



WES  
SMT. MANORAMABAI MUNDLE  
COLLEGE OF ARCHITECTURE

# THIRD SEMESTER

**STRUCTURAL DESIGN AND SYSTEMS**

**ARCHITECTURAL GRAPHICS**

**HISTORY OF ARCHITECTURE**

**CRITICAL APPRECIATION**

**ENVIRONMENTAL STUDIES**

**ARCHITECTURAL DESIGN**

**VERNACULAR ARCHITECTURE**

**CLIMATE AND ARCHITECTURE**

**ARCHITECTURAL DOCUMENTATION**

**CONSTRUCTION TECH . & MATERIALS**

## ACADEMIC BOOKLET

**ODD SEMESTER**

2019- 20

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Submission Calendar

### 2<sup>nd</sup> Year In-Charge

Ar. Seema Burele

### Class coordinators

Section A - Class Coordinator : Ar. Sarika Joshi

Section B - Class Coordinator : Ar. Sneha Bodhankar

Section C - Class Coordinator : Ar. Isha Pawar

## III SEMESTER FACULTY

### 1. Architectural Design III

Team: Ar.Pratima Dhoke, Ar. Roopal Deshpande, , Ar. Tarika Dagadhkar, Ar. Seema Burele, Ar. Sneha Bodhanka, Ar. Sarika Joshi, Ar. Isha Pawar, Ar Harpreet Saggu

### 2. Construction Technology and Materials

Team : Ar. Vishvas Dikhole, Ar.Tarika Dagadhkar, Ar. Seema Burele, Ar. Sarika Joshi, Ar. Sneha Bodhankar, Ar. Isha Pawar, Ar. Harpreet Saggu

### 3. History of Art and Architecture

Team : Dr.Roopal Deshpande, Ar.Sarika Joshi

#### 4 Elective A

##### a) Environmental Study

Team : Ar.Tarika Dagadhkar, , Ar. Sarika Joshi

##### b) Vernacular Architecture

Team : Ar. Seema Burele, Ar. Isha Pawar

#### 5. Elective B

##### a) Architectural Documentation

Team: Dr. Neeta Lambe, Ar. Sneha Bodhankar

##### b) Critical Appreciation

Team : Dr.Roopal Deshpande, Ar. Harpreet Saggu

### 6. Architectural Graphics III

Team : Prof. Madhura Rathod, Prof. Tarika Dagadkar, Prof. Seema Burele, Prof. Sarika Joshi, Prof. Sneha Bodhankar, Prof. Isha Pawar

### 7. Climate and Architecture

Team : Ar. Vaijayanti Yadav, Ar. Sneha Bodhankar

### 8. Structure

Er. Rupal Wadegaonkar

### 9. Survey

Mr. Sandeep Shirkhedkar, 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 co-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 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 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, 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 8<sup>th</sup> 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 our policy, the students are allowed only to participate in Zonal or Annual NASA.

### Scheme of Examination- 3<sup>rd</sup> Sem

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	T	D	S/P	Total	L	T	D	S/P	Total					
1	3S-A-1	Architectural Design II	DC	AR	2	0	0	5	7	2	0	0	5	7	Sessional Viva-Voce		100	100	100
2	3S-A-2	Construction Technology & Materials III	DC	AR	2	0	2	0	4	2	0	2	0	4	Sessional Paper	3	100	100	50
3	3S-A-3	Structural Design & Systems-III	ES	AR	2	1	0	0	3	2	1	0	0	3	Sessional Paper	3	30	100	40
4	3S-A-4	History of Art & Architecture III	DC	AR	2	1	0	0	3	2	1	0	0	3	Sessional Paper	3	30	100	40
5	3S-A-5	Architectural Graphics - III	DC	AR	1	0	2	0	3	1	0	2	0	3	Sessional		50	50	25
6	3S-A-6	Surveying and Levelling	DC	AR	1	0	0	1	2	1	0	0	1	2	Sessional		50	50	25
7	3S-A-7	Climate & Architecture	DC	AR	1	0	1	0	2	1	0	1	0	2	Sessional Paper	3	30	100	40
8	3S-AA-1	Elective a	DE	AR	1	0	2	0	3	1	0	2	0	3	Sessional		100	100	50
9	3S-AA-2	Elective b	DE	AR	1	0	2	0	3	1	0	2	0	3	Sessional		100	100	50
<b>TOTAL</b>					<b>13</b>	<b>2</b>	<b>9</b>	<b>6</b>	<b>30</b>	<b>13</b>	<b>2</b>	<b>9</b>	<b>6</b>	<b>30</b>			<b>1000</b>	<b>1000</b>	<b>460</b>

**Total Paper-5, sessionals- 6, viva-voce- 1 (Passing heads- 11)**

Environmental Studies/Rural Architecture/Vernacular

ElectivA Architecture/Environmental Impacts/

History of Indian Traditional Art & Crafts/Art Appreciation/Architectural

ElectivB Documentation/Critical Appreciation

## **DESIGN III**

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### **Architectural Design**

