



WES  
SMT. MANORAMABAI MUNDLE  
COLLEGE OF ARCHITECTURE

ARCHITECTURAL DESIGN  
WORKING DRAWING – III  
(INTERIOR DESIGN & DETAILING)  
APPROPRIATE BUILDING TECHNOLOGY  
SPECIFICATION  
HUMAN SETTLEMENT PLANNING  
BUILDING SERVICES - IV  
LANDSCAPE ARCHITECTURE II  
ELECTIVE VII - HOUSING  
ELECTIVE VII – ARCHITECTURAL  
CONSERVATION  
ELECTIVE VII – HIGHTECH  
ARCHITECTURE

# SEVENTH SEMESTER

ACADEMIC  
BOOKLET  
2023 - 2024

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## YEAR INCHARGE

Prof. Sneha Mandekar Tirale

## CLASS CO-ORDINATORS

Section A: Prof. Anuradha Bhute  
Section B: Prof. Samruddhi Amte  
Section C: Prof. Poornima Deshpande

## 7<sup>th</sup> semester team -

### Architectural Design VII + Allied Design Studio-VII

#### Subject Teachers –

Section A – Dr. Neeta Lambe, Ar. Anuradha Bhute, Ar. Sneha Mandekar  
Section B – Dr. Sujata Godbole, Ar. Samruddhi Amte, Ar. Renuka Chutke  
Section C – Ar. Rashmi Tijare, Ar. Poornima Deshpande, Ar. Isha Pawar

### Appropriate Building Technology

**Subject Teachers –** Ar. Rashmi Tijare, Dr. Seema Burele

### Working Drawing -III (Interior Design & Detailing)

**Subject Teachers –** Ar. Sanjivani Mohgaonkar, Ar. Anuradha Bhute, Ar. Mrinmayee Tiwari,  
Ar. Namrata Gaurkhede, Ar. Piyusha Rathod

### Specification

**Subject Teachers –** Ar. Poornima Deshpande, Ar. Sneha Mandekar

### Human Settlement Planning

**Subject Teachers –** Dr. Sujata Godbole, Ar. Isha Pawar

### Building Services – IV

**Subject Teachers –** Ar. Rashmi Tijare, Ar. Anuradha Bhute

### Landscape Architecture II

**Subject Teachers –** Ar. Sneha Mandekar, Ar. Poornima Deshpande

## Elective VII

- Architectural Conservation – Dr. Neeta Lambe, Ar. Tanvi Burghate
- Housing – Ar. Poornima Deshpande, Ar. Samruddhi Amte
- High Tech Architecture – Dr. Sujata Godbole, Ar. Isha Pawar

## **SMMCA:Vision**

Our vision is to reach global standards by deliberate modernization without losing the essential characteristics of our tradition. Being a women's college, we find it more pertinent to imbibe both these qualities very consciously in our girl students.

We wish to produce socially responsible architects with sensitivity towards social issues of immediate contexts, national concerns and global effects and positive and creative approach towards life.

## **Mission**

To create an educational environment in which students are prepared to meet the challenges of a fast developing and changing world.

Hence the students are equipped with:

- Up to date knowledge
- Analytical and practical skills
- Creative approach towards everything that they undertake
- Attitude to be sensitive towards national, social and environmental issues

While addressing the global challenges we believe strongly in anchoring ourselves to the immediate context. We accept gratefully our role in preserving and enhancing Vidarbha and Nagpur- the place, its people and architecture.

## **Core Values**

- Integrity
- Creativity
- Innovation
- Discovery
- Collaboration
- Respect
- Discipline
- Excellence
- Diversity

## **Objectives**

- To develop among students academic and Professional competency.
- To foster value-based, creative and critical learning
- To hone skills of living in a technological, globalized and ecologically aware environment
- To develop culture of commitment to excellence

## **Code of Conduct**

**Punctuality-** It is mandatory for students to be punctual in the college and shall have to be present every day at 8.45 a.m. Every student is expected to attend the morning assembly. Attendance of the students will be taken at the time of assembly by respective class coordinators.

The attendance will also be taken at the beginning of the classes in the afternoon after lunch break. The record of attendance shall be displayed at the end of each month for students. Every student is expected to go through the displayed attendance and request rectification of the record within 8 days by talking to the class teacher if her attendance has been wrongly recorded.

In case of absence, student shall bring a letter of absence duly signed by her parents/guardian. However, a student having less than 75% attendance will face disciplinary action and will not be permitted to appear for University Examination.

**Dress Code** – Salwar suit/ Jeans /Leggings with long Kurti.

**Extracurricular activities-** Credits are allotted to each activity and students are required to attend the activities to earn these credits.

Every student has to attend the programmes organized by the college from time to time.

Attendance for programme of 26<sup>th</sup> January and of 15<sup>th</sup> August is mandatory for every student and the dress code a white Salwar Suits/Leggings with Long Kurti.

Study tours- Every year study tours are arranged for students of different years as per their curriculum requirements. Active participation in Study Tour is necessary.

### **Academic Performance**

Submission schedule of all the subjects of a semester will be displayed at the beginning of the session. Students must follow the submission schedules given by respective subject teachers. No late submissions will be accepted after the scheduled date.

### **Midterm assessment**

A midterm assessment will be conducted to assess the progress of a student. It is mandatory for all the students to appear for this assessment.

### **Student Council**

The Student Council will be formulated for the main purpose of empowering the students. Having a formal setup of a Student Council enables students to organize and conduct certain activities, coordinate publications like 'Her Space', and properly convey any concerns students may have to the college administration and teaching faculty.

The student council also takes the lead in organizing and coordinating many events in the academic year– like daily assembly, Republic Day and Independence Day celebrations, NASA, Teachers Day, Archiventure, Women's Day celebration and all other major events conducted by the college. The structure of the council is such that students from all years find representation in it. The team is headed by fourth year students with representative from first, second and third year. Third year students take over the reins when fourth year students go for their training in the 8th semester. Final year students act as mentors to the council.

The organization set up for student council will comprise of –

President

Vice-president

Treasurer

Design Heads

Activity Heads

Cultural Heads

Editorial Heads

In addition, there are Class Representatives from first and second year – one representative from each of the three sections in a year.

**Scheme of Examination**  
Fourth Year B. Arch Semester 7

SCHEME OF EXAMINATION – B.Arch. FOURTH YEAR B.ARCH. Semester – 7																	
Sr. No.	Sub. Code	Sub. Name	Category	Board	Load Per Week			Credits			Duration In Hours	Max. Marks	Total Marks	Min. Pass Marks			
					L/D	T	S	P	Total	L					T	S	P
1	7S-A-1	Architectural Design VII			1	0	4	0	5	1	0	6	0	7	150	250	75
2	7S-A-2	Allied Design Studio-VII			1	0	2	0	3	1	0	3	0	4	100	100	50
3	7S-A-3	Appropriate Building Technology			1	0	2	0	3	1	0	3	0	4	60	100	50
4	7S-A-4	Working Drawing -III (Interior Design & Detailing)			2	0	0	2	4	2	0	0	1	3	50	100	25
5	7S-A-5	Specification			2	1	0	0	3	2	0.5	0	0	2.5	50	100	50
6	7S-A-6	Human Settlement Planning			2	1	0	0	3	2	0.5	0	0	2.5	60	100	50
7	7S-A-7	Building Surveys - IV			2	1	0	0	3	2	0.5	0	0	2.5	60	100	50
8	7S-A-8	Landscape Architecture II			2	1	0	0	3	2	0.5	0	0	2.5	100	100	50
9	7S-A-9	Elective VII			1	2	0	0	3	1	1	0	0	2	50	50	25
<b>Total</b>									<b>30</b>					<b>30.0</b>	<b>1000</b>	<b>1000</b>	

