



WES
SMT. MANORAMABAI MUNDLE
COLLEGE OF ARCHITECTURE

ARCHITECTURAL DESIGN VI

STRUCTURAL DESIGN AND SYSTEMS VII

BUILDING SERVICES-IV

ACOUSTICS & ILLUMINATION

RESEARCH SKILLS & PROJECT INTRODUCTION

ELECTIVE A- ADVANCED SPATIAL ANALYSIS

CONSTRUCTION TECHNOLOGY & MATERIALS VII

ELECTIVE B - VALUATION

ELECTIVE B - URBAN PLANNING

SEVENTH
SEMESTER

ACADEMIC BOOKLET

2020 – 2021

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YEAR INCHARGE

Prof. Medha Pophale

CLASS CO-ORDINATORS

Section A: Prof. Priyanka Sambare

Section B: Prof. Sarika Joshi

Section C: Prof. 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 absentism, 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 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 –

President

Vice-president

Secretary

Vice-secretary

Treasurer

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

Sr · no	Sub Name	Load Per Week					Credits					Paper/Ses sional	Durati on in Hours	Max · Mar ks	Tota l Mar ks	Min. Pass Marks
		L	T	D	S/ P	Tot al	L	T	D	S/ P	Tot al					
1	Architectur al Design VI	2	0	0	10	12	2	0	0	10	12	Sessional Viva-Voce	12	150 50	150 50	100
2	Constructio n Technology and Materials VII	1	0	2	0	3	1	0	2	0	3	Sessional Paper	3	100 100	100 100	50 40
3	Building Services - IV	1	1	0	0	2	1	1	0	0	2	Sessional Paper	3	30 70	30 70	40
4	Structural Design and Systems - VII	1	1	0	0	2	1	1	0	0	2	Sessional Paper	3	30 70	30 70	40
5	Research Skills and Project Introductio n	1	0	2	0	3	1	0	2	0	3	Sessional Viva-Voce	3	50 50	50 50	50
6	Acoustics and Illuminatio n	1	0	0	1	2	1	0	0	1	2	Sessional Paper	3	30 70	30 70	40
7	Elective A	1	0	2	0	3	1	0	2	0	3	Sessional	3	100	100	50
8	Elective B	1	0	2	0	3	1	0	2	0	3	Sessional	3	100	100	50

Total Papers – 4, Sessional – 5, Viva-Voce – 2 (Passing Heads – 11)

Elective A – Architectural Education/Design Process/Interior Design/Landscape Design/Advanced Spatial Analysis

Elective B – Urban Planning/Conservation/ Urban Aesthetics/ Infrastructure Planning/ Valuation.

TEACHING PLANS

ARCHITECTURAL DESIGN VI

Design Co-ordinator - Ar. Medha Pophale

Teachers In charge –

Section A - Ar. Anuradha Tikkas, Ar. Priyanka Sambare, Ar. Samruddhi Amte, Ar. Madhuri Gehani

Section B – Ar. Sampada Peshwe, Ar. Aakanksha Agarwala, Ar. Namrata Tharwani, Ar. Sarika Joshi

Section C- Ar. Sanjeevani Mohgaonkar, Ar. Rashmi Tijare, Ar. Medha Pophale, Ar. Isha Pawar

SEVENTH SEMESTER (150 marks)

S.No	SUBJECT NAME & CODE	COURSE OUTCOME	
1.	7S-A-1 ARCHITECTURAL DESIGN-VII	CO1	<p>General CO To understand urban issues, rural issues, issues of development & redevelopment, urban design, urban planning, rural planning, infrastructure planning & community design etc</p> <p>Specific CO for odd semester 2020 To make students aware of the present issues and challenges of rural areas along with the schemes launched by Government of India like Smart Village Sansad Gram Yogana and other rural development schemes.</p> <p>Module 1: Understanding developmental issues and challenges and Govt. initiatives</p>
		CO2	<p>General CO To study policies, legal frameworks, methods, techniques and tools for rural and urban development with data collection and precedent studies</p> <p>Specific CO for odd semester 2020 To understand the guidelines given by Government under various developmental schemes, study of implemented schemes to understand the issues and challenges associated with rural development</p> <p>Module 2: Precedent studies and data collection</p>
		CO3	<p>General CO Context studies for ideation.</p> <p>Specific CO for odd semester 2020 Study of identified rural areas with its context for its potential for development and conceptualization of possible developmental schemes.</p> <p>Module 3: Context studies and conceptualization</p>
		CO4	<p>General CO Detailing of design intervention with consideration of its context, environmental aspects, infrastructural aspects etc.</p>

