DEPARTMENT OF ARCHITECTURE ,GOVT.POLYTECHNIC SUNDERNAGAR	
LESSON PLAN	
Program Name	Architecture Assistantship
Subject Name	ARCHITECTURE DESIGN-III
Subject Code	ARPC – 3001
Semester	THIRD
Subject Teacher Name	BANDNA DIXIT

Evaluation Scheme

Sr. No	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1	AD-III	1	6	40	40	80	60	60	120
Reference Books		Time-saver Standards for Architectural Design Data: The Reference of Architectural Fundamentals", Donald Watson, McGraw-Hill, 1997.							
		"Building drawing with an integrated approach to Built Environment", M. G. Shah, C. M. Kale, S. Y. Patki, Tata McGraw-Hill Education, 2002.							

Course Outcomes (COs)

CO – 1	To train student in design development and understanding and appreciation of space.
CO – 2	to develop understanding of Functional requirements such as circulation, facilitation and area analysis

Teaching Plan

Chapters	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I	introduction to various topics given in syllabus	01-08-2025		
	concept disscussion	02-08-2025		
	library study	03-08-2025		
	library study	06-08-2025		
	duplex design priliminary sketch drawings	07-08-2025		
	duplex design priliminary sketch drawings	08-08-2025		
	duplex design priliminary sketch drawings	13-08-2025		
	duplex design priliminary sketch drawings	14-08-2025		
	duplex design priliminary drawings	20-08-2025		
	duplex design priliminary drawings	21-08-2025		
	duplex design priliminary drawings	22-08-2025		
	PRILIMINARY SUBMISSION	23-08-2025		
	duplex design final drawing work	27-08-2025		
	duplex design final drawing work	28-08-2025		
	duplex design final drawing work	29-08-2025		
	duplex design final drawing work	30-08-2025		
	duplex design final drawing work	03-09-2025		
	duplex design final drawing work	04-09-2025		
	duplex design final drawing work	05-09-2025		
	duplex design final drawing work	06-09-2025		
	duplex design final drawing work	10-09-2025		
	duplex design final drawing work	11-09-2025		
	FINAL SUBMISSION	12-09-2025		
UNIT-II	Design of public buildings concept disscussion	17-09-2025		
	basic sketch drawings	18-09-2025		
	basic sketch drawings	19-09-2025		
	concept disscussion	20-09-2025		
	basic sketch drawings	24-09-2025		
	basic sketch drawings	25-09-2025		
	basic sketch drawings	26-09-2025		
	basic sketch drawings	27-09-2025		
	priliminary drawings	01-10-2025		
	priliminary drawings	03-10-2025		
	priliminary drawings	04-10-2025		
	priliminary drawings	08-10-2025		
	priliminary drawings	09-10-2025		
	priliminary drawings	10-10-2025		
	PRILIMINARY SUBMISSION	15-10-2025		

	final drawing work	22-10-2025		
	final drawing work	23-10-2025		
	final drawing work	24-10-2025		
	final drawing work CT-II	25-10-2025		
	final drawing work	29-10-2025		
	final drawing work	30-10-2025		
	final drawing work	31-10-2025		
	FINAL SUBMISSION	01-11-2025		
UNIT-III	study of various architectural monuments	06-11-2025		
	drawing of any important building/architectural monument	07-11-2025		
	drawing of any important building/architectural monument	13-11-2025		
	drawing of any important building/architectural monument	14-11-2025		
	documentation of monuments	15-11-2025		
	documentation of monuments	19-11-2025		
	documentation of monuments	20-11-2025		
	documentation of monuments	21-11-2025		
	documentation of monuments	22-11-2025		
	documentation of monuments	26-11-2025		

Signature of teacher

(Ar. Bondua Dixit)

Sig. of H.O.D.