**Design Co-ordinator** – Ar.Seema Burule

#### **Design Team-**

**Sec A-** *Dr.Roopal Deshpande, Ar. Sarika Joshi , Ar. Herpreet Saggu*

**Sec B-** *Prof. Pratima Dhoke, Ar. Tarika Dagadkar, Ar. Sneha Bodhankar,*

**Sec C-** *Ar. Seema Burele, Ar. Isha Pawar.*

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#### **Introduction**

In the first year, the methodology adopted was to take the students from known to unknown. Students worked on single activity, simple circulation and composition of activities on sloping site. Design in III Semester carries forward the understanding of the previous semester with the added complexities of multiple activities, modular coordination with application of knowledge of climatology. Architectural designing is a complex process involving interactive relationships between parameters of diverse nature and varying magnitude. Once upon a time architecture was concerned with only the design and construction of buildings, but no longer is this so.

The projects for III semester is planned with due consideration for further refinement of their understanding of issues related to composite activities, impact of site and site features on planning and implementing the climate responsive strategies in design.

#### **Designing with Climate-**

The natural environment is either a hindrance or a help, and the architect must be able to utilize his powers to make the best of both. The architect's main aim is to make a building habitable and comfortable. He must be able to control climatic elements such a daylight, humidity, air movement, thermal conditions etc. by evolving a design process that utilizes these climatic parameters. The climatic approach should be integrated with the design process from the beginning, that is, the climatic parameters should be looked at simultaneously with the other aspects of building design.

The idea of a climatically responsive design is that it should modulate the conditions so that they are always within or as close as possible to the comfort zone.

#### **Objectives -**

The main emphases in the III Semester Design Problems are:

- Simplicity to complexity

- Complex circulation systems
- Set of functional activities
- Modular assembly
- Properties of free form
- Climate responsive approach

Students will be dealing with two projects one minor and one major, details of which are given in table below.

Sr.No	Project	Major thrust area	Duration
1.	<b>Major Project</b>  Guest house with Food court	<b>Modular co-ordination-</b> understanding the concept of module, super module and cluster design. <b>Climate responsive approach-</b> Study of climatic data for different climatic zones, study of Mohoney's table for applying the climate responsive design strategies. Sun study and wind analysis for orientation, shading, lighting and fenestration designing.	8 week
2.	<b>Minor Project</b>  Designing an Outdoor Installation (Site specific)	Designing the installation on the concept of Eight Millennium Development Goals (selecting any one)	2 weeks

## **MAJOR PROJECT : GUEST HOUSE at Gorewada**

### *Introduction*

**Gorewada Zoo** is in Nagpur district of Maharashtra state, India. On commission, this is likely to be one of the largest captive Zoo Safari in India with over 1914 Hectares of land adjoining the Gorewada Lake. The Park is having various features showcasing Tribal Art, Rescue Centre for Wildlife, Indian Safari, Interpretation Centre and Night Safari.

In 2006, the Government of Maharashtra identified land of approximately forest land for establishing the project adjacent to the Gorewada Lake and at 8 km from the heart of Nagpur. The project to create an International Standard Zoo at Gorewada, Nagpur was entrusted to the Forest Development Corporation of Maharashtra. To make the Zoo park financially viable, the State transferred additional Non-Forest Land for commercial utilization.

Considering this backdrop, the major project is to design the Guest House for Forest Development Corporation of Maharashtra (FDCM). This guest house will be government guest house which will accommodate VIP, VVIP officials, ministers and a large number of visitors. Though the building is primarily a guest house, it also acts as a node for political meetings, government authorities' discussions and conferences.

As a guest house, the building has to have cozy ambience as well as capacity to accommodate the large crowd. The support facilities are also very essential to sustain the main function of the building. The typology selected will facilitate students to understanding the concept of modular co-ordination along with the climate responsive strategies.

### **Objectives:**

- To make students understand the concept of Modular Co-ordination.
- To integrate climate responsive approach with design.

### **About the Project-**

Students are supposed to design a Guest House on the given site. The guest house shall include an administrative block, Guest rooms (single & triple occupancy, VIP suits) Restaurant and food court with kitchen, wash areas, storage and other required spaces, Indoor and outdoor sports facilities etc.

### **About the site-**

The site is located in the vicinity of Gorewada zoo which is 13 km from Nagpur. Nagpur has a tropical climate. In winter, there is much less rainfall than in summer. The temperature here averages 26.9 °C. About 1092 mm of precipitation falls annually. The city has dry weather for most of the year. They are equally warm during the summer of March to June. May is the highest temperature in May. November to January is the period of winter. In winter the



temperatures below 10 degrees are below. Owing to its geographical location, the climate of the city is hot and dry for most of the time in a year. The summers are crucial and needs to be dealt through climate responsive architectural strategies.

### **Stages of work:**

#### **Stage 1: Exercise I**

##### **Creative exercise**

**Objective:** to make the student understand

- Module, Super module and cluster
- Composition of modules and super module
- Transferring the module in third dimension so that the composition is identified as a modular building.

**Method:** Taking a 15 bricks (from brick kits) and considering one brick as a module.

OR

Deriving the module choosing any shape but with restricted area.