			<p>Design solution considering social, economical and cultural aspects. Study of impact of design interventions.</p> <p>Specific CO for odd semester 2020 Preparation of rural development plan with consideration of its context, environmental aspects, infrastructural aspects etc. Design solution considering social, economical and cultural aspects. Study of impact of design interventions on rural development.</p> <p>Module 4: Proposed Design intervention</p>
		CO5	<p>General CO Understanding of the overall developmental/ design issues, challenges and logical design solutions through presentation of entire scheme</p> <p>Specific CO for odd semester 2020 Detailing of proposed scheme with understanding of the overall developmental/ design issues, challenges and logical design solutions through presentation of entire scheme for rural development.</p> <p>Internal Viva Pre-final submission</p>
		CO6	<p>General CO Leading the students to equip themselves, with Professional Competency and Capabilities and sensitivity towards developmental issues and possible design interventions through planning, design & implementability through acquired knowledge / know-how in all their future works / designs, of various Buildings as Professional Architects.</p> <p>Specific CO for odd semester 2020 Understanding the overall competency of students in dealing with the chosen issues and challenges and their ability to resolve it.</p> <p>Viva(college) External Final submission</p>

Evaluation Scheme (150 marks)

Project I (Major Project) – RE-IMAGINING THE RURAL SCAPE OF WARODA VILLAGE, TAH.

KALMESHWAR, DIST. NAGPUR

Site Area – 4-5 acres

Built up area – 6000-7000 sq.m

DURATION: 5-6 WEEKS

MARKS: 75%

Introduction -

AIM FOR THE IV YEAR DESIGN PROJECT:

- An approach of holistic development needs to be initiated in the rural areas, which shall inevitably trigger the transformation of the people and their surroundings.
- To focus on improving the villages without the cosmetic facilities.

- To boost the overall economy by concentrating on the main strength of the village.
- To reverse migration and create job opportunities and raise the standard of living by making the people aware of their strengths to utilize it for the up-gradation of the villages

LEARNING OBJECTIVE:

- To realize the existing problems and addressing them by manifesting architectural ideas to evolve a humane environment.
- To incorporate the social, cultural and physical environment to help emerge either a traditional/ contemporary/ approach towards the existing village life.
- To address the regional attributes to achieve an architectural expression to create a harmonious setting within the rural scape.
- To help balance the entire rural environment by implementing the sustainable goals by integrating the climate as the basic indicator.

METHODOLOGY:

- Understand the strengths, weakness, opportunities and threats of the village
- Identify the issues and the need
- Survey or Data Collection (Primary & secondary)
- Data Analysis
- Working on the weak indicators by assessment of the reasons of the issues
- Precedent studies related to the growth and development of the village.
- Analysis and inferences of the precedent studies.
- Study of standards and rules/regulations under RDPFI (Rural Area Development Plan Formulation and Implementation guidelines)
- Proposals for the growth of the economy and standard of living of the village by a holistic framework approach.

Building typologies:

Semester	Waroda	Ridhora	Borkhedi
7 th Area 6000 to 7000sq.m	Commercial Complex cum community centre/Exhibition Pavilion, open market	Commercial Complex cum community centre/Exhibition Pavilion, open market	Mother and Child Centre
	Agro research & Development Centre	Agro research & Development Centre	Agro Hub For Exotic vegetables/ Horticulture

DESIGN PROGRAM:

Sr. no	Stages	Description	Inputs	Expected Output	Date
1	Stage I	Introduction to Design	Introduction to the concept of Rural Development		19th Oct 2020
2	Stage II	1. Discussion on the typologies to be finalized in all the three villages 2. Need of said spaces 3. analysis of study of similar spaces 4. Survey of needs, aspirations of locals.	Interactive discussion by all faculties and explaining the idea of up-gradation of the villages		20 th Oct 2020
3	Stage III	1. Understanding the need of spaces 2. Identification of Precedent Studies 3. Analysis of study of similar spaces	Suggestion of similar villages to understand the development proposals and reviewing them The students shall work in groups for precedent studies	Finalization of precedent studies Students shall study the different villages and understand the development proposals suggested for them	21st Oct 2020
4	CO1	REVIEW – I (study & analysis done by the students on precedent studies)			26th Oct 2020
5	Stage III	Understanding the inferences and the relevant proposals to be provided in the village Finalising the site as per the finalized requirements	Students will be briefed about the 3 selected sites. Discussions shall be done for the strengths and weakness of the same Design requirements will be formulated after drawing inferences from the precedent study and study of the context of the site.	In the form of Sheets. Site model is expected from the students.	27 th Oct 2020
6	Stage IV	Site Analysis, Final design program	Interpreting the site in terms of strengths and finalising areas in the design program.	In the form of sheets	29 th Oct 2020