Elective VII | High Rise Buildings / Architectural Conservation / Housing / Industrial Architecture / Hightech Architecture / Institutional Project 7

**Total Papers – 3 , Sessional – 3, Viva-Voce – 3 (Passing Heads – 9)**

**Electives – High Rise Buildings / Architectural Conversation / Housing / Industrial Architecture / High tech Architecture / Institutional Project 7**

# **TEACHING PLANS**

## **ARCHITECTURAL DESIGN VII - (150 marks)**

Design Co-ordinator - Ar. Sneha Mandekar

Teachers In charge –

Section A – Dr. Neeta Lambe, Ar. Anuradha Bhute, Ar. Sneha Mandekar

Section B – Dr. Sujata Godbole, Ar. Samruddhi Amte, Ar. Renuka Chutke

Section C – Ar. Rashmi Tijare, Ar. Poornima Deshpande, Ar. Isha Pawar

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### **Course Outcomes -**

**CO1:** To understand the importance of multispecialty hospital and analyze the significance through precedent / case studies.

**CO2:** To collect, critically understand the standards and related data required for designing the hospital.

**CO3:** Understanding of the overall developmental/ design issues, and examine the challenges and logical design solutions through presentation.

**CO4:** To make students understand the other aspects of human nature associated with hospital design like psychological, social and emotional aspects.

**CO5:** To examine the ideas, values and expressions of various spaces attached in a hospital

**CO6:** To bring positive attention to a project and help promote and contribute to corporate/institutional identity.

**CO7:** To cultivate lateral thinking in terms if designprojects while encouraging creative outputs.

### **Major Design Problem –** **Multi-speciality Hospital @ Wadi, Amravati Road, Nagpur**

Duration: 5 - 6 WEEKS

#### **INTRODUCTION:**

*“A hospital is a living organism, made up of many different parts, having different functions, but all must be in due proportion and relation to each other and to the environment to produce desired result.” – Dr. S. Billings*

Modern hospitals buildings are designed to minimize the effort of medical personnel and the possibility of contamination while maximizing the efficiency of the whole system. Hospital architecture is not just providing the right facilities for the patients but also focusing on the right kind of environment which could really enhance the healing process of the patients. Throughout the rush to design health care facilities, basic concerns such as ecological, social, mental and spiritual and happiness are often ignored.

The building and design of hospitals are very complex, taking into account how to ensure that there is a symbiotic relationship between all departments. Doctors shares administrative staffs, records, equipment, patients in a hospital, so the design should ensure easy flow of traffic and communication and for that one needs to plan a good Hospital architecture and design.

A multi-speciality hospital is a hospital where there are various specialities of doctors, and hospital staffs working together. Such hospitals are designed to cater to all the needs of patients, as you can find almost all departments relating to health field in this building and plan a good hospital design.

Such hospital will have lots of traffic, it will be big enough to accommodate both in patients and out patients. With spacious entry and exits for safety and security purposes, taken into consideration in planning the building even if it is a small hospital in design.

Amenities provided by hospitals these days are apart from main activities of super speciality department:

- Environmental services should be catered at priority
- Restful, peaceful atmosphere for recuperating patients
- Patient friendly environment
- Dust free and hygienic spaces
- Rest areas / waiting areas for all types of user group
- Psychological and emotional healing conducive environment
- Basic amenities for user group
- Large, spacious waiting rooms
- Wireless communications and Internet access

**Aim:**

To understand and design the complexities involved in Hospital design in terms of circulation & services.

**Learning Objectives :**

- To learn and understand the complexities and technicalities of specialized hospital spaces and its services.
- To appreciate the constraints and opportunities in the design of specialized buildings as regards to function, form and its immediate environment.
- To get acquainted of rules and regulations applicable in the city for hospital building typology and all related services like staircases, lifts, fire escape staircase, ducts, shafts, service floors, toilets, HVAC, automation systems, electrical, plumbing, medical services etc.
- To make students understand the other aspects of human nature associated with hospital design like psychological, social and emotional aspects.
- To examine the ideas, values and expressions of various spaces attached in a hospital.

**DESIGN:**

This semester shall address and deal with more challenging and complex Hospital design issues, for understanding the approach involved in addressing them to evolve a **humane environment** for hospitals. The two specialities identified for the hospital will cater by individual student are as follows

- Orthopedic or Cardiology
- Gynecology & Pediatrics

**Architectural challenges are as follows:**

- Universal Design approach
- Activities and space required
- Circulation and seamless connectivity on each level in building to augment the anticipated built-up
- Zoning of the activities on site and horizontal and vertical zoning
- Parking allotted for the visitors & staff
- Building services of the hospital like staircases, lifts, fire escape staircase, ducts, shafts, service floors, toilets, HVAC, automation systems, electrical, plumbing, medical services etc.



Basic Design Programme is as follows. But if any students wants to add any special requirement, they are free to do so.

**DESIGN PROGRAM - MULTISPECIALITY HOSPITAL**

Sr. No.	Name of the Activity area	Number	Area (sq.m)
1	<b>Entrance foyer</b>		
	# Reception / Registration counter	1	20 - 25 sq.m.
	# Waiting lounge	1	20 - 30 sq.m.
	# Common toilets	1 (1 - SA, 2 - F, 2 - M)	20 sq.m.
	# Record Room	1	15-20 sq.m.
	# Storage area, Space for wheelchair & stretchers	1	10 sq.m.
		SA - Specially abled	
		<b>Area</b>	<b>100 - 110 sq.m.</b>
2	<b>Pharmacy</b>	1	<b>80 - 100 sq.m.</b>
3	<b>Outpatient Department (OPD)</b>		
	# File counter	1	10 - 12 sq.m.
	# Waiting lounge	1	100 - 150 sq.m. ( Each consultation room will have waiting area in front - 10 sq.m.)
	# Counsultation rooms with toilet		
	a) Gynecologist	2	12 x 2 = 24 sq.m.
	b) Pediatric	2	12 x 2 = 24 sq.m.
	c) Cardiology / Orthopedic (Plaster room)	2	12 x 2 = 24 sq.m.
	d) Neurologist	1	10 sq.m.
	e) Dietician	1	12 - 15sq.m.
	f) Physio therapist	1	10 - 12 sq.m.
f) Physio therapist	2	10 -12 sq.m. x 2	
g) General cousteller	1	10 -12 sq.m.	
	Total 11 rooms		
	Toilet		20 - 30 sq.m.
		<b>Area</b>	<b>340 - 350 sq.m.</b>
4	<b>Inpatient Department (IPD - 55 beds)</b>		
	# IPD incharge cabin + toilet	1	10 sq.m.
	# Nurse station	3 - 4	10 sq.m. per station = 30 sq.m.
	# Single room (with toilet)	15 nos.	15 sq.m. x 20 = 300 sq.m.
	# Double room (with toilet)	10 nos	10 x 30 sq.m. = 300 sq.m.
	# Delux room (with toilet & waiting)	8 nos.	8 x 30 sq.m. = 240 sq.m.
	# General ward (with toilet)	<u>6 bedded x 2 rooms</u>	40 - 50sq.m. x 2 = 100 sq.m.
		Total beds = 55 nos.	
	# Staff toilet		20 - 30 sq.m.
	# Store (linen)		10 - 12 sq.m.
	# Record maintenance room		10 - 12 sq.m.
	# Sanitary room		10 sq.m.
	# Utility room		5 sq.m.
	# Pantry area		5 sq.m.
# Janitor closet		5 sq.m.	
# Visitor's lounge		25 - 30 sq.m.	
# Doctor's lounge		15 - 20 sq.m	
# (Nurse incharge cabin + toilet)		12 sq.m.	
		<b>Area</b>	<b>1100 - 1200 sq.m.</b>