#### **Stage 2: Discussion on Guest House and precedent study.**

- What is a Guest House? Its role.
- Its requirements and considerations.
- Difference between Guest house and Hotel.
- Other activities associated with the guest house.
- Types of possible accommodations like: single occupancy, double occupancy, dormitory.

#### **Stage 3: Formulation of Design Programme**

- Formulation of Design Programme.
- Area requirements according to the activities listed out.
- Circulation between different activities.
- Data collection by referring the standards.
- Facilitation for derivation of shapes of rooms and other activities too.

#### **Stage 4: Modular Arrangements**

Trying out various types of arrangement with the finalized modules of single rooms, twin rooms and double bed rooms.

### Stage 5: 3D compositions

Preparation of alternative 3D models with the selected modular arrangement and combining all the modular and non-modular activities.

Finalization of module and its orientation on site as per chosen climatic zones. While arranging the modules, emphasis will be on retaining the modular character to the building in third dimension fulfilling the climatic requirements of the selected zone. Students to analyze their own designs with the planning criteria and principals of visual compositions.

**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.

Stages	Objectives	Teacher's input	Expected output	Time duration
<b>Stage-1:</b> Creative exercise- 2D Composition of derived and finalized module	To understand the concept of modular co-ordination	Instructions regarding exercise, hands on exercise for better understanding	1 A2 sheet with model	½ week 1 <sup>st</sup> & 3 <sup>rd</sup> July 2019
Stage2: Introduction to the project	To understand the concept of guest house, different activities associated with it, area requirement, Introduction to user preferences and facilitation required.	Presentation by faculty on the typology selected.	A2 size sheets	1 week 8 <sup>th</sup> July 2019
<b>Stage 3-</b> Precedent study and data collection	To analyze the typology with respect to the activity and climate responsive approach.	Discussion	A2 size sheets	1 week 10 <sup>th</sup> , 15 <sup>th</sup> July 2019
<b>First submission- Review- I- (17<sup>th</sup> July 2019)</b>				
<b>Stage 4:</b> Formulation of Design Programme	To identify the activities and the area required for designing the given typology.	Discussion	A2 size sheets	1 week 22 <sup>nd</sup> July 2019
<b>Stage5:</b> Introduction to the proposed site-Site study & analysis.	To understand the site context, view points from the site and to the sites. To identify areas for placement of activities on site. To identify the site potential to decide orientation of blocks on site.	Discussion	A2 size sheets and model	1 week 24 <sup>th</sup> July 2019

<b>Stage 6:</b> Modular Arrangements and 3D compositions	To make student understand and visualize the 3D form of the final modular composition. To derive a balanced composition.	Discussion and hands on exercise.	A2 size sheets and Model	1 weeks 29 <sup>th</sup> & 30 <sup>th</sup> July 2019
<b>Stage 7:</b> Revision of 3D composition with respect to site and climatological consideration.	To make student understand the application of climate responsive strategies. To analyze the composition and rectifying the same with respect to the climatical constraints.	Presentation by faculty and hands on session in climatology lab.	A2 size sheets and Model	½ week 5 <sup>th</sup> August 2019
<b>Second Submission- Review-II (7<sup>th</sup> August 2019)</b>				
<b>Stage 8:</b> Architectural detailing	To represent and explain the entire proposal in form of detail drawings.		Sheets with detail finished model	3 weeks 14 <sup>th</sup> , 19 <sup>th</sup> , 26 <sup>th</sup> , 28 <sup>th</sup> August 2019, 4 <sup>th</sup> Sept. 2019
<b>Third Submission- Review-III Pre final Submission (9<sup>th</sup>, 11<sup>th</sup> September 2019)</b>				
<b>Final Portfolio submission (4<sup>th</sup> OCT. 2019)</b>				
<p><b>Submission requirements of sheets and models:</b></p> <ol style="list-style-type: none"> <li>a. Creative exercise</li> <li>b. Precedent study</li> <li>c. Data collection</li> <li>d. Facilitation</li> <li>e. Site analysis</li> <li>f. 3D Composition</li> <li>g. Site plan</li> <li>h. Details of each block <ol style="list-style-type: none"> <li>i. plans</li> <li>ii. elevations</li> <li>iii. sections</li> <li>iv. sketches/views</li> </ol> </li> <li>i. Models- study models and final model</li> </ol>				

**MINOR PROJECT –**

**Outdoor Installation** - based on Eight Millennium Development Goals of Sustainability

Duration: 2 weeks

**Introduction**

Installation means a work of art that usually consists of multiple components often in mixed media and that is exhibited in a usually large space in an arrangement specified by the artist or designer. The installation to be designed is based on the theme of Eight **Millennium Development Goals** that had been established following the Millennium Summit of the United Nations. The goals are

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve maternal health
6. To combat HIV/AIDS and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development



**Objectives:**

To make students understand the concept of installation.

To make students understand the guide lines while designing the installation.

To understand the design of site-specific *installations*

To understand the different types of construction materials and techniques used for installation.

