

No.of Teaching Weeks: 16
 Contact Hours: per week : L : 0 S: 6
 Contact Hours: per sem : L : 0 S: 72
 Credit: 06
 Total Marks:100 (E=50 I=50)

Course Title: Architectural Design
 Course Code: AP-102
 1st Year – 2022, Semester II

Objectives:

It is intended to introduce students to the process of design development through design of a small building by addressing all fundamental factors like orientation,anthropometrics,area calculations,circulation,structure and form etc.at an elementary level.

Pedagogy:

It will focus to equip the students to utilise visual images,through presentations (PPT) and via lectures. It will also encourage discussions,critiques and interactive sessions between students and teachers.The students will be empowered to develop skills for presentation and communication. They will be encouraged to read books, resulting in book reviews and to also attempt 3D-2D exercises, for improving visual stimulation.

Expected Outcomes:

The students are expected to develop sensitivity towards design, and also technical understanding, as an aid to design. It is an endeavour to make students be able to relate to architecture as an extension of life and environment. The students will also be guided to use the relevant architectural drawing equipment, to be used with full knowledge of their capacity.

TEACHING PLAN FOR SEMESTER II (Session 2020-21)

S NO.	WEEK/	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED
1	WEEK 01	Orientation		Measured Drawing of my House-Students to undertake the existing measurement of their house and draft a site plan,floor plans,elevations and sections	A2 Cartridge sheet,site plan-1:100,floor plans-1:50	Measurement Drawing
	Studio 1	Lecture-1	Review of 1st Semester/Review on Anthropometrics			
	Studio 2	Lecture-2				
					10	
2	WEEK 02	Perception Building-Elements of Nature		Existing Furniture Layout Study of my House-Students to add existing furniture layout into the floor plans.	A2 Cartridge sheet,site plan-1:100,floor plans-1:50	Understanding the fundamentals of anthropometrics
	Studio 1	Lecture-1	Review on Anthropometrics			
	Studio 2	Lecture-2				
					10	
3	WEEK 03	Visualisation & Analytical Skills		Time Problem on the Measurement Drawings based on Anthropometrics:-Redesigned Furniture Layout of my Existing House-Students to give a proposed plan and other details after doing the analysis study of their houses based on Anthropometrics.	A2 Cartridge sheet submission	Proposed Plan based on Anthropometrics after study of existing plans
	Studio 1	Lecture-1	Documentation and Measurement Drawings of different architectural elements			
	Studio 2	Lecture-2				
					20	
4	WEEK 04	Representation of Ideas and Emotions using 2D and 3D Techniques		Introduction of the House Problem-The objective will be to introduce the students the process of design development through design of a small building for addressing all fundamental factors like Orientation,Anthropometrics,Area Calculations,circulation,form and structure.The Design Problem will be a residence which will be inhabited by a family of 6,to include 2 olds,2 adults and 2 children with need to accommodate guests and consideration for pandemic.	A3 sheet sketch book submission.	Introduction of the Design Problem
	Studio 1	Lecture-1	Introduction to Design Problem-Own House Design			
	Studio 2	Lecture-2				
					Grade	
5	WEEK 05	Representation of Ideas and Emotions using 2D and 3D Techniques		The site for the residence will be shared with the students.The area of the plot will be 3000sqm.The students will be required to study the site and will be guided to how to do basic site analysis and draw inferences to progress to the further stage.Students to do literature case-study in a group of 2 of a residence done by the list of	Site Analysis on A2 sheet and Case study presentation on A3	Introduction to the site and site analysis and study of literature Case-study
	Studio 1	Lecture-1	Site Analysis and Area Programming/Introduction to Case Study-Introduction to the site and discussion on design brief			

	Studio 2	Lecture-2		2 of a residence done by the list of master architects shared by the faculty in the studio.		10+5=15 Marks	
6	WEEK 06	Basic Aspects of Building Form and Space-Principles of Design		The students will be asked to make an A3 sheet comprising a digital or physical collage of ideas which will serve as the fundamental transition between an initial thought and a first thought.	Mood/Vision Board on an A3 sheet	10	Introduction to conceptualisation and ideation. Learning how to prepare a mood/vision board for a project.
	Studio 1	Lecture-1	Ideation and Conceptualisation -Introduction to Mood Board to help establish a clear vision				
	Studio 2	Lecture-2					
7	WEEK 07	Understanding of Built Objects and Space in Relation to Human Scale		Lecture on concept and design development processes in order to develop sensibility towards various design approaches. Students will explore deriving area programme through graphical representation. Students will generate ideas and concepts based on the research study conducted by them.	A2 sheet showing Site Analysis and Conceptual Derivation	10	Concept Derivation
	Studio 1	Lecture-1	Ideation and Conceptualisation -Discussion on overall vision, understand the fundamentals through Case Studies				
	Studio 2	Lecture-2					
8	WEEK 08	Understanding of Built Objects and Space		Understand the fundamentals-Area Program and Circulation. Students will explore deriving area programme through graphical representation. Students will generate idea for overall planning based on their predesign studies and analysis.	A2 Cartridge Sheet	Grade	Fundamentals of Zoning and Area Program
	Studio 1	Lecture-1	Zoning and Area Programming -Understand the fundamentals with the help of bubble diagrams				
	Studio 2	Lecture-2					
9	WEEK 09	Test Week		N/A	N/A		N/A
	Studio 1	Lecture-1	N/A				
	Studio 2	Lecture-2					
10	WEEK 10	Design Exercise		Design Development-Form and structure. Students will present their first design draft based on the understanding of various predesign studies and analysis and also by incorporating all the requirements based on the area program.	A2 Cartridge Sheet, floor plans on 1:50	Grade	DD-1
	Studio 1	Lecture-1	Design Development 1 -First draft with site zoning and floor plans along with elevations and sections				
	Studio 2	Lecture-2					
11	WEEK 11	Design Exercise		Design Development-Services and Anthropometrics/Areas. Students will take crits from the faculty and review their design.	A2 Cartridge Sheet, floor plans on 1:50	15	DD-1
	Studio 1	Lecture-1	Design Development 1				
	Studio 2	Lecture-2					
12	WEEK 12	Design Exercise		Design Development-Site, Placement, Orientation. Students to present their design development based on the crits received and will integrate their detailed ground floor plans to the site plan and integrate all open and landscaped areas.	A2 Submission of sheets along with the block model on 1:100	Grade	DD-2
	Studio 1	Lecture-1	Design Development 2 -3D views, detailed site plans, site sections and landscape for complete site plan				
	Studio 2	Lecture-2					
13	WEEK 13	Design Exercise		The student in DD-2 stage will detail their building roofs, elevations, landscape sections and justify all design parameters.	A2 Submission of sheets along with the block model on 1:100	20	DD-2
	Studio 1	Lecture-1	Design Development 2 -3D views, detailed site plans, site sections and landscape for complete site plan				
	Studio 2	Lecture-2					

14	WEEK 14	Review		Drawing Requirements:-Design Concept,Site Plan,Floor Plans,Elevations,Sections,views and other necessary details along with the model	A2 Submission of sheets along with the block model on 1:100	30	Prefinal Submission
	Studio 1	Lecture-1	Prefinal Submission -Final changes to be incorporated and Pending submissions, Back log Reviews			20	
	Studio 2	Lecture-2				Total=50	
15	WEEK 15	Final Submission		Drawing Requirements:-Design Concept,Site Plan,Floor Plans,Elevations,Sections,views and other necessary details along with the model	A2 Submission of sheets along with the model on 1:100		
	Studio 1	Lecture-1	Final Submission with final Sheets (Presentation) and Model				
	Studio 2	Lecture-2					
16	WEEK 16	Final Submission		Drawing Requirements:-Design Concept,Site Plan,Floor Plans,Elevations,Sections,views and other necessary details along with the model	A2 Submission of sheets along with the model on 1:100	70	Final Submission
	Studio 1	Lecture-1	Final Submission with final Sheets (Presentation) and Model			30	
	Studio 2	Lecture-2				Total=100	

