Department of Architecture
Dr BR Ambedkar Govt. Polytechnic Ambota
Distt. – Una (H.P.) - 177205

LESSON PLAN

Program Name	Architecture Assistantship
Subject Name	ARCHITECTURE DESIGN -IV
Subject Code	ARPC-5001
Semester	5th
Subject Teacher Name	ARUN RANA

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.	ARCH. DESIGN -V	1	6	40	40	80	60	60	120
Reference Books		Timesavers standards for Building Types. 2. Timesaver standards for Architectural design. 3. Metric Handbook Planning and Design Data. 4. National Building Code 5. 101 Hotel rooms by Corinna. 6. Hotel Design by Instituto Monsa. 7. Asian resorts by Tan Hock Beng.							

COURSE OBJECTIVE:

1. **To understand the functional /planning aspects of institutional buildings.**
2. **To explore and learn the design intricacies of buildings of specific functions.**
3. **To Familiarize with the concept of multistorey structure.**

Course Outcomes (COs)

CO – 1	Design of an institute campus such as Architecture, Medical, Law, Business, Music and Dance colleges, vocational training institutions etc. with detailed design of academic and library block. Emphasis on design with Barrier Free Environment can be explored during this exercise
CO – 2	Design of Housing/ Multistory building with emphasis on construction system and vertical circulation.

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I	Design of an institute campus such as Architecture, Medical, Law, Business, Music and Dance colleges, vocational training institutions etc. with detailed design of academic and library block. Emphasis on design with Barrier Free Environment can be explored during this exercise			PROJECT -1
		4/8/25		
		5/8/25		
		6/8/25		
		7/8/25 (T)		
		11/8/25		
		12/8/25		
		13/8/25		
		14/8/25(T)		
		18/8/25		
		19/8/25		
		25/8/25		
		26/8/25(T)		
		27/8/25		
		28/8/25(T)		
		1/9/25		

		2/9/25		
		3/9/25		
		4/9/25(T)		
		8/9/25		C.T-I
		9/9/25		
		10/9/25		
		11/9/25(T)		
		15/9/25		
		16/9/25		
		17/925		
		18/9/25(T)		
		22/9/25		
		23/9/25		
		24/9/25		
		25/9/25(T)		
		29/9/25		
UNIT-II		30/9/25		
		1/10/25		PROJECT-II
		6/10/25		
		7/10/25		
		8/10/25		
		9/10/25(T)		
		13/10/25		C.T.-II
		14/9/25		
		15/10/25		
		16/10/25(T)		
		21/10/25		
		22/10/25		
		23/10/25(T)		
		27/10/25		
		28/10/25		
		29/10/25		
	Design of Housing/ Multistory building with emphasis on construction system and vertical circulation	30/10/25(T)		
		3/11/25		PTM
		4/11/25		
		5/11/25		
		6/11/25(T)		
		10/11/25		HOUSE TEST
		11/11/25		
		12/11/25		
		13/11/25(T)		
		17/11/25		
		18/11/25		
		19/11/25		
		20/11/25(T)		VIVA
		24/11/25		
		25/11/25		
		26/11/25		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date of submission	Actual Date	Remarks
P-1	UNIT -I	25/9/25		
P-2	UNIT--II	24/11/25		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-I,	As per HPTSB Academic Schedule		
Class Test -2	Unit-I,UNIT-II			
House Test	Unit-1 to Unit- II			

Subject Teacher

HOD

Department of Architecture	
LESSON PLAN	
Program Name	Architecture Assistantship
Subject Name	BUILDING MATERIAL & CONSTRUCTION-IV
Subject Code	ARBS&AE – 5002
Semester	Fifth
Subject Teacher Name	Rajinder Kumar

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	Building Material & Construction-IV	1	6	40	40	80	60	60	120

Reference Books	The Construction of Buildings", Vol. 2, R Barry, Wiley, 2001
	Construction Technology" Vol. 1,Roy Chudley, Roger Greeno, Prentice Hall (UK), 2005.

Course Outcomes (COs)

CO – 1	Students will understand the construction system and importance of interior building components in different materials.
CO – 2	Students will appreciate various design intent and materials used for false ceilings, paneling ETC. & Students will understand the basics and usage of prefabrication in building construction.