Date	Module	Module description and task	Teachers input	Expected work
16 <sup>TH</sup> , 18 <sup>TH</sup> SEPT. 2019	Introduction Concept evolution	Theme, material, purpose, location and detailing	Presentation by faculty on outdoor installations.	A2 sheet with working model

<b>Review-1 18<sup>TH</sup> SEPT. 2019</b>				
23 <sup>RD</sup> , 25 <sup>TH</sup> SEPT. 2019	Model and presentation drawings	Detail drawings with finished 3D workable model	Discussion	A2 sheet and finished model
<b>PRE- Final submission of Minor Project and Review on 30<sup>TH</sup> SEPT. 2019</b>				

**Internal (external) Jury**

**Final Portfolio submission (4<sup>TH</sup> OCT. 2019)**

Minor project	Major project	Attendance	Total
20	60	20	100

## CONSTRUCTION TECHNOLOGY AND MATERIALS- III

**Construction Coordinator** - Ar.Tarika Dagadkar

Team : Ar.Vishwas Dikhole, Ar.Tarika Dagadkar , Ar.Seema Burule, Ar. Sarika Joshi, Ar. Sneha Bodhankar, Ar. Isha Pawar, Ar. Harpreet Saggu

Sr. No	TOPIC	Objectives	TIME PERIOD	Teaching Methods Active/Passive						Expected output For evaluation	Marks weighatge
				Active			Passive				
				Model making	Site visit objective	Creative .Exercise.	Ppt.	Audio visual	Interactiv e teaching	Sheets, Sketches, tutorials, market survey of materials, models	
1	Recapitulation of Timber as building material and its Joinery details.	To make students aware of joinery details in timber	1st July						Interactiv e teaching	Sheet Model	
2	Introduction to floor as building element & different types of flooring materials.  Timber flooring - Single, double and triple flooring.  Other types of	Timber flooring and its construction techniques	3rd, 8 <sup>th</sup> July	Model			Ppt	<a href="https://www.youtube.com/watch?v=PmgOW6_-yyc">https://www.youtube.com/watch?v=PmgOW6_-yyc</a>	Interactiv e teaching	Tutorial Model	

	floor										
3	Introduction to Roofs. Timber roofs.	To understand the roof geometry and its different forms	<b>10<sup>th</sup> July</b>				Ppt		Interactive teaching/ sketches	Tutorial Sheet Model	
4	Introduction to staircases – materials and guidelines for design consideration	Design guidelines for staircases and to understand its graphical representation	<b>15<sup>th</sup> July</b>				<b>Ppt</b>		Interactive teaching		
5	Introduction to wooden and steel staircase	Timber as a construction material for staircase	<b>17<sup>th</sup> July</b>	-	-		Ppt	-	Interactive teaching	Sheet Model	
<b>A - Portfolio Submission –20<sup>th</sup> July2019</b>											
6	Introduction to materials of RCC, cement, sand aggregates	To understand Materials Availability Proportions	<b>22<sup>nd</sup> July</b> <b>24<sup>th</sup> ,</b>	--	Market Survey-1 To know market forms available for different materials	-	Ppt.	-	Interactive teaching		<b>Grade Review</b>
7	Reinforcement arrangement and Schedule of Reinforcement	To understand the geometry of RCC elements:	29 <sup>th</sup> July	-	-	-	Images display	-	Interactive	Sheets Model	

	for different types of columns	Columns							teaching/ and hands on discussions		
8	Reinforcement arrangement of RCC footings- Isolated, combined and eccentric footing	To understand the reinforcement details of foundations	31st July, 5 <sup>th</sup> August	Model making Rein. bars	Site visit-1	-	Ppt	<a href="https://www.youtube.com/watch?v=1fzVz1O WV3 A">https://www.youtube.com/watch?v=1fzVz1O WV3 A</a>  <a href="https://www.youtube.com/watch?v=D5ZMhN EqNM Y">https://www.youtube.com/watch?v=D5ZMhN EqNM Y</a>	Interactive teaching with blackboard sketches	Sheets Model	
9	Schedule of Reinforcement for RCC column and column footings	To understand the reading of structural drawing	7 <sup>th</sup> August	-	-	-	-	-	Interactive teaching	Sheets Model	
<b>B - Portfolio Submission – 16<sup>th</sup> August 2019</b>											
10	Reinforcement of RCC Beams and chajjahs	To explain reinforcement details of other	<b>14th Aug 19th, 21st Aug</b>	-	-	-	Ppt	<a href="https://www.youtube.com/">https://www.youtube.com/</a>	Interactive teaching	Sheets Model	



		RCC elements						watch?v=Xs8c_Oi2LBA			
<b>SESSIONAL EXAM</b>											
11	Slab reinforcement	To explain the difference bet. one way, two way, continuous and cantilever slab	<b>4<sup>th</sup>, 9<sup>th</sup> Sept, 11<sup>th</sup>, 16<sup>th</sup>, 18<sup>th</sup> Sept</b>		Site visit-2		Ppt		Interactive teaching	sheets Site visit-2 Site visit Report	
12	Introduction to RCC staircase	Reinforcement of RCC staircase	23rd, 25th Sept		Site visit-3		Ppt	<a href="https://www.youtube.com/watch?v=CBEqgymgr6w">https://www.youtube.com/watch?v=CBEqgymgr6w</a> <a href="https://www.youtube.com/watch?v=G3twgSWGSNM">https://www.youtube.com/watch?v=G3twgSWGSNM</a>	Interactive teaching	Site visit-3 Site visit Report sheets	
<b>C - Portfolio Submission -30<sup>TH</sup> Sept 2019</b>											