Suggested Readings:-

- 1.Ching, F.D.K.; Architecture Form, Space and Order, Van Nostrand Reinhold Staff, NewYork, 1996
- 2.Rudofsky,Bernard; Architecture without Architects,University of New Mexico Press, New Mexico
- 3.Rasmussen, Steen Eiler; Experiencing Architecture, The MIT Press, Cambridge,Massachusetts, 1977
- 4.Watson, Donald / Crosbie,Michael J.; Time Savers Standards for Architectural Design,Mc Graw Hill, New York, 2005
- 5.Chiara, Joseph De / Panero, Julius / Zelink Martin; Time Savers Standards for Interior design and Space Planning, Mc Graw Hill, New York, 2001
- 6.Harris, Charles W. / Dines, Nicholas T.; Time Savers Standards for Landscape Architecture, Mc Graw Hill, USA, 1998
- 7.Gideon, Siegfried; Space, time & Architecture, Harvard University Press
- 8.Robert Powell, "Tropical Asian House", Select Books, 1999
- 9.Gill, Robert W.; Manual of Rendering with Pen and Ink, Thames and Hudson, London,1997
10. Alexander Christopher/Ishikawa Sara/Silverstein Murray;A Patter Language,Oxford University Press,New York,1977
- 11.Kennon,Paul;Pena,William;Wayne William,Architecture and You,Whitney Library of Design,NY,1981

No. of Teaching Weeks: 16
 Contact Hours: per week : L : 2 S: 0
 Contact Hours: per sem : L : 24 S: 0
 Credit: 02
 Total Marks: 100 (E=75 I=25)

Course Title: History of Architecture
 Course Code: AP-123
 1st YEAR – 2022, Semester I
 Course Coordinator : Akash Sharma
 Studio Team: Akash Sharma

Objectives:

The course broadly focuses on architectural products of various times and places within a broad chronological band. To inform about various determinants of culture and context of the place of study. To understand the role of culture, beliefs, myths, politics, economics, geography, materials and climate etc. in shaping architectural intent of buildings.

Pedagogy:

Pandemic Pedagogy: Considering Situation and Focus on good health behaviors:
 •Use of online/e-learning strategies
 •Assigning reading and exercises for home study
 •On-Line Audio Visual Presentation and Way to Podcasts, Interactive session and discussions,
 •Hosting online mini-classes with experts/seminars etc...
 •Working on an Interactive manner on Online Worksheets.

Expected Outcomes:

To give an overall understanding of the architecture, built/ unbuilt at Global Level and sequential productions rising from the cumulative effect of forces operating and intersecting in the regions. To inform about specific and prominent modes of architecture in terms of evolution, function, morphology and character. To give exposure to works that are architecturally exemplary and/or representative. To appreciate architecture as giver of particular and universal meaning.

TEACHING PLAN FOR SEMESTER I (Session 2022-23)

S NO.	WEEK/D ATE	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME	
1	WEEK 01	Sketchfile/Research	Introduction to History of Architecture	Discussion on Assignment 1 Egyptian Architecture with prominent examples. Digital Text and Handmade Sketches		Introduction to Ancient River Valley Civilisation-Pyramids	
	Studio 1	Lecture-1	Introduction to History of Architecture and Ancient river valley civilizations				Egyptian: Geographical features of Nile Valley, development of cultural and religious beliefs. Evolution of funerary architecture from Mastabas to Pyramids.
	Studio 2	Lecture-2					
2	WEEK 02	Sketchfile/Research	Prominent case examples at Saqqara, Medun, Cheops and Giza. Architecture of Mortuary & Cult Temples with case examples of Luxor, Ammon and Karnak, Rock-cut examples at Abu Simbel etc.			Egyptian River Valley Civilisation-Rock Cut Examples	
	Studio 1	Lecture-1	Ancient river valley civilizations				
	Studio 2	Lecture-2					
3	WEEK 03	Sketchfile/Research	Landscape and geographical description of fertile crescent, study of stages of civilization from early city states to Sumerian, Babylonian, Assyrian and Persian with prominent examples of Ziggurats at Ur, Uruk etc.; Palaces and/or cities of Ur, Babylon, Khorsabad	Assignment 1	10	Understanding of Mesopotamian Architecture	
	Studio 1	Lecture-1	Mesopotamian				
	Studio 2	Lecture-2					
4	WEEK 04	Sketchfile/Research	Assyrian and Persian Architecture with prominent examples of the Palace at Persipolis.	Discussion on Assignment 2 Mesopotamian Architecture with prominent examples. Digital Text and Handmade Sketches		Understanding of Mesopotamian Architecture, Persian Architecture, Babylonian Architecture with typical examples	
	Studio 1	Lecture-1	Mesopotamian				Introduction to Indus
	Studio 2	Lecture-2	Introduction to Indus Valley Civilization				
5	WEEK 05	Topic of Study	Factors contributing to the development of settlements along Indus Valley its extents and links with other civilizations of time, prominent features of civilization			Typical examples of Indus River Valley Town Planning	
	Studio 1	Lecture-1	Indus Valley Civilization				
	Studio 2	Lecture-2					
6	WEEK 06	Topic of Study	Town Planning, residential and public buildings with case examples of cities of Mohenjodaro, Harappa, Lothal.	Assignment 2	10	Understanding the planning of Cities of Indus River Valley Civilisation with typical examples	
	Studio 1	Lecture-1	Discussion on Town Planning during Indus Valley Civilization				

	Studio 2	Lecture-2					
7	WEEK 07	Topic of Study		Significant Markers: INDIA - Early Iron Age Civilization; Wooden Architecture of Indian Origins: Forest Dwellings, Kutiya and Grama; Beginning of Buddhist and Jain Architecture; the Hinayana and Mahayana Sects and their contribution to the development of architecture in India.	Discussion on Assignment 3 Indus Valley Civilization with prominent examples. Digital Text and Handmade Sketches		Classical Civilization with typical examples
	Studio 1	Lecture-1	Introduction on Classical Civilizations				
	Studio 2	Lecture-2					
8	WEEK 08	Topic of Study		Ashokan School, Buddhist Rock Cut Architecture: the Chaityas and Viharas at Ajanta and Ellora; the Stupa: Form and Evolution; Buddhist Architecture in Gandhara.			Classical Civilization with typical examples
	Studio 1	Lecture-1	Buddha, Buddhism, Buddhist Architecture				
	Studio 2	Lecture-2					
9	WEEK 09	Test Week		Minoan, Mycenaean and Classical Greek Minoan and Mycenaean: Palace at Knossos, the Lion Gate, the appearance of the Megaron.	Assignment 3	10	Greek Architecture with typical Examples
	Studio 1	Lecture-1	Greece - Early Iron Age Civilizations				
	Studio 2	Lecture-2					
10	WEEK 10	Topic of Study		Greek City states – Athens, Delphi, Sparta; Evolution of the Temple; the Orders; the Parthenon.	Discussion on Assignment 4 Greece - Early Iron Age Civilizations and Roman Architecture with prominent examples. Digital Text and Handmade Sketches		Greek Architecture with typical Examples
	Studio 1	Lecture-1	Greece - Early Iron Age Civilizations	Discussion on Rome and its Architecture			
	Studio 2	Lecture-2					
11	WEEK 11	Topic of Study		Discussion on Rome and its Architecture			Roman Architecture with typical Examples
	Studio 1	Lecture-1	Introduction to Rome and its Architecture				
	Studio 2	Lecture-2					
12	WEEK 12	Topic of Study		Structural and Engineering Achievements: the arch, Vault and the dome; Temples: Pantheon; Arenas: Colosseum; Therma: Caracalla; Aqueducts; the forum and the basilica	Assignment 4	10	Revision of Topics
	Studio 1	Lecture-1	Rome and its Architecture				
	Studio 2	Lecture-2					
13	WEEK 13	Review		Revision and Discussion on the coursework coming in the Test		20	Revision of Topics
	Studio 1	Lecture-1	Revision 1 Question & Answer Session 1				
	Studio 2	Lecture-2					
14	WEEK 14	Review		Preparation of Question Bank			Revision of Topics
	Studio 1	Lecture-1	Revision 2 Question & Answer Session 2				
	Studio 2	Lecture-2					
15	WEEK 15	Review		Revision of the coursework and discussion on important topics and questions and suggestions on how to attempt the questions in the exam.			Revision of Topics
	Studio 1	Lecture-1	Question and Answer Session 2				
	Studio 2	Lecture-2					
16	WEEK 16	Review		Revision of the coursework and discussion on important topics and questions and suggestions on how to attempt the questions in the exam.			Revision of Topics

Studio 1	Lecture-1	Final Revision and Discussion			
Studio 2	Lecture-2				

Suggested Readings:-

- 1 Tadel, Christopher History of Architecture in India Paperback – 6 Jul 1994
 - 2 Kostof, Spiro; History of Architecture, Oxford University Press, New York, 1995
 - 3 Raeburn, Michael; Architecture of the Western World, Popular Press, England, 1988
 - 4 Rapoport, Amos, Human Aspects of Urban Form, Pergamon Press, New York, 1977
 - 5 Shukla, D.N.; Vastu Shastra, Munshiram Mohanlal, New Delhi, 1993
 - 6 Alexander, Christopher; A Pattern Language, Oxford University Press, New York, 1977
 - 7 Lynch, Kevin; The Image of the City, Joint Centre Publication, USA, 1960
- * **Keywords and Dictionary will prepared from every topic and explain in limited words. It includes sketches also.**

