

W.E.S.
SMT. MANORAMABAI MUNDLE COLLEGE OF ARCHITECTURE,
SEMINARY HILLS, NAGPUR

Booklet
2nd year
4th semester 2022



ACADEMIC BOOKLET
Even semester 2022
4TH SEMESTER

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Year In-Charge

Prof. Sneha Bodhankar

Class coordinators

Section A: Prof. Sarika Joshi

Section B: Prof. Sneha Bodhankar

Section C: Dr. Seema Burele



SMMCA: Vision

The vision limits to the present situation or at best for the near future. We should mention that we equip students to venture into the future.

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

- 5B Integrity ☐ Creativity ☐ Innovation
- Discovery ☐ Collaboration ☐ Respect
- 6B 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 co-ordinators. 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 absenteeism, 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 programs organized by the college from time to time. Attendance for programme of 26th January and of 15th 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, co-ordinate 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 the President, Vice-president, Secretary, Vice-secretary and Treasurer. In addition, there are Class Representatives from first and second year – one representative from each of the three sections in a year.

NASA rules and regulation: As per out policy, the students are allowed only to participate in Zonal or Annual NASA.



2nd EXAMINATION – B.Arch.

SECOND YEAR B.ARCH.

Semester – 4

From 2020-21

Sr. No.	Sub. Code	Sub. Name	Category	Board	Load Per Week					Credits					Paper / Sessional	Duration in Hours	Max. Marks	Total Marks	Min. Pass Marks
					L/D	T	S	P	Total	L	T	S	P	Total					
1	4S-A-1	Architectural Design IV			1	0	4	0	5	1	0	6	0	7	Sessional Viva Voce		150 50	200	100
2	4S-A-2	Allied Design Studio-IV			1	0	2	0	3	1	0	3	0	4	Sessional		100	100	50
3	4S-A-3	Building Construction and Materials -IV			2	0	2	0	4	2	0	3	0	5	Paper Sessional	3	100 50	150	40 25
4	4S-A-4	Surveying and Documentation			1	0	0	2	3	1	0	0	1	2	Sessional		100	100	50
5	4S-A-5	Structural Design & Systems IV			2	1	0	0	3	2	0.5	0	0	2.5	Paper Sessional	3	60 40	100	50
6	4S-A-6	History of Architecture III			2	1	0	0	3	2	0.5	0	0	2.5	Sessional		100	100	50
7	4S-A-7	Building Services - I			2	1	0	0	3	2	0.5	0	0	2.5	Paper Sessional	3	60 40	100	50
8	4S-A-8	Climate and Architecture			2	1	0	0	3	2	0.5	0	0	2.5	Sessional		100	100	50
9	4S-A-9	Elective IV			1	2	0	0	3	1	1	0	0	2	Sessional		50	50	25
Total									30					30.0			1000	1000	

Elective IV Regional Architecture / Furniture Design / Design of Building Elements / Building Bye Laws and DCR / Theory of Design / Institutional Project 4



Architectural Design

6 weeks

Design Co-ordinator – Ar. Sneha Bodhankar

Design Team-

Sec A- Dr. TarikaDagadkar, Ar.Sarika Joshi, Ar. Poornima Deshpande,

Sec B- Dr. Ropal Deshpande, , Ar. Sneha Bodhankar, Ar. Namrata Gorkhede

Sec C-Dr. Madhura Rathod, Dr. Seema Burele, Ar. Harpreet Saggu

This semester shall explore community, tradition, theoretical constructs, building systems and its implications on architectural design.

Learning Objectives:

Exploring the relationship between various building systems and design.

- Studying and understanding integration of building systems with architectural
- Exploring concepts and form.
 - Understanding of a community setup, its people, and their spatial requirements.

Introduction

We are about to start the fourth semester. During the last semester we dealt with designing Guest House for the Women's Education Society's at Seminary Hills, Nagpur which was a major project. The emphasis was on designing a module and understanding the concept of modular co ordination with respect to the site potentials, climatological aspect and exploration of different material. Site planning was introduced at a preliminary level.