7	CO2	REVIEW -II			2 nd Nov 2020
8	Stage V	Concept Development	Identify spatial qualities to be adopted in the form of a creative exercise. Presentation will be given by faculty about the standards by RDPFI	Concept with quality and quantity of spaces	3 rd Nov 2020
9	CO3	REVIEW - III			9 th Nov 2020
10	Stage VII	Final plans, sections & elevations, 3D views simultaneously.	Discussions, teacher-student interactions	Construction details, rural architectural expression, 3-D views	11 th Nov 2020
11	CO4 Review - IV (Intermediate Review)				23 rd Nov 2020
12	Stage VIII	Architectural detailing	Discussions, teacher-student interactions	Final sheets, plan, elevations, sections, views, models, etc.	25 th Nov 2020
13	CO5 Pre Final Submission - INTERNAL REVIEW - REVIEW V				24 th Dec 2020
	CO6 Submission of Scanned Soft Copy College External Jury				24 th Jan 2020
IIA Trophy		Brief to be given by IIA	In the form of Sheets		8 th Dec 2020

CONSTRUCTION TECHNOLOGY AND MATERIALS VII

Teachers Incharge - Ar. Sujata Godbole, Ar. Rashmi Tijare Ar. Medha Pophale, Ar. Priyanka Sambre, Ar. Isha Pawar

Objectives:

CO1 Introduction to space structures, its types. General study of shell structures and folded plate structures its various types, constructional aspects, merits and demerits etc.

CO2 Introduction to Grid structures and Skeletal structures, space frames, domes etc. in steel and its various types, constructional aspects, merits and demerits, etc.

CO3 Study of Temporary structures, various materials and techniques used, constructional aspects using timber and M.S Sections, design and detailing problems on small temporary structures.

CO4 Study of Pre-cast concrete structure, its design considerations and constraints, advantages over cast-in-situ construction, construction techniques and jointing details, applications. Modular coordination, RCC pre-fabricated proofing systems to cover large spans, with or without north light.

CO5 Study of pre stressed concrete, principals and methods of pre-stressing, system of pre-stressing, advantages and disadvantages and applications.

CO6 General study of various external cladding materials and systems, curtain walling in various materials, construction details of glass curtain.

UNIT	TOPIC	OBJECTIVES	TIME REQUIRED	TEACHING METHODS ACTIVE	EXPECTED OUTPUT
Unit I	<p>Introduction to space structures, possibilities in different materials,</p> <p>Types of space structures and possibilities in different materials to cover large spans.</p> <p>General study of shell structures and folded plate structures in concrete, various types, constructional aspects, merits and demerits etc.</p>	<p>To understand the meaning of space Str.</p> <p>To make students aware of Diff. Materials used to cover large spans.</p>	June 2 nd week	Lectures, presentation, videos	<p>Online Test on CO1 + Sketch Book + Models (1: polyhedral solids, 2: Geodesic dome, 3: Hyperboloid, 4: Space frame)</p> <p>(20 marks each)</p>
Unit II	<p>General study of Grid structures and Skeletal structures, space frames, domes etc. in steel, various types, constructional aspects, merits and demerits, etc.</p>	<p>To make students aware of Different types of grid str.</p> <p>Study of solid geometry to understand diff. types of Domes</p> <p>To study diff. types of</p>	July 1 st – 2 nd week	Lectures, presentation, videos	<p>Online Test on CO2 + Sketch Book + Model (20 marks each)</p>
4th JULY SUBMISSION OF MODEL PLATONIC SOLIDS					

11TH JULY SKETCHBOOK SUBMISSION					
Unit III	Study of pre stressed concrete, principals and methods of pre-stressing, system of pre-stressing, advantages and disadvantages and applications.	To understand the methods of pre stressing.	August 1 st week	Lectures, presentation, videos.	Online Test on CO5 + Sketch Book (20 marks each)
SESSIONAL EXAM 28TH& 29TH AUGUST 2020					
Unit IV	Pre-cast concrete, Design considerations and constraints, advantages over cast-in-situ construction, construction techniques and jointing details, applications. Modular coordination, RCC pre-fabricated proofing systems to cover large spans, with or without north light.	To make students aware of prefabricated structural Systems& their joining details.	1 st week of Sept 3 rd week of Sept	Lectures, presentation, videos.	Online Test on CO4 + Sketch Book (20 marks each)
Unit V	General study of various external cladding materials and systems, curtain walling in various materials, construction details of glass curtain.	To understand the meaning of Curtain walling, material and fixing details.	2nd week of October	Lectures, presentation, videos	Online Test on CO6 + Sketch Book (20 marks each)
Unit VI	Temporary structures, materials and techniques used, constructional aspects using timber and M.S Sections, design and detailing problems on small temporary structures.	To study diff. types of temporary str. & their Materials & erection.	3 rd , 4 th week of October 1 st week of November	Lecture	CO3 - Sketch Book + Sheets