No.of Teaching Weeks: 16
 Contact Hours: per week : L : 0 S: 8
 Contact Hours: per sem : L : 0 S: 128
 Credit: 08
 Total Marks:100 (E=50 I=50)

Course Title: Architectural Design
 Course Code: AP-202
 IInd YEAR – 2022, Semester IV-2022

Objectives:

To learn designing with explicit respect or reference to a larger socio cultural or environmental setting with context- urban or rural, traditional or contemporary and to identify the various cultural activities and identities of the city in order to deal with them through new emerging ideas without disturbing the fabric of the city. Eco Tourism: The design program will specially sensitise students to a niche and demanding category of tourism that promotes responsible travel & natural conservation

Pedagogy:

The studio would begin with interactive sessions and discussions on sensitive approach of the design program. This would be achieved through technical and analytical research of various literature studies, topographical and contour analysis, Guest lectures and audio visual presentations by the faculty. Pre-design studies in the form of literature and case studies will enable the students with essential knowledge and tools to venture into conceptualising the building. Three dimensional modelling to understand the volume and scale of the proposed building will help students visualise spaces and go through various design development to eventually furnish various presentation drawings including concept drawings, plans, elevations, sections, 3-D views, architectural details and so on. The whole process of design development will be interspersed with time problems whenever feasible.

Expected Outcomes:

1. The students are expected to learn both matter and mind of the program, and derive architectural solution for Natural conservation & community based design problem. 2. Ability to apply specific elements of architecture to give desired character and identity to the building considering context and sustainability in mind. 3. Understanding and applying the characteristics of circulation within and between different functions in buildings for public use and develop site plans accordingly. 4. To understand government policies and initiatives taken for the development of such centres. 5. To aspire to create a strong functional program for creating a model Community Primary School of self reliance and environmental nurturing.

TEACHING PLAN FOR SEMESTER IV (Session 2021-22)

S NO.	WEEK/DAY	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION/ DELIVERABLE	MARKS	EXPECTED OUTCOME
1	WEEK 01	Pre-design Stage		online study, sketches & photographs	Grade	They express their emotions, imaginations, memories through a series of sketches, write ups and photographs. We condition their minds about site contours
	Studio 1	Lecture-1	Introduction of Design Problem on SOCIO-CULTURAL-CENTRE AT Near @ Amer Rd, Jal Mahal, Amer, Jaipur, Rajasthan A Center for Community & Culture Lecture: Design Vision, Introduction of site & Detailed design Problem			
	Studio 2	Lecture-2	Introduction of Design Problem SITE CONTEXT, contours site, Areas and FACILITIES. Give Instructions on Design Requirements and Challenges.			
2	WEEK 02	Pre-design Stage Literature Study+case study+site study Contextual Interpretation				Questionare-discussion-Analysis after presentations. Converting faculty input into their site study exercises.
	Studio 1	Lecture-2	Lecture on - Study of Slope & Construction technique Analysis - Introduction of model Making (site Model)-Scale of Model & sheets (Discussion on case studies)			
	Studio 2	Lecture-2	Group Study - (Design Group)- Site Analysis- short hill sections (multiple) (propose building block), contour analysis, climate & wind, material palette-SWOT-literature study			
3	WEEK 03	Pre-design Stage		A1 Sheets composed with graphical analysis, flowcharts, sketches, sections and images.	10	Creating a thick in depth analysis through all ten topics of literature analysis.
	Studio 1	Lecture-1	Discussion of Analysis & Submission of Literature Studies.			
	Studio 2	Lecture-2	Discussion of Analysis & Submission of Literature Studies.			
4	WEEK 04	Pre-design Stage		A1 Sheets composed with graphical analysis, flowcharts, sketches, sections and images.	10	Students will document the inspired projects and create a vision board for their projects.
	Studio 1	Lecture-1	SOCIO- CULTURAL-CENTRE :Submission of Case studies , Area Program study & Analysis- Group Design Vision based on case studies			
	Studio 2	Lecture-2	Submission of Case studies , Area Program study & Analysis- Group Design Vision based on case studies			
5	WEEK 05	Design Development-1				Students will learn to freeze master plan blocks, orientation, site USP, slope development, volumetric development and integrated landscape design.
	Studio 1	Lecture-1	Concept & Master Plan zoning- Over all vision, Block model, sketches			
	Studio 2	Lecture-2	Concept & Master Plan zoning- Over all vision, Block model, sketches			

6	WEEK 06	Design Development-1 Conceptual Articulation		The site plan will be detailed with final critical building forms, landscape connections, nallah development ideas and overall planning scheme. Philosophical Concept, Morphological Concept WITH AREAS Translation into Form and Functional configuration. (Sketches, Forms, site plan ,Models, Block Model)	A1 Sheets with Detailed site plan and supporting model/3d views	15	Students will learn to freeze master plan blocks,orientation, site USP, slope development, volumetric development and integrated landscape design.
	Studio 1	Lecture-1	Site plan with Landscape development with contours study,levels and site context				
	Studio 2	Lecture-2	25/3/21-Site plan with Landscape development with block model				
7	WEEK 07	Design Development-2		sketches of the master planning including all contour development. The student in DD-2 stage will detail their building roofs, elevations, landscape sections and justify all eco tourism parametres.			Students will develop the architectural master plan through levels considerations.
	Studio 1	Lecture-1	detailed site plans, site sections and landscape for complete site plan (scale 1:250)				
	Studio 2	Lecture-2	detailed site plans, site sections and landscape for complete site plan (scale 1:250)				
8	WEEK 08	Design Development-2		Students will begin exploring individually their approved dedicated part site area and building blocks through detailed floor plans, sections and landscoe details.	A1 Sheets with Detailed site plan and supporting model/3d views	15	Students will individually explore and grow their own part site plans and building blocks showcasing their individual growth as a designer.
	Studio 1	Lecture-1	Individual block details, sections , elevations (scale 1:100)				
	Studio 2	Lecture-2	Individual block details, sections , elevations (scale 1:100)				
9	WEEK 09	Design Development-3		Students will integrate their detailed ground floor plans to the master plan and integarte all open and landscaped areas. Drawings: Site Plan, Plans, and Details. (Use SINGLE Line, Furniture Layout, Labelling, Dimensions, Hatching, Annotation Etc) Photoshop Rendering Not permitted			Students will revisit the master plan with their individual block design details and finish it for the final presentation
	Studio 1	Lecture-1	Integration of all detailed blocks in the final site plan. Final changes to be incorporated				
	Studio 2	Lecture-2	Integration of all detailed blocks in the final site plan. Final changes to be incorporated				
10	WEEK 10	Design Development-3		Students will integrate their detailed ground floor plans to the master plan and integarte all open and landscaped areas.The students will begin creating presentation sheets supported through revised 3d- views, walkthroughs, rendered floor plans, rendered sections & elevations.	A1 Sheets with Detailed site plan and supporting model/3d views	15	Students will revisit the master plan with their individual design details and finish it for the final presentation
	Studio 1	Lecture-1	All floor plans with building sections, detailed individual models, final site plan, landscape details including levels				
	Studio 2	Lecture-2	All floor plans with building sections, detailed individual models, final site plan, landscape details, 3d views/sketches				
11	WEEK 11	Review		Students will do a pinned up studio presentation with all process sheets, models and 3d views/sketches	Studio submissions	15	Students will concentrate on the presentation drawings and describing the entire project through their group and individual studies and interventions.
	Studio 1	Lecture-1	Architectural Design Development Portfolio with building model				
	Studio 2	Lecture-2	Architectural Design Development Portfolio with building model				
12	WEEK 12	Test Week		NA	NA		
	Studio 1	Lecture-1	NA				
	Studio 2	Lecture-2	NA				
13	WEEK 13	Review		All unmarked submission if any would be reviewed in this week. Students will get the final chance to clear their back log submissions.			Revisiting all work lags and individual doubts will help student observe their project in new light and resolve the issues.
	Studio 1	Lecture-1	Pending submissions, Back log Reviews				
	Studio 2	Lecture-2	Pending submissions, Back log Reviews				
14	WEEK 14	Review		All unmarked submission if any would be reviewed in this week. Students will get the final chance to clear their back log submissions.			Revisiting all work lags and individual doubts will help student observe their project in new light and resolve the issues.
	Studio 1	Lecture-1	Pending submissions, Back log Reviews				
	Studio 2	Lecture-2	Pending submissions, Back log Reviews				
15	WEEK 15	PRE-FINAL		Students will do a pinned up studio presentation with all process sheets, models and 3D views/sketches	Studio submissions	20	Students will concentrate on the presentation drawings and describing the entire project through their group and individual
	Studio 1	Lecture-1	Architectural Design Development Portfolio with building model				