This semester (4th semester) demands more complexity in architectural designing which is achieved by introducing the sloping site which is always a challenge in itself. the main focus of the major project of this semester is to design a building or group of buildings on a slope so as to achieve site building symbiosis.



Apart from the challenge of the sloping site students will have to consider climate of the place and the adopt climate responsive strategies.

Theme

On 6th February 2022, we lost “Bharat Ratna” and legendry Lata Mangeshkar who was a moniker for excellence, versatility, one that will endure in the countless voices that are – and will continue to be — inspired by her.

To celebrates the immortal legacy of Lata Mangeshkar and to pay tribute the theme for the design studio is to design Music school. The theme has been adapted to Explore Form and Material of the building.

Students will explore the site building symbiosis with respect to the topography, climate and form of the building.

Inputs to be given: Thorough discussions/ presentations will be given on creative exercises for form evolution, understanding the contours and its features, slope analysis and climatic strategies to be applied while designing.

MAJORPROJECT

Duration: (2nd of March to 30th April 2022)

“Music Institute,” at Seminary Hills, Nagpur.

The students are required to design the **Music Institute** on sloping site.

The Institute consists of the Studios/classes, Auditorium, Open Air Theater, Administration, Staff rooms, Interactive areas, Canteen, etc.

Aim

To design a Music Institute on sloping site through understanding of design strategies with respect to topography, climate of the place and construction material and its techniques.

Site: Sloping site from Nagpur

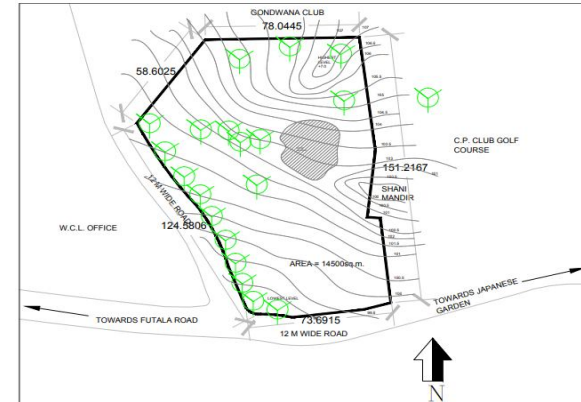
Objectives:

- To study the contour site and its impact on designing.
- To learn the slope analysis which will lead to finalizing the design strategies
- To learn various Design Considerations while planning on a Sloping Site.
- To explore the conceptual ideas of Activities and its spatial Arrangement
- To understand the various climatic considerations such as orientation, wind directions, etc.
- To study the evolution of 3D forms of the building, harmonizing with the surroundings.
- To understand the material, methods and techniques of construction on a sloping site.



Proposed Site details-

A Music School or Institute as building typology is identified for designing on sloping site as it would provide opportunities for students to play with masses and voids on the given gradient. The proposed site belongs to C.P. Club situated in Seminary hills. Site area is approx. 14500sq.m. It is surrounded by Godwana Club, Lurd mata Mandir, Japanese garden, C.P. Club and Joggers Lane.



Stages of working-The Details of stages of working, reviews, submission requirements and evaluation criteria and marks allotted are described in detail in the following Table.

Modalities of Design Studio

Sr. no	Stages	Description	Inputs	Expected Output	Dates / Duration
1	Stage I	Introduction to the topic, Site Study	Lectures/audio visual presentations by faculty.	Discussions and Study sheets	2 nd March
2	Stage II	Precedent study and secondary data collection	Discussion and power point presentation	Discussions and Study sheets	7 th March 2022
Review 1- 9th march 2022					
3	Stage III	Discussion on Designconcepts and slope analysis	Discussion and power point Presentation By faculty on Sloping Site and its constrains	Study Sheets	11 th March 2022 March Week 3
Introduction to Creative exercise on to understand Sloping Site on 14th March 2022					
4.	Stage IV	Facilitation, area calculation, Design programme, circulation and zoning.	Inputs regarding DCR, setbacks, site development, landscaping, drainage, pathways, road networks, etc.	Power Point Presentation	18 March 2022