Attendance (20)	Subject contents/ Sessional exam/ Surprise exams (40)	Plates, Models, Sketch book, tutorials (20)	Site visit / Class Test (10)	Viva (10)
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Reference books :

Advanced Building Construction by Mitchell, Allied Publishers.
 Construction Buildings by R.Barry, Orient Longman.
 Space structures by N. Subramaniam, Wheeler.
 A.J.Handbook of Building Structures by A. Hodgkinson.
 Pre-stressed Concrete Structures by P.Dayaratnan.
 Building Construction illustrated by Francis D.K.Ching, Van Nostrand.
 Concrete Technology by M.S.Shetty, S.Chand and Co.
 Erection of Pre-fabricated Reinforced Concrete Structures by Y.Bessar & V.Proskurnin.
 Structures by Daniel L.Segodak,Prentice – Hall, Inc.
 Structural Concepts and Systems for architects and Engineers by T.Y.Lin and Stotesbury

BUILDING SERVICES-IV

Subject Teachers – Ar. Rashmi Tijare & Ar. Priyanka Sambre

Building services part 4 is about advanced and more building services. the syllabus is divided majorly under 3 parts 1st is Air Conditioning and HVAC systems 2nd is Electrical distribution in campuses and Highrise buildings and 3rd is Modern means of vertical and horizontal travel.

Aim: Aim of the subject is to make students well acquainted with the above-mentioned services and make them understand its design implications as in Architect.

Objective :The objective of the subject is not only to transmit knowledge but to provide a deeper insight into the subject.

CO1- Principles of Psychometrics & heat transfer, Study of Air conditioning systems and their applicability, Unit A.Cs, Central A.Cs, Split A.Cs.

CO2- Components of A.C. systems such as chilling plants, cooling towers, air handling units, etc. Calculation of A.C. loads and Air distribution systems, ducts and ducting layouts, space requirement, integration of A.C. system in design, Water demand for A.C.

CO3- Electric supply & distribution for group housing projects, urban complexes, high-rise building etc. Study of load calculations and distribution systems for larger areas as mentioned above.

CO4- Importance and functions of bus bar, set up, step up and step down transformers, electrical substation, lightning conductors, stand by generators, automatic relays, invertors, circuit breakers etc.

CO5- Electromechanical means of vertical transportation in bldgs, requirements, occupant load, study of elevators, various components of elevators, standard space requirements

CO6- Studying Escalators & Trav-o-lators, its components arrangements and functioning, space requirements, construction detailing.

Date/Week	Topic	Learning Objectives	Input	Expected Output
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22-06-2020, 24-06-2020, 29-06-2020, 01-07-2020, 06-07-2020, 08-07-2020, 13-07-2020, 15-07-2020, 20-07-2020	Air Conditioning (10 marks)	Principles of Psychometrics & heat transfer, Study of Air conditioning systems and their applicability, Unit A.Cs, Central A.Cs, Split A.Cs. Components of A.C. systems such as chilling plants, cooling towers, air handling units, etc. Calculation of A.C. loads and Air distribution systems, ducts and ducting layouts, space requirement, integration of A.C. system in design, Water demand for A.C.	Lectures, ppts. brochures	Online Test on CO1 & CO2, 20 marks each
22-07-2020, 27-07-2020, 29-07-2020	Electric supply & distribution (10 marks)	Electric supply & distribution for group housing projects, urban complexes, high-rise building etc. Study of load calculations and distribution systems for larger areas as mentioned above. Importance and functions of bus bar, set up, step up and step down transformers, electrical substation, lightning conductors, stand by generators, automatic relays, invertors, circuit breakers etc.	Lectures, ppts. brochures	Online Test on CO2 & CO3, 20 marks each
03-08-2020, 05-08-2020, 10-08-2020	Lifts & Escalators (10 marks)	Electromechanical means of vertical transportation in buildings, requirements, occupant load, study of elevators, various components of elevators, standard space requirements, various types of elevators, various components of elevators, standard space requirements, various types of elevators and architectural implications. Escalators and Trav-o-lators, its components arrangements and functioning, space requirements, construction detailing.	Lectures, ppts. brochures	Online Test on CO5 & CO6, 20 marks each
12-08-2020		Written Test on Full Syllabus		

