

Department of Architecture Assistantship
Dr. B. R. Ambedkar Govt. Polytechnic Ambota
Distt-Una(H.P)
Lesson Plan
Academic Session Jan -May 2026

Programme Name Diploma in Architecture Assistantship
Subject Name Structural Design-I
Subject Code ARPC-4004
Semester Fourth
Subject Co-ordinator Name Ar. Rajeev Bhardwaj

Evaluation Scheme

Subject Name	Structural Design-I	Study Scheme (Hrs/Week)		Marks in Evaluation Scheme		
		Internal Assesment	External Assesment	Th	Pr	Total
		3	Pr	40	60	100

Reference Books

1. Theory of Structures by Birender Singh (published by Kaption publishing House)
2. Structural Mechanics by Birender Singh (published by Kaption publishing house)
3. Bansal R. K., "Engineering Mechanics", Lakshmi Publications Pvt Ltd, 3/E, 1996.

Coarse Outcomes			
		CO-1	To understand the basic principles of structural mechanics that would be pertinent to simple design elements
		CO-2	To understand the structural behavior of building elements.

Teaching Plan

	Unit	Name of Topic	Proposed Date	Actual Date	Signature	Remarks
1	Unit 1	Resultant of force system & equilibrium, Force definition, SI Unit, types, system of force. Resultant of concurrent forces, law of parallelogram, triangle law of forces, polygonal law of forces, resolution and addition of forces.	27-01-2026			
		Moment of forces, statement of various theorems, resultant of non-concurrent forces, parallel and non-parallel forces. Equilibrium: Concept of equilibrium, equilibrium of two and more forces, Conditions of equilibrium, graphical conditions of equilibrium body, constraints type of reaction.	28-01-2026			
			02-02-2026			
			03-02-2026			
			04-02-2026			
			09-02-2026			
2	Unit 2	Centre of Gravity (CG) CG by geometrical consideration for rectangular, triangle, semicircle. CG of regular solids, cubes, spheres, semi-spheres, right circular cones. Centre of gravity by method of moments of area, mass or volume of regular figures, composite figures and regular figures with cut out holes.	10-02-2026			
			11-02-2026			
			16-02-2026			
			17-02-2026			
			18-02-2026			
			23-02-2026			
			24-02-2026			
			25-02-2026			
			02-03-2026			
			03-03-2026			
3	Unit 3	Moment of Inertia Meaning of terms - second moment of area, radius of gyration of a section Theorem of parallel axis and perpendicular axis (statement only without proof) Second moment of regular figures - rectangle, triangle, circle and annular sections (formulae only)	09-03-2026			
			10-03-2026			
			11-03-2026			
			16-03-2026			
			17-03-2026			
			18-03-2026			
			23-03-2026			
			24-03-2026			
			25-03-2026			
			30-03-2026			
4	Unit 4	Shear force and Bending moment Definition and concepts of Shear force and bending Moment, calculations of reactions. SF and BM diagrams for simply supported, over-hanging, cantilever beams subjected to concentrated or uniformly distributed loads on entire or partial span. Calculation of position and magnitude of maximum shear force and bending moment, point of contra-flexure.	31-03-2026			
			01-04-2026			
			06-04-2026			
			07-04-2026			
			08-04-2026			
			13-04-2026			
			20-04-2026			
			21-04-2026			
			22-04-2026			
			27-04-2026			
			28-04-2026			
			29-04-2026			

Unit 5	Simple Stress and Strain: Concept and definitions, units, types of stresses, axial stresses in bars, strains Hooks law, tensile test on mild steel, working stress and factor of safety, temperature stresses in bars. Bending stresses, neutral axis Symmetrical and asymmetrical sections Assumptions in theory of bending	04-05-2026			
		05-05-2026			
		06-05-2026			
		11-05-2026			
		12-05-2026			
		13-05-2026			
		18-05-2026			
		19-05-2026			
		20-05-2026			
		25-05-2026			
		26-05-2026			

Assignments

Assignments	Contents of Syllabus Covered	Proposed Date	Actual Date	Signature	Remarks
A-1	Unit 1	09-03-2026			
A-2	Unit 2 ,Unit 3	08-04-2026			
A-3	Unit 4	19-05-2026			

House Test/Class Test

Name of Test	Contents of Syllabus Covered	Proposed Date	Actual Date	Signature	Remarks
Class Test 1	Unit 1	As Per HPTSB			
Class Test 2	Unit 1 , Unit2 , Unit 3	As Per HPTSB			
House Test	Unit 1 , Unit2 , Unit3 & Unit 4	As Per HPTSB			