Review 3- 25 th March 2022					
5.	Stage IV	Floor Plans along with site sections & elevations, & 3D views.	Discussion on Architectural Detailing	site plan and sections model	6 th April 2022
Internal Review on 8 th April 2022.					
6	Stage V	Architectural detailing	Discussion	Final sheets, plan, elevations, sections, views, etc.withmodel.	
Final Submission- 2 nd week of April					
External Review					

Evaluation Scheme

Attendance	Reviews 1,2,3,4, 5,6	Pre final Submission	Final Submission	Total Internal	Total Viva -voice
30	10+10+10+10+10+10	20	40	150	50

Design-IV									
	Review 1	Review 2	Review 3	Review 4	Review 5	Review 6			
ATTENDANCE	PRECIDENT STUDY	SLOPE ANALYSIS	SITE INVENTORY, ZONING AND ANALYSIS	DESIGN PROGRAM AND CIRCULATION DIAGRAM; SITE MODEL	CONCEPT AND PLANNING	ARCHITECTURAL DETAILING	PRE FINAL SUB.	FINAL SUB.	TOTAL
	CO1	CO2		CO3		CO4			
30	10	10	10	10	10	10	20	40	150



CONSTRUCTION TECHNOLOGY AND MATERIALS- III

Construction Coordinator - Dr.Seema Burele

Team: Dr.TarikaDagadkar, Ar. Sneha Bodhankar, Ar. Vaijayanti Yadav, Ar. Isha Pawar

Unit -I Introduction to Building Materials: -

Roof and Floor Tiles, Plaster, Finishes & all Plastic w.r.t composition, general knowhow about their physical, chemical and structural properties, their utility and selection criteria

Unit -II Windows in Steel and Aluminium. Steel doors; design criteria and principles.

Standard Terminologies and types. Special doors such as Sliding, Sliding and Folding, Revolving Doors, Rolling Shutter, Collapsible Gates - Design Criteria and principles. Standard Terminologies.

Unit -III Panelled and Glazed Partitions out of Timber and Aluminium –

Types, design principles and considerations, Standard Terminologies. Design details and drawing work, fixing details to surrounding elements / components.

Unit IV Timber Roofs - Timber Trusses, Standard Terminologies, Types – Design Criteria, principles, construction details. Design details and drawing work of King Post and Queen Post Truss. General and Conceptual drawing work of other types of timber roofs.

Steel Roof - Trusses. types, design principles and considerations, Standard Terminology - Design details and drawing work of M.S. angle and Tubular Trusses.

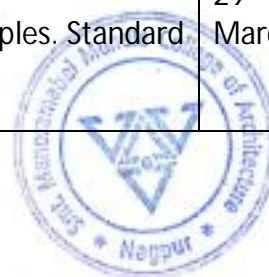
North Light Truss system. Conceptual and drawing work of types of Steel Trusses. General study of M.S. Frame and its various joints.

Unit V: Expansion Joints; types, design considerations, location consideration, principles and types.

Sr. No.	Topic	Objective	Time period (week)	Expected output o evaluation
1	Introduction to the syllabus	To make students aware about the content of the syllabus, theoretical and drafting topics, Market survey and site visits.	10 th February 2022	-
2	Expansion Joints	To understand the types, design considerations, location consideration and principles of application.	15 th and 17 th February 2022	Sheets, Sketches, tutorials,



3	Introduction to Building Materials Roof and Floor Tiles, Plaster, Finishes & all types of Plastic	To understand the materials w.r.t composition, general knowhow about their physical, chemical and structural properties To make students understand their utility and selection criteria.	22 nd and 24 th February 2022	Market survey Sketches, Sheet and Tutorials
Submission -I (26th February)				
4	Unit -III Panelled and Glazed Partitions out of Timber and Aluminium	To understand types, design principles and considerations for partition. To learn the standard terminologies, design details and drawing work, fixing details to surrounding elements / components.	3 rd and 8 th March 2022	Sketches, Sheet and Tutorials
5	Unit IV Timber Roofs and Steel Roof North Light Truss system	To learn Standard Terminologies, types of roofs, Design Criteria, principles of design, construction details. Design details and drawing work of King Post and Queen Post Truss. To learn general and conceptual drawing work of other types of timber roofs. (w.r.t to span) To understand the types of trusses, design principles and considerations Standard Terminology - Design details and drawing work of M.S. angle and Tubular Trusses. To understand and learn conceptual and drawing work of types of Steel Trusses. General study of M.S. Frame and its various joints.	15 th , 17 th and 22 nd March 2022	Sketches, Sheet and Tutorials
Submission -II (24th March 2022)				
6	Unit -II Windows in Steel and Steel doors Special doors such as Sliding, Sliding and Folding, Revolving Doors, Rolling Shutter, Collapsible Gates - Design	To understand the design criteria and principles of steel doors and windows. Standard Terminologies and types. To understand Design Criteria and principles. Standard Terminologies	24 th March 2022 29 th and 31 st March 2022	Sheets