RESEARCH SKILLS AND PROJECT INTRODUCTION

Teachers-in-charge: Dr. Ujwala Chakradeo, Dr. Sampada Peshwe, Ar. Samruddhi Amte, Ar. Namrata Tharwani Gaurkhede

Objective: To introduce students to the basics of research methodology which can applied to a research project

Contents	Learning Objective	Faculty Input	Expected Output	Course Outcomes (COs)	Dates
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Unit 1: Watch a movie	Identification of research component in the movie	Discussion to act as a research trigger	A small paragraph / poster/ any other creative method of displaying the leanings from the movie	Sensitizing the students towards issues in architecture / society, and creating a basic understanding of research methodology	Jun. and 10 th Jul.	
Basics of research methodology	Introduction to the basics of research, discussion regarding research question	Discussion			10 th Jul.	
Submission –A4 sheet submission on learnings from the movie(s)– 10th July						
Unit 2: Identification of 3-4 contemporary architectural / social issues.	To explore various areas associated with the field of architecture.	Discussion with subject faculty and later with mentor			16 th & 17 th Jul.	
Informing students on various dependable sources for online search. Students required to search dependable online resources and if possible college library for material on their selected issue.	To get acquainted with current work being undertaken by researchers in their selected issue					
Unit 3: Mind mapping of the shortlisted issue	To explore possibilities and ramifications of their identified issue	Discussion with subject faculty and later with mentors	Mind map to be created on A1 size sheet, and scanned and submitted		Identifying pertaining data for an issue and tools for analysis, such as survey, research papers, etc.	23 rd & 24 th Jul.
Submission – 3-4 options for identified issue + 1 paragraph on selected issue; Mind Map of shortlisted issue – 30th July						
Students to discuss their issues with their allotted mentors						
Unit 4: Students to work on selected issue after discussion with their mentor and after referring to	Better understanding of the identified issues through	Discussion with mentors	List of books and research papers. In case of hands-on research, documentation		30 th & 31 st Jul.	

digital/physical references and books. Student using other tools of research like physical experimentation, survey, modelling, etc. to identify method of study and start work.	literature and to embark upon their research using chalked out methods.		of ongoing experimentation.		
OPTIONAL - Students to write abstracts (One page) on the selected 2-3 books.	For students to understand to identify the crux of a book and its relation to the topic selected	Discussion with mentors and subject faculty	Students to submit abstract of paper in 300 - 400 words		
Finalization of research project	Identification of potential research area and to get to the final output	Discussion with mentors and subject faculty	Typed submission on A4 size sheets / A1 submission sheets as per the project		5 th & 12 th Aug.
Submission – list of books/ papers, book abstracts and final research domain (project) - 12 th August					
Unit 5: Students to write aim objectives, overall methodology and challenges for the research project	Basic research design of the project	Discussions with mentor and subject faculty	Submission on A4 size sheets.	Enhancing analytical skills through literature review, processing of qualitative and quantitative data	26 th Aug. and 2 nd Sep.
Identification of mode of representation of research work – poster (any other mode of presentation needs approval from subject faculty)		Discussion with mentor	First draft of poster		9 th , 16 th Sep.
Submission– First draft of final output 5 th October					
Finalization of research work (in ready to be published form)		Discussion with mentor		Learning articulation of conclusion of data analysis & communication through verbal/ graphical modes.	

Submission– Final submission of poster -19th October 2020

***Students to be allotted to prospective mentors. Students to do discussions with mentors and identify area of research for the project. Thesis in charge faculties would do the allotment.

TOTAL MARKS - ASSIGNMENTS (60) + FINAL SUBMISSION	80
ATTENDANCE (20)	20
GRAND TOTAL	100

Recommended Online Resources

Journals and Books Online (Free)