5	<b>Intensive Care Unit (ICU)</b> # Nurse Station + toilet # Doctor's station + toilet # Toilet # ICU # Staff change # Dirty utility # Waiting lounge outside lounge	10 nos beds 2 nos. (M/F)	15 - 20 sq.m. 15 - 20 sq.m. 10 sq.m. 180 -200 sq.m. 5 sq.m. x 2 = 10 sq.m. 5 sq.m. 20 - 25 sq.m.
		<b>Area</b>	<b>280 - 300 sq.m.</b>
6	<b>Intensive Critical Care Unit (ICCU)</b> # Nurse Station + toilet # Doctor's station + toilet # Toilet # ICU # Staff change # Dirty utility # Waiting lounge outside lounge	10 nos beds 2 nos. (M/F)	15 - 20 sq.m. 15 - 20 sq.m. 10 sq.m. 180 -200 sq.m. 5 sq.m. x 2 = 10 sq.m. 5 sq.m. 20 - 25 sq.m.
		<b>Area</b>	<b>280 - 300 sq.m.</b>
		<b>NICU</b>	
7	Special care Unit Nurse station + Toilet Doctor's room + toilet Store room Washing, Drying & Autoclave room (3 divisions for 3 different functions) Room for breast feeding & learning mother craft		80 - 100 sq.m. 15 - 20 sq.m. 15 - 20 sq.m. 5 - 6 sq.m. 50 sq.m. 5 - 6 sq.m.
		<b>Area</b>	<b>150 - 200 sq.m.</b>
A	<b>Emergency / Casualty</b> # Reception # Nurse Station # ECG Room # Pantry # Emergency lab # Medico - legal specimen record # Mobile X-Ray # Dirty utility # Trolley park # Store		150 sq.m.
B	<b>IPD (Casualty)</b> Janitor room Waiting area Social worker room Dry dispenser Examination room Emergency Bed Observation Room Patient convenience	3 bed 3 bed	150 sq.m.
C	<b>Minor OT (Casualty)</b> Scrub area Instrumental sterilization Anaesthetic Plaster room Treatment Room Doctors Lounge Nurses Room Ward Boys Room Ambulance Area		120 -130 sq.m. 60
		<b>TOTAL</b>	<b>480 - 500 sq.m.</b>

<b>Operation Theatre</b>			
9	Waiting Area	1	25
	Unsterilized Lobby	1	25
	Doctors Changing Room	1	10
	Equipment Area	1	10
	Scrub Area	1	10
	Sterlization Room	1	10
	Operation Theatre	3	150
	Dirty Utility Area	1	5
	Doctors Rest Room + Toilet	1	15
	Labour Room with toilet	1	15
	Pre-anesthesia Area	1	10
	Preparation Area	1	10
	Dirty Utility Corridor		
<b>TOTAL</b>			<b>290 -300 sq.m.</b>
<b>Diagnostic Centre</b>			
10 A	Reception		10
	Waiting Room		40
	Record Room		10
	<b>TOTAL</b>		<b>60</b>
<b>General X-ray</b>			
10 B	Radiography Room		40
	Control Room		10
	Changing Room		5
	Sub Waiting Room		10
	<b>TOTAL</b>		<b>65</b>
<b>Ultra Sound Room</b>			
10 C	Changing Room		5
	Sub - Waiting Room		5
	Ultra Sound Room		25
	Dark Room		10
	Film Chemical Store		25
	Report Archives		15
<b>TOTAL</b>		<b>85</b>	
<b>Staff Area</b>			
10 D	Consultants		20
	Residents		10
	Technicians		10
	Staff Area		10
	<b>TOTAL</b>		<b>50</b>
<b>Pathology</b>			
10 E	Reception		15
	Sample and preparation		15
	Sub - Waiting		15
	Patient Toilet		5
	Immunology Pathalogy		20
	Histology		20
	Cytology		20
	Washing and disinfecting		10

	Chemical and Glassware Store		25
	Pathologist Cabin		15
	Technician Cabin		15
	Staff Toilet		5
	<b>TOTAL</b>		<b>180</b>

	<b>Cath Lab (any if opted for Cardiology)</b>		
11	Procedure Room		80
	Control Area		20
	Patient Holding Area		10
	Monitor Room		10
	Recovery Room		10
	Physician Changing Area + Toilet		10
	<b>TOTAL</b>		<b>140</b>

12	Physiotherapy Unit		120
13	Canteen		100
14	Hospital Kitchen		160
15	Childrens Play Area		100
16	General Laundry		100
17	Mortuary		80
	<b>TOTAL</b>		<b>660</b>

	<b>Administration</b>		
18	Directors Cabin + Toilet	70	
	Waiting Area		
	General Waiting		
	Nursing Admin Head Cabin + Toilet		
	Waiting Area		
	Staff Area		
	<b>General Administration</b>		
	Personal Office	90	
	Staff area		
	Accounts Office Cabin + Toilet		
	Staff ARea		
	Purchase Office		
	Secretarial staff		
	Staff Toilet	250	
	Meeting Area		
	Lunch Room		
	Server Room		
	Security		
	Library Room		
	Housekeeping Head		
Staff Area			
Medical Record Room			
Computer Room (BMS)			
	<b>Total Area</b>		<b>401 - 410</b>