Criteria and principles. Standard Terminologies			
Final Submission (4th April 2022)			

4S-A-3	Construction Technology & Materials III
CO 1	Unit -1 Introduction to Building Materials: - Roof and Floor Tiles, Plaster, Finishes & all Plastic w.r.t composition, general knowhow about their physical, chemical and structural properties, their utility and selection criteria
CO 2	Unit -II Windows in Steel and Aluminium. Steel doors; design criteria and principles. Standard Terminologies and types. Special doors such as Sliding, Sliding and Folding, Revolving Doors, Rolling Shutter, Collapsible Gates - Design Criteria and principles. Standard Terminologies.
CO 3	Unit -III Panelled and Glazed Partitions out of Timber and Aluminium - Types, design principles and considerations, Standard Terminologies. Design details and drawing work, fixing details to surrounding elements / components.
CO 4	Unit IV Timber Roofs - Timber Trusses, Standard Terminologies, Types – Design Criteria, principles, construction details. Design details and drawing work of King Post and Queen Post Truss. General and Conceptual drawing work of other types of timber roofs. Steel Roof - Trusses. types, design principles and considerations, Standard Terminology - Design details and drawing work of M.S. angle and Tubular Trusses. North Light Truss system - Conceptual and drawing work of types of Steel Trusses. General study of M.S. Frame and its various joints.
CO 5	Unit V Expansion Joints; types, design considerations, location consideration, principles and types.

Assignments shall be evaluated on the basis of following criteria:

Sketch book	Tutorials	Market Surveys(material)
Quality of Sketches	No. of questions	Information from surveys



Proportion	Contents of Ans.	Reviews
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											Teachers' evaluation		
CO1	Attainment	CO2	Attainment	CO3	Attainment	CO4	Attainment	CO5	Total	Attainment	Sessional	Attendance	TOTAL
U-1		U-2		U-3		U-4		U-5					
4	Y/N	6	Y/N	6	Y/N	10	Y/N	4	30	Y/N	10	10	50

Evaluation Scheme

S.No.		%
1	Attendance	10
2	Sheets, Tutorials and Sketch Books	30
4	Sessional	10
5	Total	50



Surveying and Documentation

Team: Prof. Sandeep Shirkhedkar, Ar. Isha Pawar, Ar. HarpreetSaggu

Surveying :To enable the students to get conversant with locating the object positions in horizontal and vertical plane with desired accuracy as needed for architecture professionals.

Documentation :To help the students understand the technique of graphical documentation of a built structure /environment through measured drawings

OBJECTIVES OF SURVEYING:

CO1 : To acquaint the students with different surveying instruments, types of surveying methods and application, Introduction to Chain Survey and Plane table survey.

CO2 :To understandLeveling, methods of leveling -dumpy level and its uses.

CO3 : To understandContour survey, plotting contour maps. To understand the working of theodolite which used in contour survey.
To understand

CO4 : To understand Total Station Survey, Planimeter and its use.

CO5 :To understandmeasured Drawing: Measurement techniques of Heritage Structures andpreparing measured drawing to suitable scale.