(Ar. Hansraj)

Name of Teacher: Ar. Pranav Sharma **Subject:** **BUILDING MATERIAL & CONSTRUCTION-II** **Lectures/week:** 3 **Semester:** III SEM. **Session: AUG – DEC 2025**

S. no.	Month	Week	Lecture Planned	Lecture Delivered	Name of Chapter	Contents to be taught	Remarks
1.	AUGUST	I	3		Introduction to the Timber	Timber as a building material, variety of Indian Timber	
		II	7			characteristics and suitability for different uses, defects and decay	
		III	4			seasoning and preservation, Different types of joints in timber	
		IV	7		Timber door design and its Joinery details	Introduction to the Timber doors	
		V	7			Detailed drawing of Battened-Ledged-braced door	
2.	SEPTEMBER	VI	1				
		VII	7			Detailed drawings of Battened-Ledged-Braced-Framed doors	
		VIII	7			Detailed drawings of Glazed and panel door	
		IX	7			Detailed drawings of Flush door	
		X	4		Timber window and its joinery details	Detailed construction drawings of Casement Window	
3.	OCTOBER	X	3			Detailed drawing of Bay window	
		XI	5		Wooden Staircase	Introduction to the staircase and its different types	
		XII	4			Detailed drawings of wooden staircase	
		XIII	5		Wooden Floors	Introduction to the nature and characteristics of wood floors	
		XIV	7			Wooden floors- ground level and upper level, advantages and limitations of wooden floors	
4.	NOVEMBER	XV	7			Basic introduction and various typologies, its advantages & limitations Detailed drawing of Lean to roof	
		XVI	7		Wooden Roofs	House Test	
		XVII	7			Detailed construction drawing of King Post truss	
		XVIII	7			Market survey of manufactured timber products and its applications	

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Name of Teacher : Hans Raj **Subject**: BUILDING SERVICES **Semester** : 3rd **Session:Aug-Dec.2025**

Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
August	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	I- Water Supply	Detailed studies such as Sources and Treatment of water. Water demand & calculations, Storage & conveyance of water at municipal level. Water supply systems and various fittings. Hot and Cold-water supply layouts. Water supply design of a residence: Connection with water mains, design of Underground & Overhead water tanks, pump capacity, calculations for diameter of pipe. Introduction to water supply in a multi-storied building.	
September	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	II- Wastewater and Solid Waste management	Definition of Refuse, garbage, rubbish, sullage, sub soil water, storm water, night soil, sewage- sanitary, domestic & industrial, sewer, sewerage & waste water. Various drainage & sanitary fixtures & fittings, traps - role of water seal, sizes, materials and their space requirements. Types of pipes and drains in different materials and their usage, diameter of pipes, slope standards. Inspection and Intercepting chambers, manholes etc. Sewage and Effluent treatment- Innovative and cost-effective sanitation concepts e.g. Introduction to STP's & ETP's, Design calculations of septic tank & soak pit Storm water design calculations for roof top & for surface drains, Rainwater Harvesting & Groundwater Recharge Exercise: Design a layout for a residence for water supply, drainage, sewage and storm water.	
October	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	III- Electrical services	Introduction to Thermal, Mechanical & Electrical energy Electrical distribution systems and safety devices Types of wiring systems, advantages and disadvantages, safety and precautions, Types of electrical equipment/fixtures used in a building such as motors, fuses, switchboards, MCB's, ELCB's, fuse units, control panels etc. Standard symbols for various fixtures as per National Building Code 2016 Exercise: Preparing an electrical layout with all necessary details for a small building/residence	
Novmber	1st 2nd 3rd 4th	1-7 8-15 16-23 24-26	IV- Illumination & Fire fighting	Introduction to Illumination, studies of the same such as various types of artificial lighting. Various Terms in lighting, standards of illumination for illumination levels. Types of artificial lighting sources, types of luminaries & fixtures Types of fire and its causes Firefighting devices (Sprinkler system, Wet riser system, Fire Extinguishers, Fire alarm, Smoke detectors, various types of fire hydrants, Fire escape modes.	