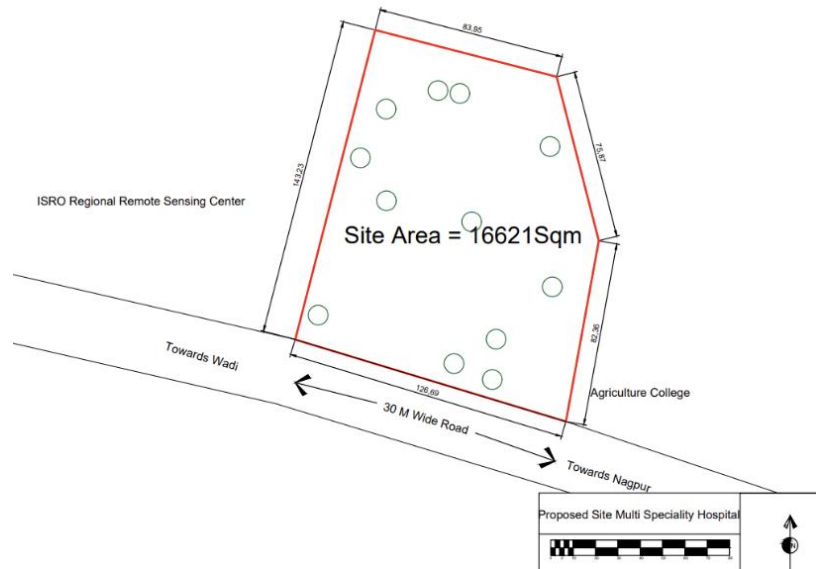
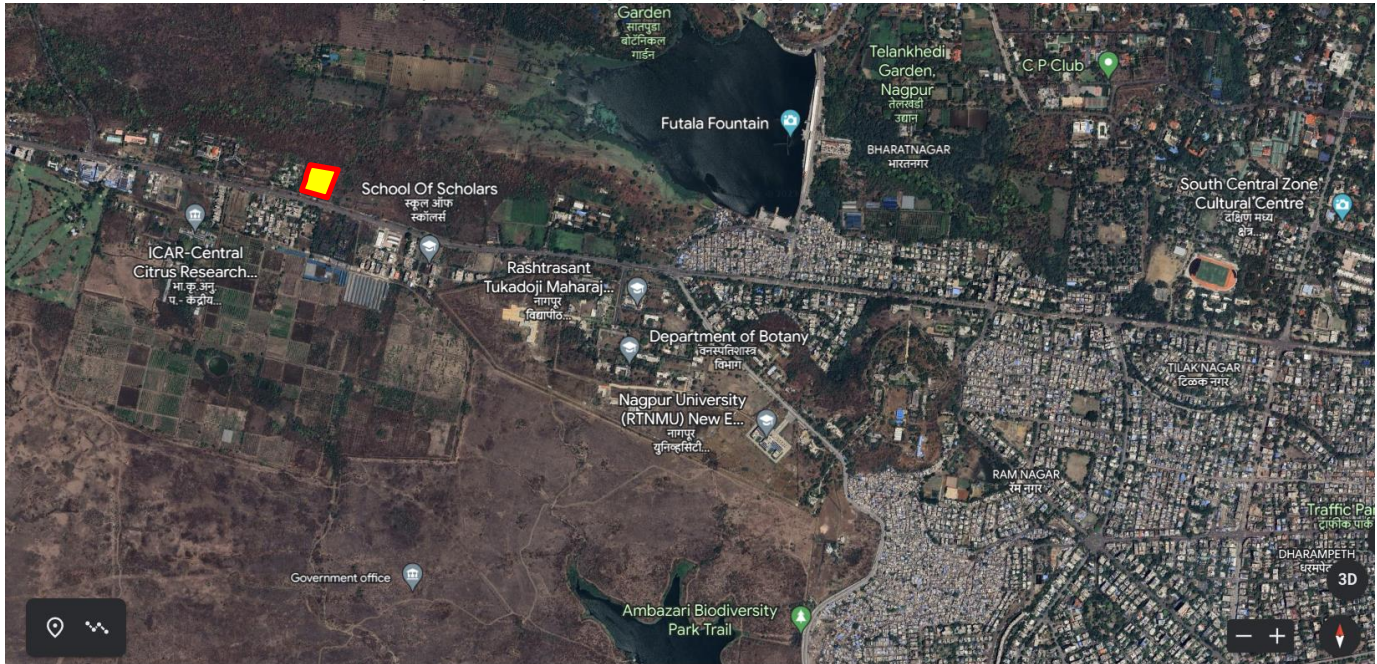
	Grand Total Area	4700
	Circulation 40%	1880
		6580
	<b>Approx. proposed B/U Area</b>	<b>7000 sq.m.</b>
	<b>Total Site Area</b>	<b>4 acre</b>
	<b>Total Site Area building footprint</b>	<b>2000 - 2300 sq.m.</b>

### Studio Modalities:

Stages	Date	Description	Expected Output
I	28-06-23	Introduction of Design brief - Designing multi-speciality Hospital	Critically understanding the aim and objectives of the design problem
	03-07-23	Guest lecture by Ar. Sanjivani Mohgaonkar on design consideration and circulation	Comprehend the circulation of hospital
	05-07-23	Data collection on standards - NABH, NBC, Bombay Nursing Act, District Hospital etc	Understand and prepare A1 sheet. Content should be graphically presented
	07-07-23	Guest lecture by Ar. Harshal Thomare on parameters required for designing Hospital	
	10-07-23	<b>Review 1 - Data collection (50 marks - 2-3 A1 sheets)</b>	
II	12-07-23	Discussion on Case Study selected by individual students	One case study in detail of each speciality (1 no)
	14-07-23	<b>Review 2 - Case Study Analysis</b>	
III	17-07-23	Design program & site analysis discussion in studio	Sheets of design programme, schematic flowchart with quality and quantity of spaces
	19-07-23		
	21-07-23	<b>Review 3 - Identified schematic approach for design, design program &amp; site analysis</b>	
IV	24-07-23	Discussion on design (Site visit can be in between)	Sheets of site plan, floor plans
	26-07-23		
	28-07-23		
	31-07-23	<b>Review 4 – External viva - Site and Building Zoning - Vertical &amp; Horizontal, Schematic Ground floor plan</b>	
V	02-08-23	Discussion on design	Sheets of site plan, floor plans
	04-08-23		
	07-08-23		
	09-08-23	<b>Guest Lecture on services at various levels</b>	
	11-08-23	Discussion on services incorporated in all floor plans	Sheets of site plan, floor plans including all services
	18-08-23		
	09-08-23		
	21-08-23	<b>Review 5 - All floor plans</b>	
23-08-23			
VI	25-08-23	Discussion on sections, elevations, construction techniques etc. details needed	Sheets having all sections – horizontal and vertical
	28-08-23		
	04-09-23	<b>Review 6 - All sections and elevation, views &amp; services</b>	
VII	15-09-23	<b>Pre final submission at 9.30 am – External Viva</b>	
VIII	22-09-23	<b>Final submission</b>	

**Site Location –**

Site Area for detailed site layout – 4 acre (16621 sq.m.)



**Project II - Short Project (IIA + Vertical studio)**

**15<sup>th</sup> SA Deshpande Trophy, Conducted by IIA, Nagpur Chapter**

Brief to be given by IIA Nagpur Chapter, along with the deadlines. Submission in the form of sheets.

Vertical studio being an inhouse college competition, brief to be given by the studio coordinator, along with deadlines.

## APPROPRIATE BUILDING TECHNOLOGY

Teacher In-charge –Dr.Seema Burele & Ar. Rashmi Tijare

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The objective of this course is to instill the knowledge of alternate thought process dealt with People, Place and Time. The various appropriate materials and techniques evolved in traditional and modern time having environmental and cost concern with its concept and design criteria. They evolved through situation analysis by traditions, individuals and agencies; will help serve society demanding more conscious efforts in conservation of energy.

**CO1:** To understand the concept of appropriate technology, its relevance in present day context, scope, Methods and criteria for situation analysis leading to decision making for the choice of the technique.

**CO2:** To understand Soil as building material, Sampling Technique, Stabilization of Soil, Various Field and Lab test. Various techniques for foundation as Inverted Arch Foundation, Inverted Saucer Foundation along with marshy and flood prone areas.