Date	Contents	Submission
Feb 2022	Introduction to surveying, types of surveying methods and its Application. Introduction to Chain Survey Introduction to Plane table survey, method and instruments used.	Tutorial
March 2022	Leveling: using dumpy level and automatic level.	Tutorial Practical



March 2022	Contour survey,	Tutorial Practical: Plotting contour maps
March 2022	Total Station Survey, Planimeter and its use.	Tutorial Practical
April 2022	Documentation of college and Hostel building	Tutorial Practical

Evaluation Scheme

Attendance	Sessional exam	Assignment 1	Assignment 2	Assignment 3	Total
20	20	20	20	20	100



Structural Designs and systems IV

Faculty involved: En.Rupal Wadegaonkar, Ar. Sneha Bodhankar

Objectives: To foster the understanding of basic principle of limit state design in RCC structural systems. To develop the understanding of characteristics of soil on structural behavior.

CO1- Unit I: Overview of the Structural System in Architecture. Study of different types of soils their characteristics, bearing capacities, Settlement of foundation. Study of structural elements like beams, columns & footings. Theory of Determinate and indeterminate structures – degree of indeterminacy.

CO2- Unit II: Deflection of beams Simply supported and cantilever beams by using Macaulay's method.

CO3- Unit III: Concept of fixity Independent fixed beams with different loadings - BM and SF diagrams. (By using First Principle method).

CO4- Unit IV: Method of Moment distribution (BM diagrams only) a) For continuous beams (Up to three spans only, without settlement)16 b) For Single portal frames (Without sway moments)

CO5- Unit V: Basic Principle of RCC a) Different Limit states, partial safety factors, permissible stresses Introduction to RCC design, characteristics of RCC, assumptions, Neutral axis; balanced, under & over reinforced sections b) Design of singly reinforced beams , doubly reinforced beams & Moment of resistance of T beam

Sessional work: Sketches/ Notes/ Tutorials & Presentations Desirable: Site visits to develop better understanding. To prepare relevant study models. Laboratory exposure wherever possible.

References : • Punmia B.C.(2005) Soil Mechanics and Foundations Laxmi Publications, Hyderabad. • Khurmi, R.S.(2010). Theory Of Structures SI Units. New Delhi: S. Chand And Co Ltd. • Ramamrutham , S. : Narayanan, R.(2018). Theory of Structure. New Delhi: Dhanpat Rai Publications Ltd • Dr. V. L Shah & Dr. S. R. Karve. (2014) Limit State Theory & Design of Reinforced concrete, Structures publications Pune. Punmia, B.C. (2015). R C C Designs. Delhi: Laxmi Publications.

Sessional (CO1,2,3,4,5)	University	Total	Minimum
40	60	100	50



History of Architecture III

Faculty involved: Dr.Roopal Deshpande, Ar. Sarika Joshi

Objectives:

CO1 - To provide an understanding of the implications of the Mughal and Colonial rules in India and its Architecture

CO2 - To provide an understanding of the philosophies and works of Indian master architects

Week	Topics to be covered	Task given
Feb week 2 and 3	Unit I: Mughal architecture in India, Forts and Cities during Mughal dynasty.	
Feb Week 4	Unit II: Architectural contribution of Akbar, and Shahjahan	
March Week 1 and 2	Unit III: Provincial Architecture in India: Bengal, Malva, Mandu, Bijapur, Punjab, Kashmir, Gujarat.	
March Week 3 and 4	Unit IV: Colonial and Post-Independence Indian Architecture: Colonial architecture of Goa, Pondicherry and Bengal. Lutyens Delhi. City planning of Chandigarh.	
April Week 1 and 2	Unit V: Indian Master Architects, their philosophies and works	

Evaluation Scheme

Attendance	Sessional exam/ test	Assignments and sketchbook	TOTAL 100
		2 assignments and sketchbook	
20 marks	40 marks	40 marks	100

Exercises: 1. Understanding 2. Analysis, 3. Interpretation, 4. Synthesis, and 5. Transform of



historical structures, in the form of small exercise and assignments.

The course culminates in a term paper, documentation or design interpretation and transformation.

Building Services I

Teachers in-charge: Ar. Anuradha Bhute, Ar. Mrinmayee Tiwari

Building Services plays an important role in design, as building services is an integral part of planning and design. Everything that makes a building safe and comfortable to live or work in needs to be designed installed and maintained. The course of this semester deals in detail with water supply and sanitation.