	Studio 2	Lecture-2	Architectural Design Development Portfolio with building model				the intervention studies and interventions.
16	WEEK 16	Final Submission		Students will do a pinned up studio presentation with all process sheets, models and 3D views. Final Detailed Drawings Detailed Models Final portfolio (hand made or digital Rendering, Views, sketches, 3d views etc allowed)	Studio submissions		Students will concentrate on the presentation drawings and describing the entire project through their group and individual studies and interventions.
	Studio 1	Lecture-1	Architectural Design Development Portfolio with building model			20	
	Studio 2	Lecture-2	Architectural Design Development Portfolio with building model				

Suggested Readings:-

- 1 <https://www.greeneconomycoalition.org/news-analysis/sikkims-eco-tourism-evolution>
- 2 <http://www.sikkimforest.gov.in/reports%20and%20publications/100years/100%20years%204.pdf>
- 3 Importance of Ecotourism in India- Research Gate
- 4 Ching, F., Architecture, form, space and order, New York, Van Nostrand Reinhold staff 1996
- 5 Haris, C.W., Time savers standards for landscapeArchitecture, USA., Mc Graw hill, 1998
- 6 Rasmussen, S.E.,(1977), Experiencing Architecture, Cambridge,Massachusetts: The MIT press 1997
- 7 Watson, D.L., Time savers standards for Architectural Design, New York: Mc Graw Hill 2005

No. of Teaching Weeks: 16
 Contact Hours: per week : L : 3 S: 0
 Contact Hours: per sem : L : 48 S: 0
 Credit: 03
 Total Marks:100 (E=75 I=25)

Course Title: Theory of Structures-III
 Course Code: AP-221
 IInd YEAR – 2022-23, Semester III
 Course Coordinator: Ms Kavita K Revo

Objectives:

The objective is to teach the historical background, composition, constituent materials used for making concrete and their properties. The course deals with the effect of chemical and mineral admixtures in concrete and various quality tests as per IS specifications for Concrete in fresh and hardened state. The subject exposes students to terms like workability & curing. Significance of concrete mix design and its relation to strength. To equip the students with basic understanding of the behaviour of reinforced concrete structures and to develop the skill to analyze and design basic RCC members with limit state method using relevant IS codes.

Pedagogy:

The Course is mainly delivered through power point presentation and on board lectures. The consolidation of concepts is achieved by problem solving, assignments, discussions, site visits and group model making exercises. Students are introduced to the Indian standards at an early stage to get them acquainted with the relevant clauses and their usage. Continuous Evaluation includes Minor test, Quizzes and a comprehensive university exam.

Expected Outcomes:

At the end of course the students would develop an ability to think logically about concrete technology and its site application. Students would be familiar with old and new design philosophies and would be able to analyse and design basic RCC members like single /Doubly reinforced beams, One way/two way slabs, Axially loaded columns and footings with the help of IS 456 and design aids SP16.

TEACHING PLAN FOR SEMESTER III (Session 2022-23)

S NO.	WEEK/D ATE	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME	
1	WEEK 01	Sketchfile/Research		Presentation on cement and its composition. Manufacturing process. Types of cement and their application in construction.	Students to study different types of cements & document it on A4 sheets in their hand writing	Students know the composition manufacturing, grades and types of cement & application	
	Studio 1	Lecture-1	Introduce course delivery plan, prerequisites of the subject and evaluation system . Discuss Concrete Technology				10
	Studio 2	Lecture-2	NA				
2	WEEK 02	Sketchfile/Research		Video demonstration of various instruments needed for tests and procedure of tests.		Students know how the quality of cement is tested in lab.	
	Studio 1	Lecture-1	Grades of cement and various lab tests.				Students to study relevant IS codes for tests on cement & prepare handouts.
	Studio 2	Lecture-2	NA				
3	WEEK 03	Sketchfile/Research		Concrete Mix design Abrahms law of w/c ratio. Strength of concrete. Grades of concrete. Volume batching/ weight batching Ready mix concrete, merits/demerits. Workability at site.Importance of curing.Use of admixtures		Students exhibit knowledge of concepts related to concrete mix design, strength, durability , workability etc. Also tests to check various parameters	
	Studio 1	Lecture-1	Introduction to RCC and its composition. Properties of concrete./ Grades of concrete				
	Studio 2	Lecture-2	NA				
4	WEEK 04	Sketchfile/Research		Grades of steel. Yield strength of steel bars. Mild steel Vs HYSD bars. Protection against corrosion. Durability parameters. Latest trends in RCC.	Assignment No. 1 Concrete Technology	10 Knowledge related to steel used in reinforcement & protection	
	Studio 1	Lecture-1	Types of reinforcement used in RCC.				
	Studio 2	Lecture-2	NA				
5	WEEK 05	Topic of Study		Presentation on various design philosophies. Comparison between old and new trends of design. Explaining the terms like Tension zone & compression zone. Neutral Axis. Role of reinforcement in RCC members, concrete cover etc.		Students know the available design methods. Merits & demerits of all and related terms	
	Studio 1	Lecture-1	Introduction to RCC design of structural members . Limit state method of design				
	Studio 2	Lecture-2	NA				
6	WEEK 06	Topic of Study		Discussion on assumptions for RCC design. Starting with the Design of SSB.		Students can use IS456 and SP 16	

	Studio 1	Lecture-1	Introducing IS456 and SP16 design aids.	Singly reinforced and Doubly reinforced beams. Types of sections- Under Reinforced Over reinforced and Balanced. Numericals to find depth Of NA			
	Studio 2	Lecture-2	NA				
7	WEEK 07	Topic of Study		Design problems on beams. Finding Depth Of NA. Identifying S/R or D/R beam. Use of IS456 and SP16 Reinforcement Detailing. Making sketches.			Students can design a simple supported beam. and draw reinforcement detail
	Studio 1	Lecture-1	Design of Singly/Doubly reinforced beams. Design steps using charts and tables.				
	Studio 2	Lecture-2	NA				
8	WEEK 08	Topic of Study		Presentation on Shear reinforcement Types of stirrups. Design problems on stirrup design using IS456 and SP16			students can design shear reinforcement for SSB
	Studio 1	Lecture-1	Design of shear Reinforcement in beams.				
	Studio 2	Lecture-2	NA				
9	WEEK 09	Topic of Study					
	Studio 1	Lecture-1	MINOR TEST WEEK				
	Studio 2	Lecture-2	NA				
10	WEEK 10	Topic of Study		Design steps for slabs. Design Problem on two way slabs. Reinforcement Detailing. Using SP16 design charts	Assignment 2 Design of beam/ slab.	10	Students can design simple slabs . And draw reinforcement detail
	Studio 1	Lecture-1	RCC design of Slabs. Introduction, types, load transfer in slabs. Design principle				
	Studio 2	Lecture-2	NA				
11	WEEK 11	Prefinal		Presentation on Columns. Behaviour under loads. Reinforcement in columns. Design steps for Axially loaded column. Design problem on RCC columns.			Students can design a column for given load
	Studio 1	Lecture-1	Design of Axially loaded RCC columns				
	Studio 2	Lecture-2	NA				
12	WEEK 12	Review		Design Steps for Circular columns Introduction to footing design.	Assignment no 3 Design of column and footings	10	Students can design helical reinforcement for circular columns using IS456
	Studio 1	Lecture-1	Design of Circular Columns with helical reinforcement.				
	Studio 2	Lecture-2	NA				
13	WEEK 13	Test Week		Design Steps for RCC footing Design problem on footings.			Students know different types of RCC footings and design of simple isolated footing
	Studio 1	Lecture-1	Footing Design Contd				
	Studio 2	Lecture-2					
14	WEEK 14	Review		Deflection in beams, causes, permissible limits as per codes. Ways to control deflection in beams Different methods to calculate slope and deflection in beams. Numerical practice.			Students can calculate slope & deflection in beam and ensure safety
	Studio 1	Lecture-1	Deflection of beams.				