Teaching Plan

Chapters	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I Timber	Detailed drawings of false ceiling	05-08-2025		
	Detailed drawings of false ceiling	06-08-2025		
	Introduction to various materials, **(TH.)**	07-08-2025		
	Detailed drawings of false ceiling	12-08-2025		
	Detailed drawings of false ceiling	13-08-2025		
	Products and hardware for false ceiling. (TH.)	14-08-2025		
	Detailed drawings of Curtain and Partition walls	19-08-2025		
	Detailed drawings of Curtain and Partition walls	20-08-2025		
	Curtain walls and Partition walls (TH.)	21-08-2025		
	Detailed drawings of Curtain and Partition walls (DCS)	23-08-2025		
	Detailed drawings of Curtain and Partition walls	26-08-2025		
	Detailed drawings of boundary wall and gate.	27-08-2025		
UNIT-II Wooden Joinery	Introduction to Cladding materials of walls (TH.)	28-08-2025		
	Detailed drawings of boundary wall and gate. (DCS)	30-08-2025		
	Detailed drawings of boundary wall and gate.	02-09-2025		
	Detailed drawings of Brick Stones, tiles, Paneling Clading	03-09-2025		
	Brick tiles, Stones, Vitreous tiles, Paneling (TH.)	04-09-2025		
	Class Test-I	06-09-2025		
	Detailed drawings of Brick Stones, tiles, Paneling Clading	09-09-2025		
	Detailed drawings of Brick Stones, tiles, Paneling Clading	10-09-2025		
	Introduction to Expansion joints and construction joints (TH.)	11-09-2025		
	Detailed drawings of Expansion & construction joints (DCS)	16-09-2025		
	Detailed drawings of Expansion & construction joints	17-09-2025		
	Conventions for doors and windows (TH.)	18-09-2025		
	Detailed drawings of Expansion & construction joints (DCS)	20-09-2025		
	Detailed drawings of Expansion & construction joints	23-09-2025		
	Detailed drawings of Expansion & construction joints	24-09-2025		

UNIT-III Wooden Stairs & Floor	Aluminum doors and windows types and their uses (TH.)	25-09-2025		
	Detail drawings of Aluminum doors and windows (DCS)	27-09-2025		
	Detail drawings of Aluminum doors and windows	30-09-2025		
	Detail drawings of Aluminum doors and windows	01-10-2025		
	Detail drawings of Aluminum doors and windows (DCS)	04-10-2025		
	Detail drawings of Aluminum doors and windows	08-10-2025		
	Introduction to PVC and UPVC for doors (TH.)	09-10-2025		
	Detail drawings of Aluminum doors and windows	14-10-2025		
	Class Test-II	15-10-2025		
	Form-work for RCC columns, beams,	21-10-2025		
	Form-work for RCC columns, beams,	22-10-2025		
	Introduction to PVC and UPVC for doors (TH.)	23-10-2025		
	Form-work for RCC columns, beams, (DCS)	25-10-2025		
	Form-work for RCC columns, beams,	28-10-2025		
	Form-work for RCC columns, beams,	29-10-2025		
	Aluminum doors and windows types and their uses (TH.)	30-10-2025		
	Form-work for RCC slabs, walls and stairs (DCS)	01-11-2025		
	Form-work for RCC slabs, walls and stairs	04-11-2025		
	Aluminum doors and windows types and their uses (TH.)	06-11-2025		
	House Test	11-11-2025		
UNIT-IV Roof & Roof Covering	**House Test**	12-11-2025		
	House Test	13-11-2025		
	Form-work for RCC slabs, walls and stairs (DCS)	15-11-2025		
	Form-work for RCC slabs, walls and stairs	18-11-2025		
	Form-work for RCC slabs, walls and stairs	19-11-2025		
	Shoring, underpinning, scaffolding (TH.)	20-11-2025		
	Form-work for RCC slabs, walls and stairs (DCS)	22-11-2025		
	Form-work for RCC slabs, walls and stairs	25-11-2025		
	Form-work for RCC slabs, walls and stairs	26-11-2025		

Sig. of Teacher

Sig. of H.O.D

Department of Architecture
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LESSON PLAN

Program Name	Architecture Assistantship
Subject Name	STRUCTURE DESIGN -II
Subject Code	ARPC-5003
Semester	5th
Subject Teacher Name	ARUN RANA

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.	STRUCTURE DESIGN-II	3	0	40	-	40	60	-	60
Reference Books		"R.C.C. Designs (Reinforced Concrete Structures)", Dr. B.C. Punmia, Ashok Kumar Jain and Arun Kumar Jain, Laxmi; Tenth edition, 2006. 2. "Reinforced Concrete, 6th Edition", S.K.Mallick and A.P.Gupta, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi, 1996. 3. R.C.C. Design by Birinder Singh, Kapson Publications 4. Design of Steel Structures by Subramaniam N -Oxford University 5. Design of Steel Structure by S.K. Duggal 6 Reinforcing Detailing of RCC members- T Rangaraju 7. R.C.C. Design by Birender Singh Kapson publishing house							

COURSE OBJECTIVE:

1. To understand the basic design principle involved in RCC and structural steel design.
2. To familiarize with basic terminologies of structural design.