CO1 To study the basic services such as water supply at Domestic Level(Test 1)

CO2 To learn effective availability of resources (Assignment 1)

CO3 To understand the effective options of various Materials available in market (Assignment 2)

CO4 To study various drainage services on sites and apply it in their designs (Test 2)

Name of the Topic	Input	Task / Expected output
Water supply Sources of water supply, qualitative and quantitative aspects, impurities, hard and soft water, quality standards. Water demand and consumption in different types of buildings, computing demand for domestic use	PPT	Class Notes & Sketches
Water demand and consumption in different types of buildings, computing demand for domestic use	Explanation	Assignment 1: Computing demand for their own house and other typology (eg Commercial, Schools etc.)
Domestic water supply system, types, capacity- design-construction and suction and storage tanks. Down take supply, water supply pipes- jointing, fixing, laying Various valves, fittings and fixtures	PPT	Assignment 2: Market Survey of various pipes
Domestic hot water supply, water heaters	PPT	Class Notes & Sketches
Sanitation Principals of sanitation, water carriage system, collection of waste matter in buildings. Various sanitary fittings and fixtures. Various traps and their functions	PPT	Class Notes & Sketches
Sewage collection and disposal system for individual buildings Various types of sanitary pipes- jointing, fixing, laying; manholes, inspection chambers, intercepting chambers	PPT & Explanation	Assignment 2: Market Survey
Refuse disposal- sources, types, collection, storage and transport, provisions for refuse disposal individual building level, refuse chutes	PPT & Explanation	Class Notes & Sketches



Storm water management	PPT & Explanation	Class Notes & Sketches
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Climate and Architecture

Teachers in-charge: Ar. Vaijayanti Yadav, Ar. Sneha Bodhankar

Objectives: This part of subject provides scope to apply the knowledge of basic climatology gained in earlier semester, for design in different climatic conditions with emphasis on tropical climate. ∴

Course Outcome	Syllabus/ Topics	Duration/	Outcome and Submission dates
CO1-	Unit I: Study of Shelters in six climatic zones in India with respect to different aspects, & understanding the term Vernacular. Unit II: Study of effect of orientation, topography, vegetation, form, building materials and surfaces in different levels of building design in response to the climate.	2 nd , 3 rd , 4 th Week of February 2022	Assignment 1 –Submission on 24 th Feb.2022
CO2-	Unit III: Climate Analysis Tools- Mahoney tables, ET/CET nomograms, bio-climatic charts, temperature isopleths, psychometric chart.	3 rd and 4 th Week of March 2022	Assignment 3 –Submission on 30 th March.2022
CO3-	Unit IV: Study of passive and advanced passive techniques for heating, cooling, daylighting and ventilation, techniques of solar radiation control and heat transfer and insulation.	1 st , 2 nd Week of March 2022	Assignment 2 –Submission on 15 th March 2022
CO4-	Unit V: Study of contemporary climate responsive design concept and techniques. Climate responsive & Energy saving design approach (Daylight, building heat gain calculations, Shading devices Calculations) which will includes, process and design detailing	1 st , 2 nd Week of April 2022	Assignment 4 –Submission on 15 th April.2022
Final Submission on Climate responsive design Folio- 25th April 2022			



Marking Scheme-

CO1	CO2	CO3	CO4
Unit I and Unit II	Unit III	Unit IV	Unit V
Assignment 1			
10 Marks	10 Marks	10 Marks	10 Marks

Evaluation Scheme

Attendance	Design Folio +Sessional exam	Assignments and sketchbook	TOTAL 100
20 marks	20 + 20 marks	40 marks	100

Sessional Work: Case studies, creative exercises with climatic considerations Use of simulation software.

References:

Climate responsive architecture, Arvind Krishnam

- Manual of tropical housing and building, O H Koenigsberegger•
& Ingersol. Urban Microclimate, Evyatar Erell,•
- Design with climate, Víctor Olgyay, Aladar Olgyay.
- John R. Mather -Climatology: Fundamentals and Application.•



Elective IV

a. Design of Building Elements

Faculty: Ar. Medha Pophale, Ar. SnehaMandekar

Objective: To develop an understanding of design elements and principles relative to their use in the architectural design process

CO 1: To develop understanding of elements of design & their relation to space.