	Studio 2	Lecture-2	NA				
15	WEEK 15	Final Submission		Calculating slenderness ratio of columns. Load carrying capacity of column	Assignment no 4 Slope & deflection	10	Students can calculate SR in columns. also stress distribution in columns
	Studio 1	Lecture-1	Columns and Struts. Stress distribution on column section.	Middle third rule Core /kernel of columns			
	Studio 2	Lecture-2	NA				
16	WEEK 16	Final Submission		Sharing question bank, discussin ol univ papers and doubt clarification			Students prepared for univ exam
	Studio 1	Lecture-1	REVISION				
	Studio 2	Lecture-2	NA				

Suggested Readings:-

1. Concrete Technology , by M S Sf <http://www.iricen.gov.in/LAB/>
2. Reinforced Concrete,Limit state Design by A K Jain
3. Strength Of materials, S Ramamrutham, IS 456 and SP16 Design Aids

No. of Teaching Weeks: 16
 Contact Hours: per week : L : 0 S: 10
 Contact Hours: per sem : L : 0 S: 160
 Credit: 10
 Total Marks:100 (E=50 I=50)

Course Title: Architectural Design V
 Course Code: AP-301
 IIIrd YEAR – 2022-23, Semester V

Objectives:
 The objective of the course is develop an understanding of spatial design of mixed use projects with contemporary function and emphasis on building design, volumes, building bye laws, structural building systems and energy efficiency. This will be addressed through various lectures and three parallel studio design problems on 5 acre site based in Chandigarh, Mohali.

Pedagogy:
 With primary focus on pedagogy that will help students adapt to offline learning in design studios after 2 years of online studios, following are some of the methods and procedures to be adopted:
 • The students will be introduced to face to face rigorous critical reviews of their designs through discussions and suggestions in the form of sketches by faculty
 • Studio faculty team review of individual student's designs at various stages – ensuring that all students get a review at least once every week.
 □ Most of the times the review done collectively by the faculty and other students encouraged to participate in all reviews so they learn from each other too.
 □ Toward the pre-final submission, sometimes the students divided in groups to be addressed by one of the faculty to accommodate the paucity of time.
 □ Knowledge sharing by the faculty through regular lectures on topics related to the projects at hand.
 □ Lectures supported with audio-visual content in the form of PowerPoint presentations.
 • Sharing of sketches and text remarks long with run-through of selected documents.
 □ Students to be encouraged for peer review so that each student gets feedback from a number of classmates.

Expected Outcomes:

1. The students will develop the ability to understand and apply the design procedures for large buildings with complexity of multiple functions, achieving desired functionality and aesthetics
2. Understanding of structural arrangements for large public buildings through primary and secondary case studies
3. Exposure to a variety of large public buildings through primary and secondary case studies
4. Learning the use of time-saver standards for designing of administrative and institutional buildings
5. Application of development regulations and by-laws for public buildings
6. Developing finer sensibilities about symbolism in buildings

TEACHING PLAN FOR SEMESTER V (Session 2021-22)

S.NO.	WEEK/DATE	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME
1	WEEK 01	Introduction	Group allotment based on topics decided for Design program. Literature review search	None		An outline of the information that needs to be provided as also learning the best way to present the information so collected
Sep 12	Studio 1	Lecture-1 i) Introduction to the design program - 1) Socio-cultural Centre (ScC) 2) Experimental Cultural Museum of Punjab (ECM)				
Sep 15	Studio 2	Lecture-2, 3 ii) Literature review introduction – Shelly Shrivastav, Niraja, Vidushi, Garima				
2	WEEK 02	Pre-design Stage	Lecture based information and Review of information collected by all the student groups for Literature Review. Next Studio all submissions on literature review to be evaluated.			
Sep 19	Studio 1	Lecture-4 Spatial Complexity & Function-wise requirements (unit-wise) - Shelly Shrivastav, Niraja, Vidushi				
Sep 22	Studio 2	Lecture-5 Spatial Complexity & Function-wise requirements (unit-wise) - Shelly Shrivastav, Niraja, Vidushi				
3	WEEK 03	Literature Review	Presentation and Evaluation, Lecture based information	Background Research through Literature review • Time – Saver Standards • Development Controls • Building Codes		Submission of document by ten groups with 4-5 topics each group, all relevant information regarding development regulations and different standards.
Sep 26	Studio 1	SUBMISSION 1: Literature review presentation by students				
Sep 29	Studio 2	Lecture-6 User interface & Concept dev. (as regards spatial configuration responding to various types of users) - Vidushi			5	
4	WEEK 04	Case Studies	Lecture based information			
Oct 3	Studio 1	User interface & Concept dev. (as regards spatial configuration responding to various types of users) - Vidushi				
Oct 6	Studio 2	Case Study - Primary and secondary, focus, aspects and takeaways - Introduction by Garima				
5	WEEK 05	Case Studies	Presentation and Evaluation	Case Studies		A report along with drawings for min. two case-studies. These shall include the following: <input type="checkbox"/> Urban Context - site and surrounding <input type="checkbox"/> Site zoning indicating Built form and surrounding functions <input type="checkbox"/> Site Planning and Building Blocks <input type="checkbox"/> Development Controls- built form and open spaces. - FAR, / net and gross density <input type="checkbox"/> Services Layout of the building <input type="checkbox"/> Built form and its response to Climate <input type="checkbox"/> Environmental concerns – water harvesting, waste management, energy conservation etc. <input type="checkbox"/> Structural grid as a module to define spaces its appropriateness <input type="checkbox"/> Influence and correlation with the proposed project. The above issues are to be represented through: Plans, Elevations, Sections, Sketches, Area Statements, Analysis, Photographs on A3 size module that can be added to make larger drawings
Oct 10	Studio 1	SUBMISSION 2: Case Study Presentation - Primary and secondary				
Oct 13	Studio 2	Site analysis/ Site Surroundings and Area program introduction: Shelly Shrivastav, Niraja, Vidushi, Garima			5	
6	WEEK 06	Review	Presentation and Evaluation and Lecture based information	Site Analysis		• Site & its context • Site analysis. • Area requirement for various components • Functional requirements
Oct 17	Studio 1	Lecture-7 SUBMISSION 3: Site Analysis and Area Program. Site Planning, Site services & Landscaping- Shelly Shrivastav, Garima Dubey				
Oct 20	Studio 2	Lecture-8 ISOLA LECTURE: Landscape Architect VERTICAL STUDIO: Cracks in the City Spaces under the Byovers- Brief Introduction by Prof. Niraja, Prof. Garima			5	
7	WEEK 07	VERTICAL STUDIO				
Oct 24	Studio 1	Lecture-1 HOLIDAY				
Oct 27	Studio 2	VERTICAL STUDIO			Grade	
8	WEEK 08	Design Development-1				

Oct 31	Studio 1		Sustainability Measures/ Climate responsive considerations- Shelly. Site services & Landscaping - Garima. Spaces and Structures - All faculties. Time Problem				
Nov 3	Studio 2		Basement Services & Fire Safety - Niraja				
9	WEEK 09		Design Development-1	Presentation and Evaluation	Concept and Zoning	<ul style="list-style-type: none"> Project brief with area requirement. Spatial analysis and zoning Schematic diagrams explaining proposed concept. Layout and design approach (2d & 3d approach) Design concept – sketches/ plans, sections. Proposed Site Plan, Scale- 1: 200 Block Model Scale – 1: 200 	
Nov 7	Studio 1		SUBMISSION 4: Zoning and Design Concept				
Nov 10	Studio 2	Lecture-9	Structural Systems - Kavita Revo			5	
10	WEEK 10		Test Week/FDP				
Nov 14	Studio 1		None				
Nov 17	Studio 2		None				
11	WEEK 11		Design Development-1 - Review	Presentation and Evaluation	DD1	<ul style="list-style-type: none"> Design development from various studies conducted. Functional integration of spaces and amenities, within and outside of buildings. Volumetric analysis – schematic sections Block layout and parking system- underground , surface and overhead Horizontal/ vertical movement integration lifts/staircases/corridors/skywalks Site Plan – 1:200 All Floor Plans - Scale- 1:100 Schematic Sections – Scale 1:200 Block Model - Scale – 1: 200 	
Nov 21	Studio 1		SUBMISSION 5: Design Development I				
Nov 24	Studio 2	Lecture-10	Sustainability Measures - Shelly Shrivastava			15	
12	WEEK 12		CULTURAL WEEK/ STUDENT ACTIVITY WEEK				None
Nov 28	Studio 1						
Dec 1	Studio 2						
13	WEEK 13		Design Development-2	Presentation and Evaluation	DD-2	<ul style="list-style-type: none"> Design Development based on the discussions and presentations held at previous stage. Site Plan – 1:200 (including landscaping) All Floor Plans Scale - 1:100 Building Sections – 2 Nos Scale- 1:100 Building Elevations – 2 Nos Scale- 1:100 Architectural Details- Suitable scale (including sustainability measures) Site Sections – 1:200 Block Model - Scale – 1:200 	
Dec 5	Studio 1		SUBMISSION 6: Design Development II				
Dec 8	Studio 2					15	
14	WEEK 14		Design Development-3				
Dec 12	Studio 1						
Dec 15	Studio 2		To be based on students' performance and area of deficiency				
15	WEEK 15		Prefinal Design	Presentation and Evaluation	Prefinal	<ul style="list-style-type: none"> Design Development based on the discussions and presentations held at previous stage: Site Plan – 1:200 (including site services and landscape plans- Detailed site layout plan of the entire scheme with entry / exit and parking systems, circulations, buildings, green spaces, hard and soft landscaping. Site Sections and elevations – 1:200 All Floor Plans Scale - 1:100 Building Sections – 2 Nos Scale- 1:100 Building Elevations – 2 Nos Scale- 1:100 Architectural Details- Suitable scale Services plans - 1:100 (Building services pertaining to environment and sustainability. Site services (water and waste management system) Calculations for advanced services Block Model - Scale – 1:200 	
Dec 19	Studio 1						
Dec 22	Studio 2		SUBMISSION 7: Prefinal Submission			20	<ul style="list-style-type: none"> Along with the following: Project brief along with area requirements Design concept Case studies and design inferences
16	WEEK 16		Review				
Dec 26	Studio 1		None				
Dec 29	Studio 2		None				