**CO3:** To study the soil Walling techniques such as Cob wall, Wattle and Daub, Adobe wall, Rammed Earth wall, Wardha Block wall, Compressed Stabilized Earth block masonry, Pre-cast Stone Block wall, Skew brick masonry, Brick masonry using Joshi Bond, Swastik Bond. Water proofing techniques and methods for soil walls.

**CO4:** To study the Brick floor, Terracotta tile floor, Roofing techniques such as Filler Slab roof, Nubian Vault, Ferro cement vaults, Guna tile vault, RCC Joist Brick panel roofing, etc.

**CO5:** To study Bamboo as building material with elements like Columns, Trusses, Girders and other applications. Openings such as Frameless doors and windows, Brick and Jallies in Terracotta blocks, Boards and panels using agriculture waste, Bamboo Ply etc.

**CO6:** To study Services such as Bio-gas plant, Solar water heater, Solar PV panels and concept of net metering, Roof top rain water harvesting technique, Spill water recycling technique, Compost latrines, Kitchen platform for Indian cooking, Garbage recycling such as Vermi compost manure (4 pit).

SrNo	Duration	Objective for each topic/ content	Teachers input	Expected output
1	6th July 2023	<b>Unit I:</b> <ul style="list-style-type: none"><li>Understanding the concept of appropriate technology, its relevance in present day context, scope etc.</li><li>Methods and criteria for situation analysis leading to decision making for the choice of the technique.</li></ul>	Lectures and discussions	

2	<b>13<sup>th</sup> July 2023, 3<sup>rd</sup> Aug 2023</b>	<b>Unit II:</b> <ul style="list-style-type: none"> <li>• Soil as building material, Sampling Technique, Stabilization of Soil, Various</li> <li>• Field and Lab test. Various techniques for foundation as Inverted Arch Foundation,</li> <li>• Inverted Saucer Foundation along with marshy and flood prone areas.</li> </ul>	Lectures and ppts	Tutorial
3	<b>10<sup>th</sup> August 2023</b>	<b>Unit III:</b> <ul style="list-style-type: none"> <li>• Walling techniques such as Cob wall, Wattle and Daub, Adobe wall,</li> <li>• Rammed Earth wall, Wardha Block wall, Compressed Stabilized Earth block</li> <li>• masonry, Pre-cast Stone Block wall, Skew brick masonry, Brick masonry using Joshi</li> <li>• Bond, Swastik Bond. Water proofing techniques and methods for soil walls.</li> </ul>	Lectures and ppts	
4	<b>17<sup>th</sup>, 24 August 2023</b>	<b>Unit IV:</b> <ul style="list-style-type: none"> <li>• Brick floor, Terracotta tile floor, Roofing techniques such as Filler Slab roof,</li> <li>• Nubian Vault, Ferro cement vaults, Guna tile vault, RCC Joist Brick panel roofing, etc.</li> </ul>	Lectures and ppts.	
5	<b>31<sup>st</sup> August and 14<sup>th</sup>, 21 Sep 2023</b>	<b>Unit V:</b> <ul style="list-style-type: none"> <li>• Bamboo as building material with elements like Columns, Trusses, Girders and other applications</li> <li>• Openings such as Frameless doors and windows, Brick and</li> <li>• Jallies in Terracotta blocks, Boards and panels using agriculture waste, Bamboo Ply etc.</li> </ul>	Lectures and ppts.	Sketch book
6	<b>28<sup>th</sup> Sep 2023</b>	<b>Unit VI:</b> <ul style="list-style-type: none"> <li>• Services such as Bio-gas plant, Solar water heater, Solar PV panels and concept of net metering</li> <li>• Roof top rain water harvesting technique, Spill water recycling technique, Compost latrines, Kitchen platform for Indian cooking.</li> <li>• Garbage recycling such as Vermi compost manure (4 pit).</li> </ul>	Lectures and ppts.	
7	<b>5<sup>th</sup> Oct 2023</b>	<ul style="list-style-type: none"> <li>• Visit to Building center engaged in research and development of appropriate technology. (CSV Wardha)</li> </ul>	Site visit	Report



Evaluation Scheme –

<b>Attendance</b>	<b>Sessional exam (CO1, CO2 &amp; CO3)</b>	<b>Assignment 1 (CO4 &amp; CO 5)</b>	<b>Assignment 2 (CO6)</b>	<b>Total</b>
10	10	10	10	<b>40</b>

**References:**

- CBRI, Roorkee Publications and Handbook.
- HUDCO Building Center manual and Publications.
- Publications of Center of Science for Villages such as „Building Dreams in Mud“.
- “Venu Bharti” by Ar. Vinoo Kaley, Nagpur and Articles by Ar. Ashok Joshi, Nagpur.
- Publication of Auroville Building Center, Pondicherry.
- Publications and manual of Laurie Baker Center, N. Delhi.
- Handbook and Publication of Bamboo Mission of India.

## WORKING DRAWING III (Interior Design & Detailing)

**Teacher In-charge** –Ar. Sanjivanl Mohgaonkar, Ar. Anuradha Bhute, Ar. Mrinmayee Tiwari, Ar. Namrata Gaurkhede, Ar. Piyusha Rathod

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**Objectives:** To study the Interior Design principles and their applications in interiors and to foster creative ability and inculcate skills to understand and conceive architectural design.

**Unit I:** Working Drawing (Interior Design): In continuation of previous semester, students shall be required to produce detailed working drawing

( Plans, Elevations and Furniture details) of all the major furnishing items proposed along with specification.

**Unit II:** Graphical Presentation: To produce business graphics, multimedia presentations of the previous semester project.

CO1: To apply the principles of space planning, circulation, furniture layout and anthropometrics of 2BHK residence.

CO2: To conduct a case study of 2BHK and demonstrate the principles of space planning, circulation, furniture layout and furniture details.

CO3: To document the current trends and materials through market survey.

CO4: To design and develop detailed workings drawing of the residence including furniture, ceiling and wall finishes.

CO5: To represent the designed space by views and walkthroughs.

Unit	Objective	Input	Expected output
Unit I: Working Drawing (Interior Design): In continuation of previous semester, students shall be required to produce detailed working drawing (Plans, Elevations and Furniture details) of all the major furnishing items proposed along	To apply the principles of space planning, circulation, furniture layout and anthropometrics of 2BHK residence.	Discussions and Demonstration in class	Design a 2BHK residence with all the principles in A1 sheet Submission 1: Plan of 2BHK (Group Task)

with specification.			
	To conduct a case study of 2BHK and demonstrate the principles of space planning, circulation, furniture layout and furniture details.	Discussions and Demonstration in class	Documentation of Case Study of 2BHK in A1 sheet Submission 2: Sheets of case study (Group Task) 1. Furniture Details as per requirements of clients 2. Circulation Study 3. Anthropometrics study
	To document the current trends and materials through market survey.	Discussions in class	Submission 3: Market Survey of furniture, material, cost, wall finishes, lights etc. (Group Task)
	To design and develop detailed workings drawing of the residence including furniture, ceiling and wall finishes.	Demonstrations and Discussions in class Bed (PR), Wardrobe (SM), Sofa (NTG), Table (MT), TV Unit & Showcase (AB), Lighting & False Ceiling	Submission 4: Detailed drawings in the form of plans at various levels, sections, elevations of the selected room (Individual Task)
<b>Unit II:</b> Graphical Presentation: To produce business graphics, multimedia presentations of the previous semester project.	To represent the designed space by views and walkthroughs.	Demonstrations and Discussions in class	Submission 5: Views and Walkthroughs of one room from entrance (Group Task)