Checked

(Signature of Teacher)

(Signature of H.O.D)

Department of Architecture Assistantship
 Dr. B. R. Ambedkar Govt. Polytechnic Ambota
 Distt-Una(H.P)
 Lesson Plan
 Academic Session Jan -May 2026

Program Name: Diploma in Architecture Assistantship
 Subject Name: Architecture Design-IV
 Subject Code: ARPC-4001
 Semester: Fourth
 Subject Co-ordinator Name: Ar. Rajeev Bhardwaj

Evaluation Scheme Subject Name	Architecture Design-IV	Study Scheme(Hrs/Week)		Marks in Evaluation Scheme		
		Th	Pr	Internal Assessment	Pr	Th
		1	6	40	40	60
					60	200

Reference Books

1. Chiara, J. D. (1984) Time Saver Standard for Site Planning, McGraw Hill Book Co., NY-49
2. Neufert, E. (2000) Neufert – Architect's Data, Crosby Lockwood and Sons, London

Coarse Outcomes			
		CO-1	The students would be familiarized with vernacular terminology
		CO-2	The emphasis will be construction details as applicable to Indian climatic conditions.
		CO-3	The design problem would induce students to experiment with built and open spaces.

Teaching Plan

	Unit	Name of Topic	Proposed Date	Actual Date	Signature	Remarks
		Introduction	27-01-2026			
		Introduction of Project -I	28-01-2026			
		Library data	30-01-2026			
		Library data	02-02-2026			
		Report Writing	03-02-2026			
		Report Writing	04-02-2026			
		Case Study	06-02-2026			
		Seminar Preparation	09-02-2026			
		Seminar Presentation	10-02-2026			
		Discussuion on Requirements	11-02-2026			
		Development of Design	13-02-2026			
		Development of Design	16-02-2026			
		Development of Design	17-02-2026			
		Development of Design	18-02-2026			
		Development of Design	20-02-2026			
		Development of Design	23-02-2026			
		Development of Design	24-02-2026			
		Development of Design	25-02-2026			
		Development of Design	27-02-2026			
		Development of Design	02-03-2026			
		Development of Design	03-03-2026			
		Development of Design	06-03-2026			
		Development of Design	09-03-2026			
		Prefinal Submission	10-03-2026			
		Prefinal Submission	11-03-2026			
		Prefinal Submission	13-03-2026			
		Prefinal Submission	16-03-2026			
		Final Submission of Project -I	17-03-2026			
		Final Submission of Project -I	18-03-2026			

2	Public spaces: Aganwadi, Kisan kendra, senior secondary school, community centre, Kalyan kendra, Art and Cultural Centre etc. An architectural design focused on a specific theme, for example, a material based thing such as, building only in mud/stone/timber etc. or a style based theme, for example, based on a period style, or a vernacular style, ecology - energy conservation theme, etc.	Introduction to Project -II	20-03-2026			
		Library data	23-03-2026			
		Library data	24-03-2026			
		Report Writing	25-03-2026			
		Report Writing	27-03-2026			
		Case Study	30-03-2026			
		Seminar Preparation	31-03-2026			
		Seminar Presentation	01-04-2026			
		Discussion on Requirements	06-04-2026			
		Development of Design	07-04-2026			
		Development of Design	08-04-2026			
		Development of Design	10-04-2026			
		Development of Design	13-04-2026			
		Development of Design	17-04-2026			
		Development of Design	20-04-2026			
		Development of Design	21-04-2026			
		Development of Design	22-04-2026			
		Development of Design	24-04-2026			
		Development of Design	27-04-2026			
		Development of Design	28-04-2026			
		Development of Design	29-04-2026			
		Development of Design	04-05-2026			
3	Time Problem : Bank, General Post Office, etc	Prefinal Submission	05-05-2026			
		Prefinal Submission	06-05-2026			
		Final Submission of Project -II	08-05-2026			
		Final Submission of Project -II	11-05-2026			
		Visit to near by Monument	12-05-2026			
		Documentation	13-05-2026			
		Documentation	15-05-2026			
		Drawings	18-05-2026			
		Final Submission	19-05-2026			

House Test/Class Test

Name of Test	Contents of Syllabus Covered	Proposed Date	Actual Date	Signature	Remarks
Class Test 1	Unit 1	As Per HPTSB			
Class Test 2	Unit 2	As Per HPTSB			
House Test	Unit 1 , Unit 2	As Per HPTSB			