13	Introduction to Steel truss	Different geometric forms of trusses and truss details	<b>30<sup>th</sup> Sept, 3<sup>rd</sup> Oct</b>				Ppt	<a href="https://www.youtube.com/watch?v=1OIJQyZ3YIw">https://www.youtube.com/watch?v=1OIJQyZ3YIw</a>	Interactive teaching	Sheets Site visit-4 Site visit Report	
14	Introduction to North light truss			<b>4<sup>th</sup> Oct</b>		Site visit-4		Ppt	<a href="https://www.youtube.com/watch?v=1OIJQyZ3YIw">https://www.youtube.com/watch?v=1OIJQyZ3YIw</a>	Interactive teaching/sketches	<b>Sheets</b>
<b>C- Final Submission 5<sup>th</sup> Oct. 2019</b> <b>Sessional exam -02</b> <b>Doubt Class -7<sup>th</sup> ,9<sup>th</sup> October 2019</b>											

**Assignments shall be evaluated as follows:**

Sketch book	Model	Site Visit	Tutorials	Market Surveys(material)
Quality of Sketches	Scale & Proportion	Site Observations and method of documenting site visit report (compilation on sheet, audio visuals/photographic documentation.	No. of questions	Information from surveys
Proportion	Material		Contents of Ans.	Reviews

## Evaluation Scheme

S.No.		%
1	Attendance	20
2	Sheets, , Tutorials, Sketch Books, Model	20
3	Site visit	10
4	Sessional	40
5	Test / Viva	10

## ARCHITECTURAL GRAPHICS

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**Team** –Ar. Madhura Rathod, Ar.Tarika Dagadhkar, Ar. Seema Burele, Ar. Sneha Bodhankar, Ar.Sarika Joshi, Ar. Isha Pawar

Third semester Graphics, subject helped students to know about perspective. This semester will take students to the world of perspectives. Looking forward to enjoy, learn and enhance our knowledge.

### FORMAT FOR TEACHING PROGRAM

MONTH	DATES	TOPIC	OBJECTIVES	ASSIGNMENTS
<b>UNIT I</b>				
<b>JULY 2019</b>	2 July 2019	Recapitulating Semester II -Isometric, Axonometric and oblique views	To recall and refresh Semester II Syllabus	1no. A2 size sheet
	9 July 2019	Introduction and Presentation to perspective - vocabulary, types, methods + exercise on direct method  Three point perspective worms eye views and bird's eye view  Photographic Documentation of perspective images and analysis	To know the basic concepts of perspective like stand point eyelevel ,picture plane and to understand the different methods of drawing parallel perspective of block assembly and interiors  Introduction of very uncommon method used for drawing views from specific angle.  To involve students into topic as Perspective	2 no. A2 size sheets  2no. A2 size sheet

	16, 23, 30 July 2019	Introduction and problems on Parallel Perspectives	To understand the methods of drawing parallel perspective. Various examples on blocking ,height reductions and for interiors	6 no. A2 size sheets
<b>Unit I submission on 30<sup>th</sup> July 2016</b>				
<b>UNIT II</b>				
<b>AUGUST 2019</b>	6, 13 August 2019	Detail explanation of two point perspective – Direct Method and measuring point	To understand the methods of drawing angular perspective. Various examples on blocking ,height reductions and for interiors	4 no. A2 size sheets
	20 August 2019	Exercises on two point perspectives – measuring point methods	Measuring point method for interiors and building forms	3 no. A2 size sheets
<b>Submission of Unit II on 20<sup>th</sup> August 2017</b>				
<b>MID SESSION SUBMISSION SEPT. 2017</b>				
<b>UNIT III</b>				
<b>SEPTEMBER 2019</b>	3 Sept. 2019	Exercises on building elements - two point perspectives - measuring point methods	Practicing their skills on actual drawings made by them in Design.	2 no. A2 size of design Project
	17 Sept. 2019	Building perspective	Sharpening the psychomotor skills.	2 no. A2 size of design Project
		Interior views by one /two point perspective		2 no. A2 size of design Project
<b>Unit III Submission on 15<sup>th</sup> Sept. 2016</b>				

<b>SEPTEMBER</b>	<b>24 Sept. 2018</b>	Approximation method Three point perspective	Improving the skills of sketching through this method for design projects through grid method, campus and site and landscape	2 no. A2 size of design Project
		Rendering Techniques	To understand various mediums, techniques and methods of rendering through shading, hatching and colour Rendering any 5no. perspectives drawn	2 no. A2 size of design Project
<b>Pre-Final Submission on 24<sup>TH</sup> SEPT 2019</b>				
<b>Final Portfolio submission on 1<sup>th</sup> Oct. 2019</b>				