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Name of Teacher: Ar. Noopur Tandon Subject: H.O.A. – II Semester: 3RD Sem. Session: AUG – DEC 2025

S. no.	Month	Week	Lecture Planned	Lecture Delivered	Name of Chapter	Contents to be taught	Remarks
1.	AUGUST	I	1		Development of Christian architecture	Early Christian, Byzantine	
		II	2			Romanesque, Gothic,	
		III	2			Renaissance and Baroque-Rococo	
		IV	3				
		V	3		Rise and Development of Islamic Architecture	Rise of Islam, Islamic Invasions, political and social conditions in India.	
2.	SEPTEMBER	VI	3			Slave, Khilji,	
		VII	2			Tughlak, Sayyid,	
		VIII	3			Lodi Dynasity Mughal art and architecture In India	
		IX	3			Provincial Architecture of Malwa & Bijapur.	
3.	OCTOBER	X	2		Architecture in Europe	Industrial Revolution	
		XI	2			Neo Classicism and	
		XII	1			Neo Gothic Development of Architecture	
		XIII	1			Neo Gothic Development of Architecture	
		XIV	2			American Skyscrapers	
4.	NOVEMBER	XIV	1		Architecture in Colonial India	Culture of colonialism British Response to Indian Context,	
		XV	1			Culture of colonialism British Response to Indian Context,	
		XVI	3			Early British Architecture.	
		XVII	3			Indo-Saracenic Architecture in India	

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(Noopur Tandon)

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Name of Teacher: Ar. Pranav Sharma **Subject:** CIMATE RESPONSIVE ARCHITECTURELectures/week: 3 **Semester:** III SEM. **Session:** AUG – DEC 2025

S. no.	Month	Week	Lecture Planned	Lecture Delivered	Name of Chapter	Contents to be taught	Remarks
1.	AUGUST	I	2		Introduction to the subject& geography of the world	Role of climate w.r.t shelter and importance of building climatology	
		II	2		Global climatic factors	Latitude, longitude, solar radiation etc.	
		III	1		Elements of Climate	Humidity, temperature etc.	
		IV	3		Classification of Climate	Various climatic zones of India	
		V	3				
2.	SEPTEMBER	VI	3		Macro and Micro climate	Effect of local factors and landscape elements on site climate	
		VII	2		Human comfort	Thermal balance of human body and comfort zone	
		VIII	3		Principle of thermal design in buildings	Heat flow through building envelope, thermal balance equation	
		IX	3			Thermo physical properties of building materials like conductivity etc.	
3.	OCTOBER	X	2		Role of sun in building climatology	Apparent movement of the sun, Sun path diagrams and its application, greenhouse effect	
		XI	2			Orientation, internal blinds and curtains, highperformance glasses, taxonomy of shading devices. Solar angles, shadow angles	
		XII	3			Diwali Vacations	
		XIII	3		Role of wind in providing thermal comfort	study of diurnal and seasonal variations, heating and cooling, effect of topography, Functions of natural ventilation	
		XIV	2			Supply of fresh air, stack effect, air movement in and around buildings, wind eddies, size andposition, effect of wind on design of buildings.	
4.	NOVEMBER	XV	1		Precipitation	Water-vapor. Relative-humidity, condensation, rain, fog, snow and architectural responses	
		XVI	2		Day Lighting	Day-light: glare, amount of light, sky as a source of light and day-light factor, effectof size and shape of openings in different planes with and without obstructions.	
		XVII	2		Design Strategies	HOUSE TEST &Climate responsive traditional architecture in different climatic zones of India.	
		XVIII	3			Example of climate responsive contemporary building projects from India.	
		XIX	3			Question bank to be provided and discussed with the students	

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Name of Teacher: Ar. Pranav Sharma **Subject: PE-I (HILL ARCHITECTURE)** **Lectures/week:** 3 **Semester:** III SEM. **Session: AUG – DEC 2025**