Course Outcomes (COs)

CO – 1	The student shall have developed the necessary skills to understand the basic concepts. terminologies. thumb rule and design processes related to RCC design and steel structures.
CO – 2	Students will be able to understand and implement the Limit state method of structural analysis in architecture design.
CO-3	The student will be able to give structural design of components of RCC building

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I RCC-----LSM	**Introduction:** - Materials, basis properties of concrete and steel, Reinforcement, standard loading, characteristics strength, permissible stresses in Concrete and steel as per Indian Standard, Design Philosophies- Working Method, Ultimate Load, Method and Limit state Method. **Limit State Design Method** {as per IS: 456 (2000)} Safety and serviceability requirements, limit states, characteristic material strength and loads and partial safety factors.	4/8/25		
		5/8/25		
		7/8/25		
		11/8/25		
		12/8/25		
		14/8/25		
		18/8/25		ASSIGNMENT -1
		19/8/25		
		21/8/25		
		25/9/25		
		26/9/25		
		28/9/25		
UNIT-II RCC----LSM	Calculation of moment of resistance of a simply supported beam. Design of singly reinforced rectangular simply supported beam as per IS Code.	1/9/25		
		2/9/25		
		4/9/25		
		8/9/25		C.T-I
		9/9/25		C.T-I

	Design of one way simply supported slab. Concept of two way slab with the help of IS:456 Design of axially loaded long and short columns as per IS:456	11/9/25		
		15/9/25		
		16/9/25		
		18/9/25		
		23/9/25		
		25/9/25		
		29/9/25		
		30/9/25		
		6/10/25		
		9/10/25		
		13/10/25		C.T.-II
		14/11/25		
		16/10/25		
		21/10/25		
		23/10/25		
UNIT-III STEEL	**Steel Structural Elements:** Classification of sections in Limit State Method, Grades of Structural Steel, Terminology & Properties. Structural Connections: **Bolted connections-** types of Bolts, forces in Bolts, types of Bolted joints with Sketches. **Welded connections-** types of welds, forces in welds, type, defects in welds.	27/10/25		
		28/10/25		
		30/10/25		
		3/11/25		PTM
		4/11/25		
		6/11/25		
		10/11/25		
		11/11/25		HOUSE TEST
		13/11/25		
UNIT-IV STEEL	Introduction to the concept of beams, column with single RS section as per IS: 800 and handbook. Hollow sections: General Shapes (Hot Rolled & Cold Form) and advantages & applications	17/11/25		
		18/11/25		
		20/11/25		
		24/11/25		
		25/11/25		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date of submission	Actual Date	Remarks
A-1	UNIT -I & UNIT -II	9/10/25		
A-2	UNIT-III & UNIT -IV	20/11/25		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-I, Unit -II	As per HPTSB Academic Schedule		
Class Test -2	Unit-I,UNIT-II			
House Test	Unit-I to Unit- III			

Subject Teacher

HOD

Department of Architecture
Dr. B.R. Ambedkar Govt. Polytechnic Ambota
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LESSON PLAN

Program Name	Architecture Assistantship
Subject Name	C.A.A. - IV
Subject Code	ARSEC - 5004
Semester	Fifth
Subject Teacher Name	Ms. Urvashi Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study Scheme Hrs/Week		Marks in Evaluation Scheme				Total
				Internal Assessment		External Accessment		
		Th.	Pr.	Th.	Pr.	Th.	Pr.	
1	C.A.A. - II	0	4	0	40	0	60	100

Course Outcomes (Cos)

CO-1	Students will be able to make working drawings for any project using software.
CO-2	Students will be able to develop various details in drawings required for construction.
CO-3	Students will be able to furnish the basic skills required in the professional sphere in terms of software & working drawing knowledge