No.of Teaching Weeks: 16
 Contact Hours: per week : L : 4 S: 0
 Contact Hours: per sem : L : 64 S: 0
 Credit: 04
 Total Marks:100 (E=75 I=25)

Course Title: Theory of Structures
 Course Code: AP-322
 IIIInd YEAR – 2022-23, Semester VI

Objectives:

The objective of this course is to introduce students to structural analysis of simple building frames . In this semester students would be taught about approximate/manual methods of analysis along with software based Analysis by STAAD Pro software. The course aims at exposing students to various structural systems that can be used to make their designs workable without compromising with the safety and stability of structure and in accordance with codes of practice.

Pedagogy:

The course would be delivered through Lectures, Power point presentations and videos in online mode during pandemic. Site visits and case studies are conducted to get exposure and understand the construction related issues. . Numerical /Design problem exercise with relevant IS codes is practiced to get a hold over the concepts learnt.

Expected Outcomes:

At the end of course the students can fulfil their architectural expression and designs by adopting the most suitable structural system.

TEACHING PLAN FOR SEMESTER VI (Session 2022-23)

S NO.	WEEK/DATE	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME	
1	WEEK 01	Sketchfile/Research		NA	NA	Students get an overview of types of structural systems in buildings	
	Studio 1	Lecture-1	Introductory class, course delivery plan, prerequisites of the subject and evaluation system would be discussed.				Introduction to Floor systems. Components and behaviour. Failure Modes
	Studio 2	Lecture-2	Structural systems in buildings. Horizontal support systems.				
2	WEEK 02	Sketchfile/Research		GROUP PRESENTATION Merits, Demerits and application of different floor systems.	10	Students can adopt a suitable floor system in their design	
	Studio 1	Lecture-1	Types of Floor Systems.				Study floor systems like Beam & Slab system waffle slab System Flat slab Flat Plate system Merits, demerits and application
	Studio 2	Lecture-2	Types of Floor Systems.				
3	WEEK 03	Sketchfile/Research		NA		Students understand the essence of lateral loads in the design of tall buildings	
	Studio 1	Lecture-1	Introduction to High Rise buildings				Lecture on principles of high rise structures . Governing forces in design.
	Studio 2	Lecture-2	High Rise buildings contd				Effect of lateral loads on tall buildings, Ways to enhance lateral stiffness.
4	WEEK 04	Sketchfile/Research		Students to conduct case study on tall building of their choice and prepare a report on horizontal & vertical support systems adopted. Source: Technical papers from CTBUH	15	Students understand the application of shear walls & bracings	
	Studio 1	Lecture-1	Vertical Support Systems- Shear walls & Bracing system				Lecture on increasing earth quake resistance of buildings. Effect on lateral stiffness with or without shear walls,types and their location for best performance.
	Studio 2	Lecture-2	Structural Wall-Frame Systems (Shear walls) contd				Different type of bracing systems adopted to increase lateral stiffness
5	WEEK 05	Topic of Study		NA		Students get exposure to super tall structure design and different structural systems	
	Studio 1	Lecture-1	Structural system for super tall structures				Tubes, Bundled tubes, outrigger structures, Diaagrids for tall buildings.
	Studio 2	Lecture-2	Structural system for super tall structures				Study of prominent tall structures Like Burj Khalifa, Kingdom Tower, Petronas Towers, Taipai 101 .
6	WEEK 06	Topic of Study		Individual PPT	10	Students understand construction issues and difficulties in the design of tall structures	
	Studio 1	Lecture-1	Structural systems in Tall buildings				Presentation by individual student on their case study- Super tall structures
	Studio 2	Lecture-2	Structural systems in Tall buildings				
7	WEEK 07	Topic of Study		Individual PPT	10	Students understand construction issues and technical difficulties in the design of tall structures	
	Studio 1	Lecture-1	Tall Buildings contd				Presentation by individual student on their case study- Super tall structures

	Studio 2	Lecture-2	Tall Buildings contd				
8	WEEK 08	Topic of Study					
	Studio 1	Lecture-1		TEST WEEK			
	Studio 2	Lecture-2					
9	WEEK 09	Topic of Study		Manual methods to analyse simple portal frame.			Students learn steps to analyse simple portal frames
	Studio 1	Lecture-1	Analysis of Portal frames	Numericals based on same	NA		
	Studio 2	Lecture-2	Analysis of Portal frames				
10	WEEK 10	Topic of Study					Students can analyse simple portal frames and also interpret stress diagrams
	Studio 1	Lecture-1	Portal Frames Contd	Numerical Practice and drawing BMD . Interpreting results	NA		
	Studio 2	Lecture-2	Portal Frames Contd				
11	WEEK 11	Topic Of Study		Lecture on comparison of Manual method to software based analysis.			Students learn about the quick ways of software based analysis.
	Studio 1	Lecture-1	Introduction to Computer Based Analysis of building frames	Introducing STAAD Pro	NA		
	Studio 2	Lecture-2	Introduction to softwares for analysis				
12	WEEK 12	Topic Of Study		Demonstration of STAAD Pro software and generation of input and output files for simple frames.	Students to submit input/output files for given problems in class	5	Students learn the basic commands of STAAD pro software
	Studio 1	Lecture-1	Guest Lecture	Students to practice commands and generate output /input files			
	Studio 2	Lecture-2	Guest Lecture				
13	WEEK 13	Topic of study					Students can interpret output files from analysis of frames using STAAD Pro
	Studio 1	Lecture-1	Software based Analysis	Students to practice STAAD Pro	NA		
	Studio 2	Lecture-2	Software based Analysis				
14	WEEK 14	Topic of study					Students can interpret output files from analysis of frames using STAAD Pro
	Studio 1	Lecture-1	Software based Analysis	STAAD PRO continued	NA		
	Studio 2	Lecture-2	Software based Analysis				
15	WEEK 15	Review		Sharing question Banks, Doubt clarification			Students are prepared for univ exam
	Studio 1	Lecture-1	Revision		NA		
	Studio 2	Lecture-2	Revision				
16	WEEK 16	Final Submission		Practicing questions and doubt clarification			Students are prepared for univ exam
	Studio 1	Lecture-1	Discussing old univ question papers		NA		
	Studio 2	Lecture-2					

Suggested Readings

1. IS 875(part 1 to 5), IS 1893, IS 4326, IS 456, SP34,IS 13920
- 2.Theory of Structures by RS Khurmi
- 3.Design of RCC structures by S .Ramamrutham
- 4.Earthquake Resistant design of structures by P Aggarwal & M. Shrikhande
- 5.Masonry & Timber Structures by A.S. Arya

No. of Teaching Weeks: 16
Contact Hours: per week : L : 0 S: 5
Contact Hours: per sem : L : 0 S: 80
Credit: 5
Total Marks:100 (E=50 I=50)

Course Title: Building Construction V
Course Code: AP-403
IVth YEAR – 2022, Semester VII

Objectives:

Learning about alternate systems and new materials and techniques in Building Construction. This studio introduces students to alternate technologies/materials

Studio deals in Four stages in building construction and how these are achieved through different materials and technologies. Advance construction system/s with These Stages can be Detailed as follows :

- Foundation and alternate systems
- Walling systems and alternatives.
- Roofing systems designs and details
- Flooring systems and building skin

All four stages are covered through different materials such as adobe construction, bamboo construction systems, agro waste and industrial waste products based Advance Technologies and Hybrid systems with a mix of traditional and alternate technologies.