S. no.	Month	Week	Lecture Planned	Lecture Delivered	Name of Chapter	Contents to be taught	Remarks
1.	AUGUST	I	3		Introduction to the subject	Understanding the importance of hill architecture in present scenario	
		II	3		Historical perspective of hill architecture	Historical perspective of hill architecture and its unique attributes and concerns	
		III	3		Major hill settlements in various regions of the world.	Understanding the most prominent mountains, hills and its formation throughout the world	
		IV	3			Vernacular hill Settlements of North America	
2.	SEPTEMBER	IV	3			Traditional hill settlements of South America	
		V	3			Vernacular hill Settlements of Europe and Asia	
		VI	3		Traditional Hill architecture of India	Traditional hill settlements in India. North India, NE India and South India	
		VII	3				
		VIII	2		Vernacular hill architecture of Himachal Pradesh.	Building Types, techniques and materials of vernacular architecture of Himachal Pradesh.	
3.	OCTOBER	VIII	1				
		IX	2		Case study	Modern buildings on Hills in India	
		X	3		Basic concepts of designing on hills	Constraints of climate, topography and availability of materials. Design factors such as access, circulation, gradients, slope analysis, grading and interpolation of contours.	
		XI	2				
		XII	3		Case study of any Hill settlements in Himachal Pradesh	Site visit to a vernacular hill settlement of Himachal Pradesh, understanding its time testing indigenous techniques and construction system	
4.	NOVEMBER	XIII	2				
		XIV	3			HOUSE TEST	
		XV	3		Environmental and Ecological concerns	Structural aspects of modern buildings constructed in hilly regions and necessary safeguards	
		XVI	3				

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Name of Teacher: Ar. Noopur Tandon Subject: C.A.A.-II Semester: 3RD Sem. Session: AUG – DEC 2025

S. no.	Month	Week	Lecture Planned	Lecture Delivered	Name of Chapter	Contents to be taught	Remarks
1.	AUGUST	I	4		Creating folders and sub folders	Introduction to 2-D Drawing Software, Familiarizing the interface Inside the drawing editor, Commands in the menus (Tool bars)	
		II	4			Accessing Commands, Settings necessary for drafting, Understanding UCS , Folders for organizing drawings and files	
		III	4			Creating and Saving a new Drawing & Commands and options to create new drawings:-	
		IV	4		Setting up a new drawing with units, limits etc.	Units, Limits, Snap, Grid, Ortho 2.3 Application of layers 2.4 Open a new, existing drawing 2.5 Save, save as, quit, close, exit	
2.	SEPTEMBER	V	4		Modifying composition made in section	Drafting Commands:- -Keyboard shortcuts for various commands, Commands for Function Keys, Adding Text, Leader, Multi-Leader	
		VI	4				
		VII	4		Making plan, elevation and section of simple building.	Viewing an Existing Drawing 4.1 Zoom, Pan, Redraw and Regen all Exercise: Viewing, zooming of existing drawing made in section	
		VII	4			Modifying an Existing Drawing:- Undo Redo/Oops, Trim, Move, Offset, Rotate, Array, Stretch, Divide, Erase, Break, Copy, Mirror (Mirror test), Change (change properties), Extend, Explode, Blip mode, Scale, Fillet, 3 Reference Rotate, Scale- Feet Drawing feet to mm	
3.	OCTOBER	IX	2			Making & Inserting Blocks:- Blocks, Insert block, W-block, X-ref	
		X	4		Inserting furniture, fixtures, trees etc. in the plans, sections and elevations	Understanding Layout features:- Generating Layout, Viewport Formatting in Layout	
		XI	2				
		XII	2			Dimensioning	
		XIII	4				
4.	NOVEMBER	XIV	2				
		XV	4		Creating viewport of plans, sections and elevations made in model space	Plotting Drawings	
		XVI	4			Exporting the file	
		XVII	2				

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Name of Teacher : Hans Raj **Subject**: SEMINAR –I **Semester** : 3rd **Session:Aug-Dec.2025**

Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
August	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	I- Water Supply	To improve the communication skills; students are required to present seminar on any relevant topic covered in the semester.	
September	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	II- Wastewater and Solid Waste management	The focus should be on innovative things being carried out in the world, in the field of Architecture.	
October	1st 2nd 3rd 4th	1-7 8-15 16-23 24-31	III- Electrical services	The activity may be performed individually or in a group as decided by the concerned faculty.	
Novmber	1st 2nd 3rd 4th	1-7 8-15 16-23 24-26	IV- Illumination & Fire fighting	Presentations shall be made by students to explain the contents. Seminars may be conducted for the relevant topics of the subjects pertaining to 3rd semester.	

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