**Evaluation Scheme:-**

Sessional Marks only- 50

Mini. Marks: 25

<b>Topics</b>	<b>Max Marks</b>
Portfolio	30
Attendance	10
Sessional	10
<b>Total</b>	<b>50</b>

## HISTORY OF ART AND ARCHITECTURE -III

**Teacher in-charge: Dr. Roopal Deshpande and Ar. Sarika Joshi**

Date	Topics to be covered	Task given
01/7/19	<ul style="list-style-type: none"> <li>• Introduction to syllabus, purpose of learning history</li> <li>• Introduction to Islamic architecture, its concepts, its ideology, its rulers, their contribution etc.</li> <li>• Difference between religious structures , typical mosque and a temple</li> </ul>	Notes
08/7/19 15/7/19	Imperial style, Slave dynasty Evolution of Tomb typology and Mosque typology in India	Sketches/notes
29/7/19 05/8/19	Imperial style, Khalji , Tughlaq , Sayyad, Lodi Dynasty Evolution of Tomb typology and Mosque typology in India	Sketches/notes
08/8/19	Provincial style - Gujarat, Mandu, Jaunpur, Gulbarga	Sketches/notes
	Provincial style - Bengal	Sketches/notes
22/8/19	Mughal architecture- Contribution of Babar and Humayun	Sketches/notes
	Mughal architecture- Contribution of Akbar. Planning Principles of Fateh -pur sikri	Sketches/notes
26/8/19	<ul style="list-style-type: none"> <li>• Mughal architecture- Contribution of Jahangir and Shahjahan</li> <li>• Marble architecture and Climax of Mughal style- The Taj Mahal</li> </ul>	Sketches/notes
09/9/19 15/9/19	<ul style="list-style-type: none"> <li>• Introduction to Modern Architecture</li> <li>• Impact of Industrial Revolution on society and architecture</li> <li>• Explanation on how, aesthetics changed during IR period and emergence of steel and concrete as new materials</li> <li>• <b>Introduction to assignment on Islamic architecture</b></li> </ul>	Notes Tutorial
23/09/19	Steel as a material	Sketches/notes
	Concrete as material	Sketches/notes
	Schools of thought - Chicago School	Sketches/notes
30/10/19	Schools of thought - Bauhaus School, Gropius and Philosophies of Master architects- Mies Van der Rohe	Sketches/notes
	Philosophies of Master architects- Early works of Le- Corbusier	Sketches/notes

	Philosophies of Master architects- F.L.Wright	Sketches/notes
<b>07/10/19</b>	Impact of IR on Indian Architecture	Notes
	Philosophies of Master Indian Architects, B.V.Doshi, Charles Correa, Achyut Kanvinde, Raj Rewal, Laurie Baker	Sketches/notes
<b>10/10/19</b>	Planning concepts - Chandigarh	Sketches/notes

**Evaluation Scheme**

<b>Submission for evaluation</b>	<b>marks</b>
<b>Sessional exam</b>	<b>30</b>



## CLIMATE AND ARCHITECTURE

Team: Ar. Vaijayanti Yadav, Ar. Sneha Bodhankar

Dates	Syllabus	Task Given/ Activity
1, 4,8, 11,15,18, July 2019	Recapitulation and General introduction about subject	Interaction
	Study of vernacular Buildings as per climatic zones in India	Lecture
		Discussion
		Group work- Finding out the respective examples
		Review
		<b>Presentation</b>
22, 25, 29 July 2019 1, 5, 8, 19, 22 Aug 2019	Passive techniques Contemporary passive techniques	Lecture
		Group work- Finding out the respective examples
		Review
		<b>Presentation</b>
		<b>Presentation</b>
<b>SESSIONAL EXAM</b>		
5, 9, 12, Sept 2019	Effect of climate on: Topography, Vegetation, Form, Material, Surface of building Climatic data	Lecture
16, 19, 23 Sept 2019	Presentation of data and Analysis , Methods & Approaches to Design	Lecture + discussion
26, 30 Sept 2019	<b>Revision Class and Paper Discussion</b>	Lecture, <b>Dought Clearing Class</b>

### Evaluation Scheme

Sessional exam	30 marks
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## **STRUCTURAL DESIGN AND SYSTEMS-III**

Team: Er. Roopal Wadegaonkar

<b>Months/ Dates</b>	<b>Syllabus</b>	<b>Task Given/ Activity</b>
July	Stability of retaining walls Direct and bending stresses	Lecture
		Lecture
		Submission -1
		Lecture
August	Stress- strain curve Column by Eulers and Rankins method	Lecture
		Lecture
		Lecture
	Bending moment and shear force diagram of simply supported and cantilever beams	Lecture
		Lecture
September	Principle stresses and strains Application of Mohr's circle Concept of analytical method	Lecture
		Lecture
Assessment = Sessional (20) + STM (10) = 30 Marks		

## **SURVEYING AND LEVELLING**

Team: Sandeep Shirkhedkar, Isha Pawar

<b>Date</b>	<b>Contents</b>	<b>Submission</b>
6 <sup>th</sup> and 20 <sup>th</sup> July 19	Chain and compass survey, traversing map Survey of cluster of buildings map	<b>Assignment I ( July 2018 )</b>
3 <sup>rd</sup> and 31 <sup>st</sup> Aug 19	Leveling: using dumpy level and automatic level.	
7 <sup>th</sup> and 21 <sup>st</sup> Sept 19	Contour survey, plotting contour maps	<b>Assignment II ( Sept 2018 )</b>

