



## 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:** MACO125 - Historic Construction Systems & Material Conservation - Class: 1st Yr M. Arch IInd Sem A.Y. II 2023-24

**Instructors:** Ar. Sanjay Bhandari

**Contact Periods/ week:** 03 periods.(55 min each)

**Time Table:** Friday (9AM to 11:45 AM)

**Credits:** 3

**Attendance:** Min 75%

**Objective:** The objective of the course is the application of the theoretical understanding of historic building materials and structural systems performance to variations in different regional contexts in India.

**Out Line of the Course:** As an extension of the subject taught in the 1st semester, It will focus on historic building technologies from studio project site, structural behaviour of buildings, deterioration processes and conservation interventions.

#### LECTURE PLAN

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK& ASSIGNMENTS / REMARKS
1	05-01-2024	Introduction to traditional and historic building materials and construction vocabularies in different cultural regions of India. Lime, Timber, earth & terracotta	Lecture
2	12-01-2024	Identification of materials and structural building system typologies from studio project.	Lecture and Discussion
3	19-01-2024	Inspection, condition assessment and diagnosis of material and structural defects, Spatial and functional assessment of historic buildings.	Lecture and Discussion
4	02-02-2024	Identification of construction systems in study region prone to natural decay and other hazards.	Lecture, Discussion & Exercises - Assessment 1
5	09-02-2024	Rescue and conservation measures for distressed buildings.	<b>Documentation</b>
6	16-02-2024	Field Work - Building systems study and documentation	Lecture
7	23-02-2024	Various Methods of Retrofitting/ Mid term assessment	Lecture
8	01-03-2024	Strengthening and upgradation of heritage buildings for continued or adaptive reuse	<b>Mid-semester Assessment</b>

9	08-03-2024	Individual Case study selection of building system studies from studio exercise. Processing of data in lab collected during field survey	Lab & Discussion
10	15-03-2024	continued...	Lab & Discussion
11	22-03-2024	Study of individual building systems and materials from studio exercise.	Lecture, Discussion & Exercises
12	29-03-2024	Study of building systems and materials from studio exercise.	Lecture, Discussion & Exercises
13	05-04-2024	Preparation of conservation specifications, Laboratory testing of materials for material and structural analysis to support sensitive interventions.	Lecture
14	12-04-2024	Issue identification and Inspection report for identified building system.	Lecture and Discussion
15	19-04-2024	Building System study- Proposals	Lecture and Discussion
16		Final presentation and Review	Discussion & Exercises & Assessment 2

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

**Reference Books:**

1. Durbin, Lesley, Architectural Tiles: Conservation and Restoration from the Medieval Period to Twentieth Century, 2005
2. Kumar, Conservation of Building Stones, 2001
3. Daniels, Klaus, Low-tech, Light-tech and High-tech: Building in the Information Age, 2000
4. Donhead Shaftesbury, 1998 Cowper, Lime and Lime mortars
5. Forsyth, Michael, Material and Skills for Historic building Conservation, Blackwell Publishing, 2008

**Course Instructors:**

sd/-  
(Ar. Sanjay Bhandari)

**Head of Department:**

sd/-  
(Dr. Uma Sankar Basina )