Pedagogy:

Seminar Based Approach (Lecture and Discussion Method), Time Problem, Report Submission

Guest Lecture/s by Industry Expert.

4 Members in a Group. Each Group Takes A material and Studies In Depth. through its History- technology used-construction system requirements-detailing limits Each material is studied along with its appropriate construction technology to demonstrate the use. Oral Presentation, .

Part 1 - Four stages are covered through drawings and construction details to demonstrate the use of material and its appropriateness

Studio Method- Deliverable 1 and 2 Foundation system and Walling

Deliverable 3 and 4 - Roofing system and Flooring with external wall section

Part 2. --Case study of one building with all four stages including drawings to demonstrate the learning , Part 3 -- Time problem

Expected Outcomes:

To acquaint the students with construction systems and detailing of Alternate technologies with Respect to applications and methods

The make students familiar with the concepts and developments in alternate technologies Trends.

To work on hybrid systems

To explore Various issues related to alternate technologies

TEACHING PLAN FOR SEMESTER I (Session 2021-22)

S NO.	WEEK/ DATE	LECTURE /DISCUSSION	ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME
1	WEEK 01	Sketchfile/Research		Lecture, demonstration & discussion (Session-1 lecture 1 hr and rest of the studio time for discussions. session 2 majorly discussion and presentation by students online/offline mode.		
	Studio 1	Lecture-1	Introduction To Entire Course, & Methodology of Alternate Construction technology content			
	Studio 2	Lecture-2	Group wise topic and research for report.			
2	WEEK 02	Sketchfile/Research		Lecture, demonstration & discussion Group Presentation (History part)	ppt Presentation by students and report submission	
	Studio 1	Lecture-1	Alternate materials and technologies, constructions systems: hybrid construction			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
3	WEEK 03	Sketchfile/Research		Lecture, demonstration & discussion		
	Studio 1	Lecture-1	Foundation Systems- Types			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
4	WEEK 04	Sketchfile/Research		Lecture, demonstration & discussion By (Ar.Kunal mathur) Group Presentation (Technology part)	ppt Presentation by students and report submission	
	Studio 1	Lecture-1	Walling Ssystems - Types			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			

5	WEEK 05	Topic of Study		Lecture, demonstration & discussion		
	Studio 1	Lecture-1	Roofing System - Types			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
6	WEEK 06	Topic of Study		Lecture, demonstration & discussion	ppt Presentation by students and report submission	
	Studio 1	Lecture-1	Complete Report - Presentation			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
7	WEEK 07	Topic of Study		Lecture, demonstration & discussion	ppt Presentation by students and report submission	
	Studio 1	Lecture-1	Time Problem 1			
	Studio 2	Lecture-2	Time Problem 1- Discussion			
8	WEEK 08	Topic of Study		Lecture, demonstration & discussion	alternate construction technology - final report group work	
	Studio 1	Lecture-1	Case Study - Alternate Building Technology			
	Studio 2	Lecture-2	CaseStudy - Discussion - Foundation/ Walling			
9	WEEK 09	Topic of Study		Lecture, demonstration & discussion discussion and crits on report content	Stage submission of details	
	Studio 1	Lecture-1	Case Study - Alternate Building Technology			
	Studio 2	Lecture-2	CaseStudy - Discussion - Roofing/ flooring			
10	WEEK 10	Topic of Study		Lecture, demonstration & discussion discussion and crits on drawings to students		
	Studio 1	Lecture-1	New Material and Hybrid Technologies - Foundation, walling systems			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
11	WEEK 11	Topic of Study		Lecture, demonstration & discussion discussion and crits on drawings to students	Report Submission with Details	
	Studio 1	Lecture-1	New Material and Hybrid Technologies - Roofing, Flooring systems			
	Studio 2	Lecture-2	PPT By students (Group Assignment)			
12	WEEK 12	Topic of Study		- discussion	dwgs & report submissions	
	Studio 1	Lecture-1	Time Problem 2			
	Studio 2	Lecture-2	Time Problem 2- discussion assessment			
13	WEEK 13	Review		Lecture, demonstration & discussion	final submission report	

	Studio 1	Lecture-1	Report 1 and 2				
	Studio 2	Lecture-2	Report 1 and 2				
14	WEEK 14	Review		Lecture, demonstration & discussion	final submission of drawings & report		
	Studio 1	Lecture-1	Report Time problem	Group Presentation			
	Studio 2	Lecture-2	Report Time problem		5		
15	WEEK 15	Final Submission					
	Studio 1	Lecture-1	Overall discussion and corrections of work				
	Studio 2	Lecture-2	Portfolio submission/final marking		50		
16	WEEK 16	Review					

Suggested Readings:-

1. Barry R (1999) Construction of Buildings, East West Press Pvt. Ltd., New Delhi.
2. Mckay WB (1988) Building Construction (Vol. III & IV), Orient Longman, London, 1988.
3. Allen E (1999) Fundamentals of Building Construction: Materials and Methods, John Wiley & Sons, New York.
4. Punamia BC (1993) Building Construction, Laxmi Publications (P) Ltd, New Delhi.
5. Chudley R (1988) Building Construction Handbook, Butterworth Heinemann, Oxford.

No.of Teaching Weeks: 16
 Contact Hours: per week : L : 0 S: 3
 Contact Hours: per sem : L : 0 S: 48
 Credit: 03
 Total Marks:100 (E=50 I=50)

Course Title: Earthquake Resistant Architecture
 Course Code: AP446
 Fourth Year – 2022-23, Semester VIII

Objectives:

This is an elective course designed to familiarise the students with the fundamentals of Earthquake Resistant Design of buildings, The objective is to acquaint students with the building configurations suitable for seismic zones. The students would be introduced to various seismic codes and learn about typical joint detail/ ductile detailing.

Pedagogy:

Lectures would be delivered in an Online mode via Power point presentation during pandemic.
 In offline mode, Group discussion, Literature review and group assignments/Pin board presentations and Model making activities would be conducted during studio hours

Expected Outcomes:

After the successful completion of the course the students can effectively apply the concepts learnt in their projects and design buildings for an earthquake prone zone .

TEACHING PLAN FOR SEMESTER VIII (Session 2022-23)

S NO.	WEEK/D	LECTURE /DISCUSSION		ACTIVITY	SUBMISSION	MARKS	EXPECTED
1	WEEK 01	Sketchfile/Research		Brief outline of various modules to be learnt via PPT. Dividing students into groups and assigning topics for group presentation	NA	NA	Students understand the scope of the course/ subject AND deliverables expected during the semester
	Studio 1	Lecture-1	Introductory Class- Introduction to syllabus , evaluation system and brief overview of Earthquake resistant architecture				
	Studio 2	Lecture-2					
2	WEEK 02	Sketchfile/Research		Group Presentation: Students to present their knowledge on basics of Seismology	PPT	20	Students get familiar to the Earthquake science and various terms
	Studio 1	Lecture-1	Earthquake Terminology, Causes and Measurement				
	Studio 2	Lecture-2					
3	WEEK 03	Sketchfile/Research		Group Presentation: Students to present case studies on the use of Base Isolation & Tuned Mass dampers in the tall iconic buildings	PPT	20	Students learn the technology /Mechanism behind base isolation & TMD
	Studio 1	Lecture-1	Tall buildings & earthquake resistant Features in Modern buildings. Base Isolation & TMD				
	Studio 2	Lecture-2					
4	WEEK 04	Sketchfile/Research		Online lecture on the impact of EQ on buildings and ground. Studying suitable building configurations to minimise damage /collapse	NA	NA	Knowing the impact of EQ and how building configuration is vital in reducing the damage during severe EQ
	Studio 1	Lecture-1	Effect of earthquake on ground & S Buildings				
	Studio 2	Lecture-2					
5	WEEK 05	Topic of Study		Online Lecture On how to improve stiffness of building. Use of shear walls, their desirable location and design aspects	Students to prepare an A3 sheet on shear walls	15	Students know the importance of Shear wall and its location for better efficiency
	Studio 1	Lecture-1	Virtues of an Earthquake Resistant Building				
	Studio 2	Lecture-2					
6	WEEK 06	Topic of Study		Knowing the Seismic Zones Of India Guidelines for earthquake resistant design as per IS 1893-2002. Site selection, Soil Characteristics, Shape of Building, Aspect Ratio etc	Students to explore IS1893 and prepare an A3 sheet based on guidelines given in the code	15	Students get familiar to the seismic code
	Studio 1	Lecture-1	Introduction to IS 1893-2002.				
	Studio 2	Lecture-2					