### **Evaluation Scheme**

<b>Attendance</b>	<b>Sessional exam</b>	<b>Assignment 1</b>	<b>Assignment 2</b>	<b>Total</b>
10	10	15	15	50

## **ELECTIVE A**

### **VERNACULAR ARCHITECTURE**

**Team: Ar.Seema Burele, Ar. Isha Pawar.**

Vernacular architecture is based on needs of the local people, construction materials and reflects local tradition; it was relied on design skills and tradition of local artisans. However since the 19<sup>th</sup> century, seeing the benefits of vernacular architecture in terms of sustainability, energy efficiency, many professionals have adopted the style.

It tends to evolve over time to reflect the environmental, cultural technological, economic, and historical context in which it exists.

It is important to understand the adaptive use of traditional knowledge in vernacular construction in the present context.

<b>Sr. No</b>	<b>Topic</b>	<b>Teachers Input</b>	<b>Expected Output</b>	<b>Duration/ Submission</b>
1.	Introduction to Vernacular Architecture	PPT, Discussion	Understand Peculiar characteristics of vernacular architecture	2 <sup>nd</sup> July
2.	Interpretation of vernacular architecture in terms of its – <ul style="list-style-type: none"><li>• Functional aspects.</li><li>• Cultural aspects.</li><li>• Climatic considerations.</li><li>• Construction methods and techniques.</li><li>• Materials</li></ul>	Study of Indian context w.r.t. Vernacular architecture and its parameters.	Select and study any one region from Indian context.	4 <sup>th</sup> to 6 <sup>th</sup> July <b>Assignment I</b> ( 30 <sup>th</sup> July )
3.	Reinterpretation of vernacular architecture in Modern construction	PPT, Discussion	Understand its significance in modern era.	1 <sup>st</sup> Aug
4.	Study of Architects who worked on vernacular architecture & their projects.	Discussion	Select one Architect & study their project.	2 <sup>nd</sup> & 3 <sup>rd</sup> Aug <b>Assignment II</b> ( 6 <sup>th</sup> Aug )
5.	Site visit	Discussions	Students will analyze the dwelling units studied at village in terms of material and its construction techniques.	3 <sup>th</sup> Sept to 7 <sup>th</sup> Sept <b>Assignment III</b> ( 12 <sup>th</sup> Sept )

#### **Evaluation Criteria :**

Attendance	Sessional exam	Assignment 1	Assignment 2	Assignment 3	Total
20	20	15	15	30	100

**ELECTIVE A****ENVIRONMENTAL ARCHITECTURE**

Team: Ar. Tarika Dagadkar, Ar. Sarika Josh

**Objective:** The objective of this teaching program is to sensitise students and bring awareness of environmental issues and study it in relation to architecture.

Unit	Contents	Learning Objective	Teachers' Input	Expected Output	Dates	Submission Date	Marks weightage
Unit 1	Recapitulation of environmental concern	To introduce students to the subject through informal discussion	discussion		5July		
	Introduction to green building and rating system	understanding the concept and necessity	presentation on seven categories in rating system	design of small building with an objective to integrate categories of green building rating	12th july	20th july	
	project application		Site visit To Madhav Netralaya		19th july		

Unit2	Brief intro to sustainable sites	understanding the site specific design consideration	Design Major Project Site Study and Analysis		2nd August	19th August	
	Introduction to innovative water conservation and efficiency	Understanding the issues relating to our immediate surrounding	Instructions to be given on site		9th August		
	Interrelation of energy and atmosphere-at different building phases		class discussion	Presentation by individual student	16th August		
	Principles of solar passive architecture	Through the understanding of various examples	Presentation by faculty Visit to green rated building at NEERI	Assignment - Choose Rated buildings to study the topics	23rd August		
	Materials and Resources	understanding the importance of 3Rs	class discussion		30th August		

	Indoor environmental quality	Relating the parameters of Human Physiological comfort , rate of ventilation and types of Ventilations	PRESENTATION BY FACULTY		6th Sept	7th Sept		
	Regional priority	understanding the geographically significant environmental local issues	PRESENTATION BY FACULTY		13th Sept			
	Application in design project	Application of study in architecture		Students work on detail study of building along with the drawings and specifications	20th Sept			
Test								
<b>FINAL SUBMISSION</b>						27 <sup>th</sup> September 2019	80	
TOTAL MARKS - ASSIGNMENTS (60) + TEST (20) + ATTENDANCE (20) = 100								

## **ELECTIVE B**

### **ARCHITECTURAL DOCUMENTATION**

Team: Ar. Neeta Lambe, Ar. Sneha Bodhankar

#### **Introduction:**

Architectural documentation is the capture of information relevant to understanding the physical configuration, history, evolution and condition of historic sites at known points in time. It is based on the recording of primary evidence (the historic fabric itself as well as documentary, pictorial and other evidence) and the research of secondary sources.