CO 2: To analyse the space according to the architectural design principles.

Date	Topic/ Assignments	Input by Faculty	Expected Output
Feb- 15 th , 22 nd	1. Architectural Design Elements.	Book Review, Rapid reading, Presentation, Interaction	Assignment 1: Book Review and question answer session. Sheet on elements and space characteristics identified from the book chapter.
March 8 th , 15 th	2. The Concept of Space.	Movie screening- Through the space, Discussion	
March 22 nd , 29 th	3. Architectural Design Principles.	Lecture, Discussion.	Assignment 2: Brainstorming session Assignment on A2 Sheet specifying relation between Design Principles & the hobbies through sketches
April 5 th , 12 th	4. Additional Design Considerations.	Lecture, Discussion.	Group Discussion

Evaluation scheme

1 st Assignment	2 nd Assignment	Sessional Exam	Attendance	Total Marks
15	15	10	10	50

Sessional Work: Assignments, Model making, Visits



b. Building Bye laws and DCR

Teacher In charge: Dr.TarikaDagadkar, Dr.Seema Burele

Building bye-laws are a set of rules that every individual from the construction fraternity have to abide by, while developing projects. Any sort of development, a specific set of rules must be followed, while carrying out building construction activities. This specific set of rules that one has to comply with, is commonly known as building bye-laws, which are aimed at providing orderly development in cities. Typically, building bye-laws are created by the town planning authorities and address various building and safety requirements, apart from height, coverage, limitations and amenities in a building.

Building bye-laws also govern the provisions for open spaces in a project, with the aim to ensure that developments do not turn the city into a concrete jungle. **Building bye-laws also contain rules to ensure that there is minimum harm to the environment, as a result of developments.**

Thus, this subject basically aims to make students aware about the rules and regulations to be referred for construction of any project. It will also enable them to apply the knowledge in their design project.

Date	Topic/ contents to be covered	Learning Objective for each topic/ content	Teachers' input	Expected output
15 th Feb 2022	Introduction to the subject.	To develop understanding about rules and regulations. To make students aware about the importance of building byelaws and DCR.	Interactive Session	-
22 nd Feb, 8 th march, 15 th march, 22 nd march and 1 st April 2022	Different chapters given in DCR to be allotted to the group of students for discussion.	To make students understand the content and its application. To make them aware about zoning rules and regulation.	Interactive Session	Power point presentation
SUBMISSION – I (After the presentation of each group)				
8 th and 15 th April 2022	Analysis of the sanctioned plans for different types of project.	To make student learn the way rules and regulations are being applied for sanctioning the specific project.	Interactive Session	Sheets
SUBMISSION – II 20th April 2022				
Final submission 24th April 2022				



Evaluation Scheme

Attendance	Subject contents/ Sessional exam/ Surprise exams	Assignment 1	Assignment 2	Total
10	10	15	15	50



c. Institution Project

Faculty: Dr. Neeta Lambe, Ar. Sneha Bodhankar

Objective: To develop an understanding of design elements and principles relative to their use in the architectural design process

CO 1: To develop understanding of Data collection of Any Heritage Site.

CO 2: To Develop the writing Skills for Presenting Heritage Documentation .

Date	Topic/ Assignments	Input by Faculty	Expected Output
Feb- 8 th , 15 th , 22 nd	Documenting Nagpur Water bodies and explores ancient water supply systems of Nagpur.	Interaction and Instruction on Data Collection	Assignment 1: Primary and Secondary Data Collection in Presentation Format (Group Work- 5 students in each) Review -1 and submission on 1st march 2022
March 8 th , 15 th		Interaction and Instruction On writing Article	Assignment 2: Article Writing (Group Work- 5 students in each)
March 22 nd , 29 th		Correction and Discussion	Draft submission on 22 nd March 2022 Final Submission on 29th March 2022

Evaluation scheme

1 st Assignment	2 nd Assignment	Reviews/ Sessional Exam	Attendance	Total Marks
15	15	10	10	50

Sessional Work: Assignments, Site Visit