1. Google scholar/books <https://scholar.google.com/>
2. Inflibnet <https://inflibnet.ac.in/>
3. Researchgate <https://www.researchgate.net/>
4. Academia.edu <https://www.academia.edu/>
5. National Digital Library <https://ndl.iitkgp.ac.in/>
6. SWAYAM Online Courses <https://storage.googleapis.com/uniquecourses/online.html>
7. National Knowledge Network <https://nkn.gov.in/>
8. NPTEL <https://finptel.ac.in>
9. InfoPort <https://infoport.inflibnet.ac.in/>
10. Talks to Teacher https://www.ted.com/playlists/182/talks_from_inspiring_teachers
11. A-VIEW <http://aview.in/>
12. Virtual Labs <https://www.vlab.co.in/>
13. FOSSEE <https://fossee.in/>
14. Spoken Tutorial <https://spoken-tutorial.org/>
15. e-Yantra <https://www.e-yantra.org/>
16. Oscar++ <https://www.it.iitb.ac.in/oscar/>
17. E-Kalpa <https://icar.org.in/content/e-kalpa>
18. NCERT Text Books <http://ncert.nic.in/textbook/textbook.htm>
19. Directory of Open Access Books <https://www.doabooks.org/>
20. Directory of Open Access Journals <https://doaj.org/>
21. Open Knowledge Repository — World Bank <https://openknowledge.worldbank.org/>
22. UG/PG MOOCs http://ugcmoocs.inflibnet.ac.in/ugcmoocs/moocs_courses.php
23. e-PG Pathshala <https://epgp.inflibnet.ac.in/>
24. e-Content courseware in UG subjects <http://cec.nic.in/cec/>
25. SWAYAMPRAKASHA <https://www.swayamprakash.gov.in>
26. e-Shodh Sindhu <https://ess.inflibnet.ac.in/>
27. Vidwan <https://vidwan.inflibnet.ac.in/>
28. SNLTR <https://www.nltr.org/>
29. Oxford Open https://academic.oup.com/journals/pages/open_access
30. Cambridge University Press <https://www.cambridge.org/core/what-we-publish/open-access>
31. Science Direct Open Access Content <https://www.sciencedirect.com/book/9781843342038/open-access>
32. ILOSTAT <https://ilostat.ilo.org/>
33. Project Euclid https://projecteuclid.org/librarians/lib_oa
34. AidData <https://www.aiddata.org/>
35. Springer Open Journals <https://www.springeropen.com/journals>

36. Taylor & Francis Open Access <https://www.tandfonline.com/openaccess>
37. Open Access Thesis & Dissertations <https://oatd.org/>
38. Legal Information-commonlii <http://www.commonlii.org/in/>
39. The OAPEN Foundation <http://www.oapen.org/home>
40. PubMed Central PMC <https://www.ncbi.nlm.nih.gov/pmc/>
41. Project Gutenberg <https://dev.gutenberg.org/>
42. High Wire <https://www.highwirepress.com/>
43. AGRIS <http://agris.fao.org/agris-search/index.do>
44. Southern Connecticut StateUniversity <https://libguides.southernct.edu/openaccess>
45. LibriVox — Audio Books <https://librivox.org/>
46. Wiley Open Access <https://authorservices.wiley.com/open-research/open-access/browse-journals.html>
47. Training and Courses by Tata Steel <http://www.capabilitydevelopment.org>
48. Directory of Open Access Journals (DOAJ) <https://doaj.org/>
49. Shodhganga-a reservoir of Indian theses <https://shodhganga.inflibnet.ac.in/>
50. International Journal of Academic research <http://ijar.org.in/>

SMMCA e-library - Login Credentials:

URL: www.k-hub.in

Username: KB1707NGP

Password: a6Dm!jYF

Online Magazine Sources

1. Domus India
2. Architecture Design Interior Design Home Decoration magazine – AD India
3. Design Detail
4. www.iabforum.com
5. Architecure Design
6. DownToEarth
7. A+U Magazine – Magazines – Idea Books
8. Digital magazines
9. Wallpaper Magazine : design intyeriors, architecture, fashion, art
10. architetre record
11. the architrcatural review
12. modern livinf, hiome desing ideas, inspotarion and advice
13. eVolo
14. Azure Magazine – Design Architecture Intererios CUrosity
15. Icon magazine: Architecture and desing cult
16. Dezeen Magazine
17. Designboom magazine
18. ArchDaily
19. The platform for architecture and design

STRUCTURES

Teachers Incharge – Prof. Rupal Wadegoankar

CO 1 Study of IS 800 – Design Considerations.

CO2 Study of Steel Connections – Welded Joints a) Types of Welds b) Concentric Sections c) Eccentric Sections d) Sections in Bending e) Sections in Torsion.

CO3 Design of Tension Members.

CO4 Design of Compression members – Struts / Independent.