Signature of Teacher

27.01.26

Checked

27.01.26
(Signature of H.O.D)

Department of Architecture LESSON PLAN									
Program Name	Architecture Assistantship								
Subject Name	BUILDING BYE LAWS & SUBMISSION DRAWINGS								
Subject Code	ARPC – 4003								
Semester	Fourth								
Subject Teacher Name	Rajinder Kumar								
Evaluation Scheme									
Sr. No	Subject Name	Study scheme (Ihrs/Week)		Marks in Evaluation Scheme					
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1	Building Material & Construction-I	1	4	40		40		60	100
Reference Books									
Course Outcomes (COs)									
CO – 1	Students will learn how to prepare Submission Drawings and the procedure of getting the approval done.								
CO – 2	Student will be able to understand the terminologies and application of various building byelaws related to architecture practice.								
Teaching Plan									
Chapters		Name of Topic			Proposed Date	Actual Date	Remarks		
UNIT-I (Building Byelaws: (Theory))		Definition, Objects, Importance and applicability of bye laws.			02-02-2026				
		Definition, Objects, Importance and applicability of bye laws.			09-02-2026				
		Terminology used in Building Bye laws: Set- back, Light plane,			16-02-2026				
		Terminology used in Building Bye laws: Set- back, Light plane,			23-02-2026				
		Floor space Index or Floor area ratio (Calculation also)			02-03-2026				
		Off-Street Parking, Fire Protection, Minimum Plot sizes,			09-03-2026				
		Consolidated open plot, Mezzanine floor, Skip floor.			16-03-2026				
		Principles underlying building bye- laws.			23-03-2026				
		Building Bye –Laws for residential area of a typical town planning			30-03-2026				
		Building Bye –Laws for residential area of a typical town planning			06-04-2026				
		Building Bye –Laws for residential area of a typical town planning			13-04-2026				
		Study of Revenue paper required for submission drawings			20-04-2026				
		Tatima or ax or map of land or plot, Jamabandi or type of land use,			27-04-2026				
		owner name, area of land, owner name Khasra no. etc.)			04-05-2026				
		Case Study of building bye laws of any town.			11-05-2026				
		Case Study of building bye laws of any town.			18-05-2026				
		Case Study of building bye laws of any town.			25-05-2026				
UNIT-II (Development/ Building Permission: (Drawing)		Requirements for submission (Municipal) drawings			29-01-2026				
		Requirements for submission (Municipal) drawings			02-02-2026				
		Requirements for submission (Municipal) drawings			05-02-2026				
		Sub division/ layout plan, key plan,			09-02-2026				
		Sub division/ layout plan, key plan,			12-02-2026				
		Sub division/ layout plan, key plan,			16-02-2026				
		Sub division/ layout plan, key plan,			19-02-2026				
		Site plan, Floor plans, elevations, sections,			23-02-2026				
		Site plan, Floor plans, elevations, sections,			26-02-2026				
		Site plan, Floor plans, elevations, sections,			02-03-2026				
		Site plan, Floor plans, elevations, sections,			05-03-2026				
		Site plan, Floor plans, elevations, sections,			09-03-2026				
		CLASS TEST - I			12-03-2026				
		Services plans, specifications, Structural stability Certificate,			16-03-2026				
		Services plans, specifications, Structural stability Certificate,			19-03-2026				
		Services plans, specifications, Structural stability Certificate,			30-03-2026				
		Services plans, specifications, Structural stability Certificate,			02-04-2026				
		Services plans, specifications, Structural stability Certificate,			06-04-2026				
		Scale, &coloring; Preparation & Signing of plans;			09-04-2026				
		CLASS TEST - II			13-04-2026				
		Scale, &coloring; Preparation & Signing of plans;			16-04-2026				
		Scale, &coloring; Preparation & Signing of plans;			20-04-2026				
		Fees, Duration of sanction; Deviations,			23-04-2026				
		Fees, Duration of sanction; Deviations,			27-04-2026				
		Fees, Duration of sanction; Deviations,			30-04-2026				
		Fees, Duration of sanction; Deviations,			04-05-2026				
		Fees, Duration of sanction; Deviations,			07-05-2026				
		HOUSE TEST			11-05-2026				
		Violations and Penalties, Completion Certificate.			14-05-2026				
		Violations and Penalties, Completion Certificate.			18-05-2026				
		Violations and Penalties, Completion Certificate.			21-05-2026				
		Violations and Penalties, Completion Certificate.			25-05-2026				