## Schedule

<b>Submission of Plan in group in A3 Sheet</b>	<b>17<sup>th</sup> July 2023</b>
<b>Submission of Market Survey in A3 Sheets</b>	<b>18<sup>th</sup> July 2023</b>
Input on all Furniture by teachers	17 <sup>th</sup> & 18 <sup>th</sup> July 2023
Discussion	24 <sup>th</sup> July 2023
<b>Final Plan Submission</b>	<b>25<sup>th</sup> July 2023</b>
Input on all Interior Lighting & False Ceiling by teachers	31 <sup>st</sup> August 2023
Discussion on False ceiling Drawing	7 <sup>th</sup> & 8 <sup>th</sup> August 2023
<b>Submission of False ceiling Drawing</b>	<b>14<sup>th</sup> August 2023</b>
Discussion of Elevations & Sections	21 <sup>st</sup> & 22 <sup>nd</sup> August
<b>Submission of Elevations &amp; Sections</b>	<b>28<sup>th</sup> August 2023</b>
Discussion on furniture details	4 <sup>th</sup> & 5 <sup>th</sup> September 2023

<b>Submission of furniture details</b>	<b>11<sup>th</sup> &amp; 12<sup>th</sup> September 2023</b>
<b>Submission of views and walkthroughs</b>	<b>18<sup>th</sup> &amp; 19<sup>th</sup> September 2023</b>
<b>Final Submission</b>	<b>25<sup>th</sup> &amp; 26<sup>th</sup> September 2023</b>

## SPECIFICATION

Teacher In-charge - Ar. Poornima Deshpande, Ar. Sneha Mandekar Tirale

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### Objectives:

**CO1:** Learning Art of writing specifications for materials & works. Introduction, importance of specifications in const. activity. To study Types of specifications & its applications.

**CO 2:** Method of writing specifications (content, Correct Sequence). To understand and study the Use of IS Codes, PWD Specification

**CO 3:** Knowing Specifications of basic building materials such as bricks, stones, aggregate, cement, steel, timber and also to Understand Specifications for various Building Construction items and Services in RCC framed structure.

**CO 4:** To understand the importance of Specification in Working Drawings.

DATE	TOPIC	INPUT	EXPECTED OUTPUT	EVALUATION
3rd July 2023	Unit I - Introduction, importance of specifications building construction activity. Types of specifications and its applications. Method of writing specifications (contents, correct order and sequence), use of Indian standard codes and specifications, PWD specifications.	Lecture/ Interaction	Tutorials	
Month of July and Aug 2023	<b>Unit II:</b> Specifications of basic building materials such as bricks, stones, aggregate, cement, steel, timber etc. Specifications of materials used in flooring and finishing such as ceramic tiles marble-mosaic tiles, paints and varnishes. Specifications of materials used in roofing and roof covering such as tiles, A.C, G.I. and Aluminum sheets etc.	Lecture/ Interaction	<b>Assignment 1:</b> Skit to be presented by students based on materials selected.	<b>On the basis of presentation</b>
	<b>Unit III:</b> Specifications for fixtures and fastenings; Study of proprietary materials alongwith manufacturer's specifications, trade names of such materials.	Lecture/ Interaction	<b>Assignment 1:</b> Skit to be presented by students based on materials selected.	

	<b>Unit IV:</b> Specifications of works for a residential building of load bearing type or R.C.C. framed type. Specification of construction of steel structure, ceilings and partitions, paneling insulation and Water proofing.	Lecture/ Interaction	<b>Assignment 1:</b> Skit to be presented by students based on materials selected.
	<b>Unit V:</b> Specifications for items of services such as drainage, wafer supply, electrical installation.	Lecture/ Interaction	<b>Assignment 1:</b> Skit to be presented by students based on materials selected.
	<b>Unit VI:</b> Specifications for demolition-work, temporary construction like sheds, exhibition stalls, gateways.	Lecture/ Interaction	<b>Assignment 1:</b> Skit to be presented by students based on materials selected.
<b>Assignment 2: Writing Specification for various building items in Working Drawing - Month of July and Aug 2023</b>			
<b>Assignment 3: Application of knowledge gained through assignment 2 in WD related sheet - Month of September 2023</b>			
<b>Sessional</b>			

**Evaluation Scheme:**

<b>Attendance</b>	<b>Assignment 1</b>	<b>Assignment 2</b>	<b>Assignment 3</b>	<b>Subject contents/ Sessional exam</b>	<b>Total</b>
	CO 1	CO 2 & CO 3	CO 4		
10	5	10	15	10	<b>50</b>

## HUMAN SETTLEMENT PLANNING

Teacher In-charge: Dr. Sujata Godbole, Ar. Isha Pawar

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### Aim:

To sensitize students to the broad principles of settlement and urban development, enabling them to understand the evolution and architectural impact of cities throughout history.

### Objectives:

The study aims at understanding terminologies and key definitions. Connecting History with stages of Evolution of Settlement and learning's from the past which offered cities which were process driven, demand driven and evolved out of necessity. This Continues with contribution of Various Masters and Pioneers in the field of Urban Planning and various tools of reading the city.

**CO1:** To understand the designing and developing of human Settlements.

**CO2:** To understand development of planning thought from historic to present age.

**CO3:** To understand the concepts of planning by various pioneers' planners and designers.

**CO4:** To Understand 'Architecture' as a part of bigger urban setting with lot of complexities related to socio-economic and legislative realities.

Weeks	Topics	Assignments
July & August 2023	<b>Unit I:</b> Introduction to Urban Planning its scope and relevance. Establish Connect between Architecture and Human Settlements. Understanding key definitions of various components which constitutes a settlement. Understanding Culture, Society, Context and Aesthetics. Broad comparison between, Rural - Urban, Local - Global, Urban Planning - Urban Design.	<b>Sessional on CO1 &amp; CO2</b>
	<b>Unit II:</b> Evolution of Urbanity in India and World. <b>Social and Cultural influence on</b> designing and development of settlements from ancient times through Medieval, Renaissance and Industrial revolution to present day development.	
	<b>Unit III:</b> Urban planning in India. Understanding Settlement Planning principles of Vedic & Buddhist settlements. British Planning in India, Planning after independence. Factors governing the location and growth of towns.	

September 2023	<b>Unit IV:</b> Pioneers and their works, Planning concepts of Patric Geddes, Ebenezer, Howard, Le-Corbusier, C. A. Parry, Clarence Stein, Doxiadis, Kevin Lynch, F.L. Wright.	<b>Assignment 1 on CO3 :</b>  Seminar on Pioneers and their works
	<b>Unit V:</b> Planning as a team work, Role of Architects/ Planners in a team, Importance and methodologies of surveys in the planning process Development control rules, zoning, density, height, FSI Structures, Transfer of Development Rights (TDR), Special Economic Zones (SEZ), Transit oriented Development (ToD). Factors governing the location and growth of towns. Overview of Planning Legislation.	<b>Assignment 2 on CO4 :</b>  Seminar



## BUILDING SERVICES - IV

Teacher In-charge - Ar. Rashmi Tijare, Ar. Anuradha Bhute

This semester is quite crucial as regards to services. This part of the building services deals with various systems and components of Fire detection and Fighting system, provision of essential spaces and elements, Electromechanical means of vertical transportation in buildings, Communication systems etc., for large scale projects. The students shall be made aware of Architectural design consideration regarding space allocation and design of building elements to anchor these services so as to achieve balance of functional efficiency, user safety and building aesthetics. This shall also help student to establish a sound communication in terms of design with a wide range of consultants, fabricators, wanders and contractors.