CO5 Design of Built in Columns. Design of Sections in Bending Sections Subjected to Biaxial Bending (design of purlin)

CO 6 Structural behavior of Types of Large Span Steel Structures like: a) Arches b) Open Web Sections c) Bow String Girders d) Suspension Structures e) Geodesic Dome f) Space Structure

Sr. No	Topic	Marks Allotted
1	Analysis of tension members	
2	Design of Tension Members	
3	Analysis of Compression members	
4	Design of Compression members	
5	Design of built up columns	
6	Design of girders/ beams	
7	Design of Purlins/biaxial	
8	Design of eccentric welded connections	
	Sessional Exam	30 Marks

ACOUSTICS AND ILLUMINATION

Teachers Incharge: Prof. Rajagopalan and Ar. Medha Pophale

Course Objectives:

To make students realize the importance of acoustics in interior spaces and necessity of manipulating acoustical environment in buildings and also to impart knowledge of basic illumination design & illumination system for the indoor spaces.

CO1 Study of Frequency range of audible sounds. Propagation of sound, sound reflection, diffusion, diffraction.

CO2 Sound Isolation, Mass law, Transmission loss, STC rating, TL for single & double walls sound leaks & flanking.

CO3 To study Acoustical Material & interior finishes, Sound absorbing materials & their properties.

CO4 Constructional & planning measures for good acoustical design of building in general. Learning Acoustical treatment of Auditorium / Lecture Halls / Conference hall.

CO5 Study of Light radiation, its units, Laws of illumination, inverse square law and cosine law. Artificial light calculation by Lumen Method. Light sources, various types of Lamps and their characteristics.

CO6 Learning Types of lighting systems, task lighting, accent lighting, general lighting, lighting for mood etc.

CO7 Luminaries, their types, properties and uses.

Date 2020	Content	Teacher's interaction	Expected output
17 th June	Frequency range of audible sounds. Propagation of sound.	Lecture, ppt	Notes
24 th June	Sound reflection, diffusion, diffraction. Ref. Acoustics In Building Design by K.A. Siraskar.		
1 st July	Sound Isolation, Mass law, Transmission loss	Lecture, ppt	
2 nd July	STC rating, TL for single and double walls sound leaks and flanking.	Lecture, ppt	
8 st July	Acoustical Material		
9 st July	Acoustical Material and interior finishes, Sound absorbing materials & their properties. Ref. Architectural Acoustics by David Egan.		Sketching
15 th July	Constructional and planning measures for good acoustical design of building in general.		
16 th July	Acoustical treatment of Auditorium / Lecture Halls / Conference hall. Ref. Auditorium Acoustics and Architectural Design by M. Barron.		
22 nd July	Light radiation, its units, Laws of illumination, inverse square law and cosine law.	Lecture, ppt	
23 rd July	Artificial light calculation by Lumen Method. Light sources, various types of Lamps and their characteristics.		
29 th July	Artificial light calculation by Lumen Method. Light sources, various types of Lamps and their characteristics.		
30 th July	Types of lighting systems, task lighting, accent lighting, general lighting, lighting for mood etc.		
5 th Aug	Types of lighting systems, task lighting, accent lighting, general lighting, lighting for mood etc.		
6 th Aug	Luminaries, their types, properties and uses.		

12 th Aug	Luminaries, their types, properties and uses.	Lecture, ppt	
13 th Aug	Doubt session		

The sessional exam would be in online on Google forms on the Cos which would constitute towards internal marks.

ELECTIVE A (ADVANCED SPATIAL ANALYSIS)

Teachers-in-charge: Medha Pophale, Priyanka Sambare, Namrata Gaurkhede, Samruddhi Amte

Course Objectives:

CO1: To enhance the students' ability in preparation of internship portfolio.

CO2: To prepare presentable drawings, use of advance commands of softwares like AutoCAD, photoshop, corel draw.

Date	Unit to be covered	Inputs and outputs	Evaluation
29/06/2020	Introduction		
06/07/2020	Advance AutoCAD		
13/07/2020	Photoshop		
20/07/2020	Photoshop	Students will start working on their portfolio	
27/07/2020	Corel		
10/08/2020	Discussion on student's work		
21/08/2020	FINAL SUBMISSION Assignment 1 – Soft copy to be evaluated. Submission to be done in Google drive/ MS Teams		40
21/08/2020	FINAL SUBMISSION Assignment 2 – Soft copy to be evaluated		20

Evaluation Scheme

Attendance	Sessional exam	Assignment 1- Portfolio	Assignment 2- Logo Design	Total
20	20	40	20	100

ELECTIVE B – VALUATION

Teachers-in-charge: Ar. Viswas Dikhole, 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.

CO1 Introduction to Valuation, Role of valuer and purpose of valuation.