7	WEEK 07	Topic of Study		Discussion on Plan and Vertical Irregularities Re-entrant Corners Soft storey Mass irregularity Stiffness distribution Short/Floating columns etc	Students to prepare an A3 sheet on plan/vertical irregularity in buildings	15	Students learn how to avoid these irregularities that affect the seismic performance of a building
	Studio 1	Lecture-1	Irregularities in Plan and Vertical as per IS1893-2002				
	Studio 2	Lecture-2					
8	WEEK 08	Topic of Study		Exploring the cause behind the massive devastation caused in Bhuj earthquake on 2001. Group Discussion	Students to come prepared for GD	10	Identifying the flaws in the design of buildings in Bhuj
	Studio 1	Lecture-1	CaseStudy- Bhuj earthquake				
	Studio 2	Lecture-2					
9	WEEK 09	Test Week					
	Studio 1	Lecture-1	Test Week				
	Studio 2	Lecture-2					
10	WEEK 10	Topic of Study		Introduction to IS4326			Students learn the codal guidelines
	Studio 1	Lecture-1	Strengthening Of Masonry Buildings.				
	Studio 2	Lecture-2					
11	WEEK 11	Topic of Study		Discussion on clauses IS4326	Students to prepare A3 sheet on improvinf earthquake resistance of Masonry Buildings	15	Students understand various aspects of providing bands and suitable opening sizes to improve EQ performance
	Studio 1	Lecture-1	Strengthening Of Masonry Buildings Contd				
	Studio 2	Lecture-2					
12	WEEK 12	Topic of Study		Introduction to IS13920. Understanding Stess straun curve-Mild steel	Unerstanding term ductility	NA	Ductility of joints
	Studio 1	Lecture-1	Ductility for better EQ performance				
	Studio 2	Lecture-2					
13	WEEK 13	Topic of Study		Introduction to IS13920 Contd	Students to study beam column joints, reinforcement detail for seismic ristance	NA	Undertanding how to make joints ductile
	Studio 1	Lecture-1	Ductility for better EQ performance				
	Studio 2	Lecture-2					
14	WEEK 14	Topic of Study		Students to assess their own 3rd year design project and identify the shortcomings that could be an Earhquake hazard and preapring a report	A3 size brief of their study	20	Can implement various codal guidelines learnt in due course to check the flaws in their design
	Studio 1	Lecture-1	Analysis of Design project 3rd year- Office building				
	Studio 2	Lecture-2					
15	WEEK 15	Topic of Study		Students to assess their own 3rd year design project and identify the shortcomings that could be an Earhquake hazard and preapring a report	Students to prepare a brief of their study wrt to seismic codal guidelines	20	Can implement various codal guidelines learnt in due course to check the flaws in their design
	Studio 1	Lecture-1	ANALYSIS of Design project 3rd year- Office building. CONTD				
	Studio 2	Lecture-2					
16	WEEK 16	Topic of Study			Students to submit final portfolio (A3) with cover page and assignments all complete	50	
	Studio 1	Lecture-1	Final portfolio submission				

	Studio 2	Lecture-2					
--	----------	-----------	--	--	--	--	--

Suggested Readings

Guidelines for Earthquake resistant non-engineered construction(NICEE IIT Kanpur, India) 2004
CVR Murthy, Andrew Charlson" Earthquake design concepts" NICEE IIT Kanpur 2000
Earthquake resistant design Aggawal P
Socio-economic developmental record Vol 12, 2005
"Safe Shelter within Unsaf Cities" Ian Davis: Open House International UK 1987

No.of Teaching Weeks: 16
Contact Hours: per week : L : 2 S: 0
Contact Hours: per sem : L : 32 S: 0
Credit: 2
Total Marks:100 (E=75 I=25)

Course Title: Professional Practice
Course Code: AP-502
5th YEAR – 2022

Objectives:

The Objective of the theory course is to familiarize students with legal, economic and social issues related to professional practice. Focus will be on the role of the architect in developing society and emerging influence of economic liberalization. Emphasis will be on ethical dimension governing professional conduct in serving client/society.

Pedagogy:

The course is conducted online. Students will be getting notes on various topics. In this semester they are working in professional office and topics are related to architecture profession. It is expected that students will have hand on experience on these topic. They are expect to submit answers on tutorial using their experience in their place of training

Expected Outcomes:

Students working with professional office will give them hands on experience of professional practice. It is expected that they will use this experience in their future professional life.

TEACHING PLAN FOR SEMESTER I (Session 2020-21)

S NO.	WEEK/DAT	LECTURE /DISCUSSION		ACTIVITY	SUBMISSION	MARKS	EXPECTED OUTCOME
1	WEEK 01	Sketchfile/Research		Faculty to prepare notes on Architect and his office by faculty	Students to write notes as per their experience in office where they are under training on Architect & his office.		
	Studio 1	Lecture-1	Online Discussion				
	Studio 2	Lecture-2					
2	WEEK 02	Sketchfile/Research		Faculty to send notes on Architect and his office by faculty.	Students to write notes as per their experience in office where they are under training on Architect & his office.		
	Studio 1	Lecture-1	Online Discussion				
	Studio 2	Lecture-2					
3	WEEK 03	Sketchfile/Research			Students to submit on line tutorial on Architect & his office.	25	To enable students to document and understand the working of an architect's office
	Studio 1	Lecture-1	Online Discussion				
	Studio 2	Lecture-2					
4	WEEK 04	Sketchfile/Research		Faculty to prepare notes on Architect's responsibility & office management	Students to write notes as per their experience in office where they are under training on Architect's responsibility and office management.		
	Studio 1	Lecture-1	Online Discussion				
	Studio 2	Lecture-2					
5	WEEK 05	Topic of Study		Faculty to send notes on Architect's responsibility & office management	Students to write notes as per their experience in office where they are under training on Architect's responsibility and office management.		
	Studio 1	Lecture-1	Online Discussion				
	Studio 2	Lecture-2					
6	WEEK 06	Topic of Study			Submission of tutorial on Architect's responsibility & office management.	25	To enable students to document and understand the responsibility of an architect and the office management
	Studio 1	Lecture-1	Online Discussion				

	Studio 2	Lecture-2						
7	WEEK 07	Topic of Study		Faculty to prepare notes on Project Co-ordination with consultant and project manager.	Students to write notes as per their experience in office where they are under training on Project co-ordination with consultant and project manager.			
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
8	WEEK 08	Topic of Study		Faculty to send notes on Project Co-ordination with consultant and project manager.	Students to write notes as per their experience in office where they are under training on Project co-ordination with consultant and project manager.			
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
9	WEEK 09	Topic of Study			Submission of tutorial on Project co-ordination with consultants and Project manager.	25	To enable students to document and understand the relationship and co-ordination with consultants and project manager	
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
10	WEEK 10	Topic of Study		Faculty to send notes on project co-ordination with clients.	Students to write notes as per their experience in office where they are under training on client co-ordination			
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
11	WEEK 11	Prefinal			students to submit on line tutorial on project co-ordination with clients	25	To enable students to document and understand the relationship and co-ordination with clients	
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
12	WEEK 12	Review		Faculty to prepare notes on office accounting & billing.	Students to write notes as per their experience in office where they are under training on Office accounting & billing.			
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
13	WEEK 13	Test Week		Faculty to send notes on office accounting & billing.	Students to write notes as per their experience in office where they are under training on Office accounting & billing.			
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
14	WEEK 14	Review			Students to submit on line tutorial on office accounting & billing.	25	To enable students to document and understand the accounting and billing in an architect's office	
	Studio 1	Lecture-1	Online Discussion					
	Studio 2	Lecture-2						
15	WEEK 15	Final Submission		final tutorials review, compilation submitted by students	Students to submit compilation of all tutorials	25		
	Studio 1	Lecture-1						
	Studio 2	Lecture-2				marks / 150		
16	WEEK 16	Review						

Suggested Readings:-

1. Handbook of professional Documents published by the Council of Architecture.
2. Nanavati R (1993) Professional Practice, Lakhani Book Depot.

Note:- Subject will be taught collectively by Mr A K Jain & Mr Prashant Sharma , Mr Akash Sharma & Ms Kavita Revo will assist the lead faculty with co-ordination