### Course Outcomes:

The student will be able to

**CO1** to define fire and understand different causes and various categories of fire (Test)

**CO2** To understand the Use of Norms & regulations regarding Fire escape, stairways & escape routes, dry & wet risers as per NBC of India. (Assignment 2 – Norms of Hospital)

**CO3** to Implement various building escape strategies and preventive measures in case of fire. (Assignment 1 -Fire Policy)

**CO4** To apprehend architectural considerations to accommodate the communication systems wrt video conferencing, telephone and computer network in a building.

**CO5** To Understand building automation system, security and surveillance of a building.

**CO6** to Get knowledge of different categories of fire and smoke.

**CO7** Know the basics of mechanical ventilation.

DATE/ WEEK/ TIME	UNIT	TOPIC	LEARNING OBJECTIVES	METHOD OLOGY	EXPECTED OUTPUT
Unit I 15 Hours	Unit I: Fire	Causes of fire in buildings, types of fire, spread of fire, production of smoke and poisonous gases	To study different causes and various categories of fire and smoke generated and their effects on human health and buildings	Class lecture	Test (CO1) Assignment 1: Students will prepare a document of fire policy for a public building- (yet to be decided) (CO3)
		Fire safety and preventive measures	To acquaint with various, prevent measures to be considered while designing a fire safe building		
	Fire safety - Rules and Regulations	Firefighting regulations with respect to NBC	To provide insight into the norms and regulations regarding Fire escape, stairways and escape routes, dry and wet risers as per National Building Code of India		
		Water demand for firefighting, storagetanks, fire hydrantsetc.	To learn the water demand and calculate the size and location of storage tanks to be designed		

					Specialty hospital) CO2
	Fire detection systems	Fire detection systems-	Introduction to the topic and going for market survey To Study various Fire detection systems, smoke detectors, heat detectors, fire alarms etc. their specifications and location in buildings	carry out a Mock drill in college	
	Fire Suppressing Systems	Fire extinguishing systems	To acquaint with Fire extinguishing systems, Unit fire extinguishers, Chemical and foam extinguishers, their specifications and them handling	Roam around the college premises to have a look at the extinguishers installed	
Unit II: 3 Hours		Transportation	Electromechanical means of vertical transportation in buildings, requirements, occupant load, study of elevators and types based on operational system and uses. Various components of elevators based on operational system. Standard space requirements and architectural implications.	Demonstration in ppt	Market Survey
Unit III: 3 Hours			Escalators, Trav-o-lators and Conveyor system, its components, arrangements and functioning, space requirements, construction details.		
<b>SESSIONAL EXAM</b>					
Unit IV 3 Hours		Building Automation	To Introduce to building automation systems, their components and application in buildings. To learn about the BMS section and its working in buildings	Site visit with class lecture	Sessional exam
Unit V 3 Hours		Communication systems	Video conferencing, Computer networks and trenches and conduits to accommodate the systems. To learn the working and mechanism of Security and Surveillance, location of CCTV cameras, alarms, sensors etc. and their connections in a building	Class lecture	Sessional exam

Unit VI 3 Hours		Systems of Direct to Home (DTH)	Systems of DTH, Introduction, Its classification with respect to Single and multi-user. DTH layout and its Architectural implications	Class lecture	Sessional exam
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#### Evaluation Scheme

NBC rules	10 marks
Fire Policy	10 Marks
Sessional exam	20 marks

## LANDSCAPE ARCHITECTURE II

Teacher In-charge – Ar. Sneha Mandekar Tirale, Ar. Poornima Deshpande

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### INTRODUCTION

People nowadays, are more aware of the importance of preserving the environment and ecology, thus landscape architecture is now viewed as more important than it used to be. Landscape architecture provides solutions to many existing environmental issues, protects ecology and helps to protect national treasures.

The landscape design course, provided as a part of the 7<sup>th</sup>-semester curriculum, which is a continuation of the basic design course and allows basic design concepts to be transferred to landscape design. This elective aims to facilitate an understanding amongst students in order to take site planning decisions. To help them orient and locate group of structures on site, so that the buildings together with the interrelated spaces become one architectural entity and deal with open space structures.

To start the session on a lighter and interesting note, we will introduce a concept of **Sponge city** which is currently a boom topic. Students in groups will try to understand the concept and analyze a case study. Then to continue the studio, Contemporary Landscape design, its different elements, scopes and limitations will be discussed and by understanding this, the students will develop critical thinking towards the field of landscape and understand its scope in practical. Along with this, we also have a landscape competition named **Ar. Sunil Toye Landscape Competition** in which all students participates in groups, design for a live project and the winning group executes their design on the site.

This elective contributes to the following Learning Course Outcomes:

**CO1:** To analyze critically about sponge city concept and sustainable practice parameters involved in it.

**CO2:** To analyze critically about contemporary design and sustainable practice parameters in and around Indian context.

**CO3:** To synthesize and formulate the relationship and response of man to his environment through various factors of site planning and development.

### Format of each class:

- Presentation on related theories and Concepts related to integration of landscape and architectural projects
- Discussions and Interaction with students based on design values and design Concepts.
- Activity introduction, Evaluation and feedback session

**Studio modalities:**

<b>Date</b>	<b>Learning objective for each topic/ Content</b>	<b>Teacher's interaction through lectures/ ppt/ site visit etc</b>	<b>Expected output</b>	<b>Evaluation</b>
28/06/23	General introduction to Landscape Design & Introducing assgn 1 – Studying Sponge city concept, analyzing understanding various parameters of the concept. Identify a case study and analyze it in detailed	General discussion and orientation on the concept. Choose a contemporary case study	-	Assignment 1
<b>Jury on Assignment 1 – 05/07/23</b>				
12/07/23	Introduction to Contemporary Landscape Design	Powerpoint Presentation on various aspects on Contemporary Landscape Design	Case studies on the given topic	15 (Assignment 2)
19/07/23	Introduction to Site planning and development factors & Ar. Sunil Toye Landscape Competition	General discussion & orientation along with group formation	Studio work discussion – Sheet work	30 (Assignment 1)
	Landscape Studio	Siting and orientation of buildings to study	Studio work	
	Landscape Studio	Strategies in design	Evolving strategies for own design	
	Landscape Studio	The integration of outdoor spaces and built spaces, Parking lots, broader planting policies for the site.	Incorporating strategies at building level	
<b>03/10/2023 - 07/10/2023 - Sessional Exam</b>				
13/09/23	<b>Submission of Design Competition</b>			
20/09/23	Introduction to Sustainable practices	Powerpoint Presentation on various aspects on Sustainable practices	Case studies on the given topic	15 (Assignment 2)
27/09/23	Discussion	Discussion on selected case studies		
27/09/23	<b>Submission of Assignment 2</b>			

Sessional Work: Could be in the form of a write-up, abstracts, Sketches, Manifestation of Design into Architectural Drawing, etc.