Through this elective, a structure would be identified and efforts would be taken to prepare record of these buildings in terms of its historical background, measured drawings and photographic documentation.

**Course Objectives:** To create resource material through understanding the heritage for education and training of students in enabling them to develop their skills and comprehension of the discipline of architecture.

#### **Studio Schedule**

<b>Date</b>	<b>Module</b>	<b>Contents</b>	<b>Objectives</b>	<b>Site visit</b>	<b>Assignment for Submission</b>	<b>Submission Date</b>
5 <sup>th</sup> July		Introduction to Elective-Architectural Documentation Explanation of term, Documentation Library visit to show existing documentation Introduction to Architectural Documentation schedule, Purpose of Documentation, types of documentation, Explanation about the methods of documentation Introduction about compilation of documentation, scales used, sheet formats etc	To make students understand to acquire knowledge to advance the understanding of our past, our history, cultural heritage, and its associated values and thus forward the understanding of life, as it is today and helps to explain present phenomena.			Tutorial -1



12 <sup>th</sup> July	<b>Module A</b>	Documentation Site Identified: <b>Temples of Bajargaon, 24 km. From Nagpur</b> Documentation of Main structures and residential cluster around it along with construction style.  <b>-On site measurement</b>	To provide/create a permanent record /reference of historic buildings and sites  To rediscover history and heritage and sites and demonstrate the importance of 'looking, seeing and interpreting through hands'.	2 <sup>nd</sup> week	Groups to be identified for field work  On site measurements	Sketches, photos, documentary
19 <sup>th</sup> - 26 <sup>th</sup> July 2019  2, 9, 16, 23 August 2019	<b>Module B</b>	visited site . <b>Work on Detailed measured drawing of a structure of visited site</b>	To make student understand on how to document structures.		Measured Drawings and sketches	Sheets
<b>First Submission- 23<sup>rd</sup> August -Measured Drawing- Assignment 1 Module B</b>						
13, 20 Sept. 2019	<b>Module C</b>	<b>Analysis of Documented Structures</b>	To research and relate history of Documented structures		<b>Documentary Flow Charts Debate/ Discussion</b>	<b>Presentation</b>
27 <sup>th</sup> Sept		<b>Submission. : Assignment 2 Module C</b>				
<b>Final Submission : Assignment 1:4<sup>th</sup> Oct.</b>						

#### Evaluation Scheme

S.No.	Submission for evaluation	Marks	Attendance(20)	Sessional exam(20)	Total marks(100)
1.	Module A – Site Visit	20	20	20	100
2.	Module B + C –Preparing Drawings + Analysis	40			
	<b>Total marks on assignments</b>	<b>60</b>			

**ELECTIVE B****CRITICAL APPRECIATION**

Studio Duration

Team: Dr. Roopal Deshpande Ar. Harpreet Saggu

**Objective:** The overall objective of this teaching program is to sensitise students towards the appreciation of different art forms, and through this understanding learn the critical appreciation of architecture.

Unit	Contents	Learning Objective	Expected Output	Dates	Submission Date	Marks weightage
Unit 1	Introduction to various art form	To introduce students to critical appreciation through informal discussion	Sketches / mindmapping on half imperial sheet	05 july	19th July	5
	Established theories of critical appreciation	To introduce various established theories on critical appreciation	sketches and notes with relevant examples			
	Viewing of media - advertisements (4-5 genres). Informal discussion in groups of 5-6 students.					
Unit 2	Music as an age-old art form (traditional or classical & contemporary). Discussion and analysis of different genres of music.	Analysis and critical appreciation of music as one of the art forms.	Sketches/graphical representation on half imperial sheet. Identification of 'Toolkit' to analyze music	26th July to 9th Aug	16th Aug	10

	Assignment - Identification of pathbreaking song in particular genre - Group activity					
Unit 3	Painting as an age - old art form. Brief intro to 'Isms' in painting. Comparison and analysis of different styles of painting.	Analysis and critical appreciation of painting as one of the art forms.		16th Aug to 13th Sep	13th Sep	15
	Assignment - Abstract Painting. Students to paint an abstract painting. Analysis to be done on other students' paintings.	Understanding interpretation of abstract art.	Abstract painting on A4 size canvas using acrylic paint.			
	Presentation and critique of student paintings		Presentation by individual student			
Unit 4	Architecture as an ancient art form. How to critically analyze a piece of architecture.	Through the understanding of various art forms learn the critical appreciation of architecture.	Students to go to library and select buildings. Identification of 'Toolkit' for analysis of architecture.	20th Sept to 4th Oct	4th Oct	30
	Assignment - Choose any 2 contemporary buildings and YOUR ON DESIGN PROJECT analyse them. Group Assignment	Application of critical analysis to critical appreciation of architecture	Critical analysis of selected buildings based on toolkit. Assignment be presented/submitted in group form			
Test	self appraisal of the design project.					20
<b>FINAL SUBMISSION</b>					<b>11th Oct 2019</b>	<b>80</b>

TOTAL MARKS - ASSIGNMENTS (60) + TEST (20) + ATTENDANCE (20) = 100