CO2 To understand Forms of valuation

Knowing Factors affecting changes in market value, supply & demand forces.

Studying Investment market and opportunities

CO3 Knowing Characteristics of ideal investment

Investment in real properties and factors affecting real property market

To understand Methods of valuation

CO4 To understand importance of Location of Site and Building.

CO5 To study Compulsory acquisition & Land ceiling Act.

CO6 Study of Market rate survey and ready reckoner rates.

To know Valuation report format, how to read documents (sale deed, lease deed, city survey record etc)

Unit	Contents	Learning Objective	Expected Output	Submission Date	Marks weightage
Unit 1	Introduction	Introduction to Valuation, Role of valuer and purpose of valuation.	Question And Answers	3rd July 2020	20
Unit 2	Fundamentals of Valuation	To understand Forms of valuation Knowing Factors affecting changes in market value, supply & demand forces Studying Investment market and opportunities			
Unit 3	Approaches, Methods, Theories of Valuation	Knowing Characteristics of ideal investment Investment in real properties and factors affecting real property market To understand Methods of valuation			
Unit 4	Calculations for Valuation	Outgoings, depreciation, floating, FSI, dilapidations, life of structure, Forms of rent, easement	Location Plan with details	7th July 2020	10
Unit 5	Method of Valuation	To access the cost of property depending upon specifications.	Document Verification	14th July 2020	20
Unit 6	Report Writing	Study of Market rate survey and ready reckoner rates. To know Valuation report format, how to read documents (sale deed, lease deed, city survey record etc)			
		Final Submission	Valuation Report	21st July 2020	30
FINAL SUBMISSION				7th Aug 2020	40
TOTAL MARKS - ASSIGNMENT 1 (20) + ASSIGNMENT 2 (10) +ASSIGNMENT 3 (20) +ASSIGNMENT 4 (30) + ATTENDANCE (20) = 100					

Elective B – Urban Planning

Teachers Incharge: Ar. Sujata Godbole, Ar. Anuradha Bhute

CO1 Understanding various terminologies and theories of urban and rural areas for eg. Ekistics, Garden City Concept, Utopian Concepts, Broadacres (tutorial)

CO2 Study of various zones in urban context eg rural area, urban area, rural urban fringe area, Commuter belt etc with reference to communication corridors and activities (Assignment 1)

CO3 Understanding Urban rural Context and their interdependency. (Assignment 1 A)

CO4 Understanding Rural Planning Schemes which are applicable in rural Areas (Assignment 2)

DATE	TOPIC	OBJECTIVE	METHODOLOGY	EXPECTED OUTPUT
07.07.2020, 14.07.2020	Introduction to the Topic: Introducing various terminologies like Urban Areas, Urban Agglomeration, Urban Rural Fringe, Transportation etc	To understand the terminologies related to Urban Planning	Lecture & Interaction Detailed List of terminologies will be given by the teacher	Detailed list of terminologies to be read and understood
21.07.2020	Recapitulation of various concepts by Master Planners eg. Ekistics, Garden City Concept, Utopian Concepts, Broadacres,	To understand and relate the contribution of various planners in the form of planning theories	Lecture & Interaction	Test
21.07.2020. 28.07.2020	Urban Growth of a city	To understand the city growth pattern and understand various theories regarding urban growth like central place theory, concentric ring model- Burgess Model etc.	Lecture	Assignment 1
Assignment 1: Stage 1- Choose a city and demarcate the areas such as Urban Area, Urban Rural Fringe, Commuter Belt and rural area on the map (Submission to be done on 29.07.2020_				
4.08.2020	Regional Context Analysis	To understand the interdependency of rural area on urban area and vice versa	Demonstration	Assignment 1 continuation
Assignment 1 A: Stage 2- Creating Overlapping maps of Urban Areas (markings Institutes, Markets, Industries, Transportation Networks & terminals) and in Rural Areas marking Crop Pattern and their occupation structure. Submission on 11.08.2020				
11.08.2020	Role and importance of rural area in	To Understand the role of rural area	Lecture	Assignment 2:

	<p>growth of Nation. Types of rural /village settlement Problems of Rural Areas Need for rural/village Planning Methodology for Rural/Village Planning. Smart village Rural Planning Schemes</p>	<p>in growth of Nation. To understand the problems and need for rural planning To study the methodology for Rural Planning. To understand the Best Practices in Rural Planning</p>		
Assignment 2: Study and analysis of Smart Village				
Evaluation Criteria	Assignment 1 & Assignment 1 A	Assignment 2	Tutorial	Attendance
100	30	30	20	20