**Evaluation Scheme –**

<b>Attendance</b>	<b>CO1 (Assgn 1)</b>	<b>CO2 (Assgn 2)</b>	<b>Sessional Exam</b>	<b>Total</b>
20	30	30	20	100

## References:

1. Lynch, K. (1962). Site Planning. Cambridge : The MIT Press.
2. Design with Nature, Ian Mcharg.
3. Campus Design in INDIA by Achyut Kanvinde.
4. Simonds, J. O. (2006). Landscape Architecture: A Manual of Land Planning and Design

## ELECTIVE (A) - ARCHITECTURAL CONSERVATION

Teacher In-charge - Dr. Neeta Lambe & Ar. Tanvi Burghate

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**CO1** To understand about the importance of Heritage, conservation, cultural importance, heritage buildings, historical significance, related terminologies and govt Schemes.

**CO2** To understand various techniques of conservation in architecture through study & analysis of conservation programs/ projects by eminent conservation architects.

**CO3** To develop a strategies / remedies/ proposals for an identified site for conservation.

Week	Learning Objective for each topic/ content	Teachers' interaction	Expected output	Marks Distribution
July 13 <sup>th</sup>	Introduction about the subject conservation, various terminologies, approaches, need for conservation activities & history. Rules, regulations and administrative aspects in conservation. Introduction to first assignment (To study Various Government Schemes on conservation) - {in a group of 3}	Presentation by faculty and discussion	Group formation & allotment of topics based on assignment	Assignment 1: 10 Marks
July 20 <sup>th</sup>	Presentation by students on 1 <sup>st</sup> assignment.	Discussion / Review	Presentation by students on Assignment 1	
July 27 <sup>th</sup>	Introduction to the origin, evolution of conservation programs, role of architect in	Presentation & Discussion		Assignment 1: 10 Marks

	<p>conservation programs, importance of community participation, need of conservation program.</p> <p>Also, introduction of 2<sup>nd</sup> assignment (Identify Conservation architects, study its one of their conservation programs/ project in detail. It can be either governmental or non-governmental.)</p>			
August 3 <sup>rd</sup>	Presentation by students on 2 <sup>nd</sup> assignment	Discussion / Review	Presentation by students on Assignment 2	
August 10 <sup>th</sup>	Presentation on New concepts & introduction to Urban Conservation	Presentation/ Discussion		
17 <sup>th</sup> August	<p>Guest Lecture &amp; introduction to 3<sup>rd</sup> assignment (Identify a site/ structure in Nagpur that needs conservation measures, photo documentation, problem identification &amp; providing suggestions/remedies/proposals on it)</p> <p>Site visit !</p>	Presentation by Guest Speaker & discussion session		Assignment 3: 20 Marks
24 <sup>th</sup> August	1 <sup>st</sup> Review	Discussions	Documentation Analysis	



31 <sup>st</sup> August	2 <sup>nd</sup> Review	Discussions	Documentation & Analysis
7 <sup>th</sup> September	Final Presentation & Submission	Review	Final documentation with proposals
Marks Distribution	Assignment 1	10 marks	
	Assignment 2	10 marks	
	Assignment 3	20 marks	
	Attendance	10 marks	

## **ASSIGNMENTS:**

### **CO1-** Assignment 1:

Objective: To study Various Government Schemes on conservation, understand the overall process, criteria's strategies applied, measures taken, identification of sites, management, present status & proposal areas.

### **CO2-** Assignment 2:

Identify Conservation architects, study any one of their conservation programs/project in detail. It can be either governmental or non-governmental. Understand the site, its history, evolution, significance, site delineation, problem identification, surveys conducted & proposals suggested.

### **CO3-** Assignment 3:

Identify a site/ individual structure in Nagpur that needs conservation measures, document the structure, analyze the conditions, photo documentation, problem identification & providing suggestions/remedies/proposals on it.

## ELECTIVE (B) – HOUSING

Teacher In-charge - Ar. Poornima Deshpande, Ar. Samruddhi Amte

### Objectives:

**CO 1:** To create awareness about the causes and consequences of housing problems and to illustrate about the possible solutions

**CO 2:** To understand various issues involved in urban and rural housing

**CO 3:** To explain about the planning and design solutions for low income groups

DATE	TOPIC	INPUT	EXPECTED OUTPUT	EVALUATION
13th and 20th July 2023	Unit I - Concept of Housing.	Lecture/ Interaction	Tutorials	Based on assignment
27th and 3rd Aug 2023	<b>Unit II:</b> Housing types.	Lecture/ Interaction	Tutorials	Based on assignment
10th and 17th Aug 2023	<b>Unit III:</b> Patterns of housing.	Lecture/ Interaction	Tutorials	Based on assignment
24th and 31st Aug 2023	<b>Unit IV:</b> Social and cultural and economic factors of housing.	Lecture/ Interaction	Tutorials	Based on assignment

**Assignment 1 - To introduce terms related to housing and their interpretation (vocabulary)**

**Assignment 2: Study of Housing Schemes by Master Architect**

**Assignment 3: Case Study analysis based on Sessional Exam assignment**

**Sessional**

Attendance	Assignment 1	Assignment 2	Assignment 3	Subject contents/ Sessional exam	Total
	CO 1	CO2	CO 3		
10	5	10	15	10	<b>50</b>

## ELECTIVE (C) - HIGH TECH ARCHITECTURE

Teacher In-charge: Dr. Sujata Godbole, Ar. Isha Pawar

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### Introduction

High-tech architecture, also known as "structural expressionism" or "late modernism," is a design style that emerged in the late 20th century. High-tech architecture continues to influence contemporary design and construction practices, pushing the boundaries of technology and aesthetics in the built environment. It represents a fusion of engineering, architecture, and innovation, creating iconic and visually captivating structures.

**Aim :** To undertake a comprehensive study of high-tech architecture, exploring its key features, historical context, influential architects, technological advancements, and the impact of this design style on the built environment.

### Objectives:

**CO1 :** To understand evolution of high tech Architecture and explore the new methods of construction involved in it.

**CO2 :** To understand the material explorations and techniques involved in high tech architecture.

Weeks	Topics	Assignments
July 2023	Introduction to High tech Architecture	<b>Assignment 1 on CO1:</b>  To present with examples Evolution of Façade from Historic period to Modern era.  Output can be in the form of sheets or PPT presentations.  Group Assignment
	Evolution & characteristics of High tech Architecture	
	Advancement in construction technology and its impact on architecture	
August 2023	Discussion on Advancement in Building Services.	<b>Assignment 2 on CO2:</b>  Output in the form of Sheets this will include Façade design, its Construction techniques and Services.
	Facades and its Type and Design Consideration of Facades.	
	Discussion on Advance Materials and their Application	

September 2023	Discussion on Energy Conservation, energy efficiency strategies, and green rating system.	
	Discussion on integration of Advance construction technology, services and Materials in Design	

## Evaluation scheme

<b>1<sup>st</sup> Assignment CO1</b>  (Evolution of Façade from Historic period to Modern era )	<b>2<sup>nd</sup> Assignment CO2</b>  (Façade design)	<b>Sessional Exam CO1 &amp;CO2</b>	<b>Attendance</b>	<b>Total Marks</b>
<b>10</b>	<b>10</b>	<b>20</b>	<b>10</b>	<b>50</b>