bifurcated |
| 4 | Week 4 | Staircases Construction details & types of finishes | Drawing(s) on: Open Well & Bifurcated |
| 5 | Week 5 | Staircases Written Assignment | Drawing(s) on : Open well & Bifurcated Drawing(s) on : Circular and Spiral staircases with Details · ASSESSMENT-I (30%) · Portfolio submission-I |
| 6 | Week 6 | Partitions, panelling and false ceiling Introduction: Partitions and Panelling Types of Partitions | Drawing(s) on : Timber, Glass, Gypsum, Brick Partition |
| 7 | Week 7 | Partitions, panelling and false ceiling Types of Panelling | Drawing(s) on : Timber, Glass, Gypsum, Brick Panelling |
| 8 | Week 8 | Partitions, panelling and false ceiling | Drawing(s) on : Timber, Glass, Gypsum, Brick Panelling and false ceiling |
| | | Types of False Ceiling | |

| 9 | Week 9 | Workshop on Partitions, Panelling and False Ceiling | |
|----|---------|---|---|
| 10 | Week 10 | Surface Finishes | Presentations on market survey and details |
| 10 | Week TO | Smooth finishes, textured finishes,Ribbed, hitched, Exposed aggregate finish | |
| | | Surface Finishes | Presentations on market survey |
| 11 | Week 11 | Type of plastering, Method of plastering Constituents of and characteristics of paints • Written Assignment | ASSESSMENT-II (30%)- Portfolio submission-II |
| 10 | Week 12 | Surface Finishes | Presentations: Presentations on market |
| 12 | | Laminates and veneers, | survey and details |
| 13 | Week 13 | Site Visit | |
| | 1 | Advanced building construction | |
| 14 | Week 14 | Advanced building materials synthetic boards, acoustical materials, Aluminium composite panel, | Drawing(s) on : Modular Co-ordination and prefabrication |
| | | Advanced building construction | Drawing(s) on : escalators, travelators, lifts and ramps |
| 15 | Week 15 | Designing and construction details of types of escalators, travelators, lifts and ramps. | |
| | Week 16 | Final-class written Examination | ASSESSMENT-III (40%) · Submission of Final BMC portfolio · Site-visit Assignment of brief report with sketches & photographs |

| S.No. | Category of Evaluation | Marks | |
|-------|------------------------|-------|---|
| | | 15 | The Marks allotted at each stage is |
| 1 | Assessment – I: | | tentative. Categories of evaluation may |
| | | 15 | be increased or decreased (merged) on |
| 2 | Assessment – II: | | need-basis |
| | | 20 | |
| 3 | Assessment – III: | | |

Reference books:

1. Barry, R. (1999). The Construction of Buildings Vol.II. 5th Ed. New Delhi : East-West Press.

2. Bindra, S. P. and Arora, S. P. (2000). Building Construction: Planning Techniques and Methods of Construction, 19th Ed. New Delhi Dhanpat Rai Pub.

3. BIS and relevant IS codes.

4. Brookes, A. J. (1983). Cladding of Buildings. Longman Inc.

5. Ching, F. D. K. (2000). Building Construction Illustrated. 3rd Ed. Wiley. 6. Chudley, R. (2008). Building Construction Handbook. Noida : Elsevier.

6. Eldridge, H. J. (1976). Common Defects in Buildings. London : HMSO.

7. Emmit, S. and Gorse, C. A. (2006). Barry's Advanced Construction of Buildings. Blackwell Publications.

8. Emmit, S. and Gorse, C. A. (2006). Barry's Advanced Construction of Buildings. Blackwell Publications.

9. McKay, W. B. (2005). Building Construction Metric Vol.1–IV, 4th Ed. Mumbai : Orient Longman.

10. Meghashyam, K. K. (2005). Reinforced Concrete Constructions for 21st C. New Delhi: J. M. Jaina.

11. Punmia, B. C. (1993). Building materials and Construction. New Delhi : Lakshmi Publications. .

12. Rai, M. (1986). Advances in Building Materials and Construction. CSIR.

13. Rangwala, S. (2004). Building Construction. 22nd Ed. Anand : Charotar Pub. House.

14. Rangwala, S. C. (1963). Building Construction: Materials and types of Construction, 3rd Ed. New York : John Wiley and Sons.

15. Sushil-Kumar, T. B. (2003). Building Construction, 19th Ed. Delhi : Standard Pub. Distributors.