Sig. of Teacher

(RAJINDER KUMAR)

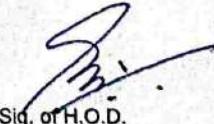
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Department of Architecture LESSON PLAN									
Program Name		Architecture Assistantship							
Subject Name		BUILDING MATERIAL & CONSTRUCTION-III							
Subject Code		ARPC – 2002							
Semester		Fourth							
Subject Teacher Name		Rajinder Kumar							
Evaluation Scheme									
Sr. No	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1	Building Material & Construction-III	1	6	40	40	80	60	60	120
Reference Books									
Course Outcomes (COs)									
CO - 1 Upon completion of the course, the student shall be familiar with basic components of a building.									
CO - 2 The course shall prepare students to gain an understanding of the basic building material like brick, stone, cement etc. and would get an exposure									
Teaching Plan									
Chapters		Name of Topic				Proposed Date	Actual Date	Remarks	
UNIT-I	Introduction to RCC, properties of ingredients, types of concrete,				27-01-2026				
	Introduction to RCC, properties of ingredients, types of concrete,				27-01-2026				
	different grades of concrete, Principles of foundation design, bearing capacity of soil,				28-01-2026				
	Different grades of concrete, Principles of foundation design, bearing capacity of soil.				30-01-2026				
	Simple foundation (masonry), spread footing, types of PAD/ Raft foundation, RCC footings and shallow foundations				03-02-2026				
	Simple foundation (masonry), spread footing, types of PAD/ Raft foundation, RCC footings and shallow foundations				03-02-2026				
	Simple foundation (masonry), spread footing, types of PAD/ Raft foundation, RCC footings and shallow foundations				04-02-2026				
	Simple foundation (masonry), spread footing, types of PAD/ Raft foundation, RCC footings and shallow foundations				06-02-2026				
	Simple foundation (masonry), spread footing, types of PAD/ Raft foundation, RCC footings and shallow foundations				10-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				10-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				11-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				13-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				17-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				17-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				18-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				20-02-2026				
	Introduction to Damp-Proof course, Horizontal and Vertical DPC in basement and walls.				24-02-2026				
UNIT-II	RCC stairs - types and construction details of RCC cast-in situ stairs				24-02-2026				
	RCC stairs - types and construction details of RCC cast-in situ stairs				25-02-2026				
	RCC stairs - types and construction details of RCC cast-in situ stairs				27-02-2026				
	RCC stairs - types and construction details of RCC cast-in situ stairs				03-03-2026				
	RCC stairs - types and construction details of RCC cast-in situ stairs				03-03-2026				
	fixing of handrails etc. Detailed section through a multistory RCC frame structure. Various types of flooring				06-03-2026				
	fixing of handrails etc. Detailed section through a multistory RCC frame structure. Various types of flooring				10-03-2026				
	fixing of handrails etc. Detailed section through a multistory RCC frame structure. Various types of flooring				10-03-2026				
	CLASS TEST - I				11-03-2026				
	fixing of handrails etc. Detailed section through a multistory RCC frame structure. Various types of flooring				13-03-2026				

UNIT-III	Types of industrialized doors and windows, sliding, revolving, collapsible, rolling shutters,	17-03-2026		
	Types of industrialized doors and windows, sliding, revolving, collapsible, rolling shutters,	17-03-2026		
	Types of industrialized doors and windows, sliding, revolving, collapsible, rolling shutters,	18-03-2026		
	Types of industrialized doors and windows, sliding, revolving, collapsible, rolling shutters,	20-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	24-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	24-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	25-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	27-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	31-03-2026		
	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	31-03-2026		
UNIT-IV	Steel sections. Detailed drawings and construction details of pressed steel sections for doors and windows.	01-04-2026		
	Introduction to structural steel trusses.	07-04-2026		
	Introduction to structural steel trusses.	07-04-2026		
	CLASS TEST - II	08-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	10-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	17-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	21-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	21-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	22-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	24-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	28-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	28-04-2026		
	Detailed drawings and construction details of north light truss along with roof coverings, valleys, gutters etc.	29-04-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	05-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	05-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	06-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	08-05-2026		
	HOUSE TEST	12-05-2026		
	HOUSE TEST	12-05-2026		
	HOUSE TEST	13-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	15-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	19-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	19-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	20-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	22-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	26-05-2026		
	Detailed drawings and construction details of steel stairs such as straight flight	26-05-2026		


Sig. of Teacher

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