Teaching Plan

Chapter	Name of the Topic	Proposed date	Actual date	Remarks
UNIT-I	Drawing of Ground Floor Plan	1/8/2025		
	Drawing of Ground Floor Plan	4/8/2025		
	Drawing of Ground Floor Plan	8/8/2025		
	Drawing of Foundation Plan & details	11/8/2025		
	Drawing of Foundation Plan & details	18/8/2025		
	Drawing of Foundation Plan & details	22/8/2025		
	Drawing of Upper Floor Plans	25/8/2025		
	Drawing of Upper Floor Plans	29/8/2025		
	Drawing of Upper Floor Plans	1/9/2025		
	Drawing of Upper Floor Plans	5/9/2025		
	Drawing of Terrace with rain water drainage details	8/9/2025		
	Drawing of Terrace with rain water drainage details	12/9/2025		
	Drawings of Toilet Details	15/9/2025		
	Drawings of Toilet Details	19/9/2025		
UNIT-II	Drawings of Toilet Details	22/9/2025		
	Drawing of Site Plan	26/9/2025		
	Drawing of Site Plan	29/9/2025		
	Drawing of Site Plan	3/10/2025		
	Drawing details of Modular Kitchen	6/10/2025		
	Drawing details of Modular Kitchen	13/10/2025		
	Drawing details of Modular Kitchen	24/10/2025		
	Flooring drawings	27/10/2025		
	Flooring drawings	31/10/2025		
	Flooring drawings	3/11/2025		
	Water supply drawings	7/11/2025		
	Water supply drawings	10/11/2025		
	Water supply drawings	14/11/2025		
	Electrical drawings	17/11/2025		
	Electrical drawings	21/11/2025		
	Electrical drawings	24/11/2025		

Urvashi Sharma
Signature of Teacher

Signature of HOD

Department of Architecture	
LESSON PLAN	
Program Name	Architecture Assistantship
Subject Name	EARTHQUAKE RESILIENT BUILDINGS
Subject Code	ARPE– 5005.iii
Semester	Fifth
Subject Teacher Name	Rajinder Kumar

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	Earthquake Resilient Building	3	-	40	-	40	60	-	100
Reference Books		Earthquake Tips by C.V.R.Murty, IIT, Kanpur, Sponsored by BMTPC, New Delhi.							
		Repair and Seismic strengthening of buildings – Guidelines, IS:13935 -2002							

Course Outcomes (COs)

CO – 1	To know the causes and consequences of earthquakes. To know about the design concepts of earthquake resisting buildings.
CO – 2	To understand the various retro fitting and restoration techniques for earthquake affected buildings.

Teaching Plan

Chapters	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I	Basics of earthquake phenomena	05-08-2025		
	Basics of earthquake phenomena	07-08-2025		
	Causes Earthquake, Seismic Waves, Magnitude and Intensity	12-08-2025		
	Causes Earthquake, Seismic Waves, Magnitude and Intensity	14-08-2025		
	Seismic Zones in India, Seismic Effects on Structures.	19-08-2025		
	Seismic Zones in India, Seismic Effects on Structures.	21-08-2025		
	Seismic Design Philosophy for Buildings.	23-08-2025		
	Seismic Design Philosophy for Buildings.	26-08-2025		
UNIT-II	Seismic Effects On Structures	28-08-2025		
	Seismic Effects On Structures	30-08-2025		
	Seismic Effects On Structures	02-09-2025		
	Seismic Effects On Structures	04-09-2025		
	Buildings Ductility and their Earthquake Response.	06-09-2025		
	Buildings Ductility and their Earthquake Response.	09-09-2025		
	Class Test-I	11-09-2025		
	Buildings Ductility and their Earthquake Response.	16-09-2025		
	Indian Seismic Codes.	18-09-2025		
	Indian Seismic Codes.	20-09-2025		
	Indian Seismic Codes.	23-09-2025		

UNIT-III	Behavior and Improvements of Load Bearing construction (Adobe, Brick, Stone) during Earthquake.	25-09-2025		
	Behavior and Improvements of Load Bearing construction (Adobe, Brick, Stone) during Earthquake.	27-09-2025		
	Behavior and Improvements of Load Bearing construction (Adobe, Brick, Stone) during Earthquake.	30-09-2025		
	Behavior and Improvements of Load Bearing construction (Adobe, Brick, Stone) during Earthquake.	04-10-2025		
	Class Test-II	09-10-2025		
	Effects and Improvements of Reinforced Concrete construction during Earthquake.	14-10-2025		
	Effects and Improvements of Reinforced Concrete construction during Earthquake.	21-10-2025		
	Effects and Improvements of Reinforced Concrete construction during Earthquake.	23-10-2025		
	Effects and Improvements of Reinforced Concrete construction during Earthquake.	28-10-2025		
	Effects and Improvements of Reinforced Concrete construction during Earthquake.	30-10-2025		
UNIT-IV	Retro Fitting Measure for Traditionally Built Construction.	01-11-2025		
	Retro Fitting Measure for Traditionally Built Construction.	04-11-2025		
	House Test	11-11-2025		
	House Test	13-11-2025		
	Retro Fitting Measure for Traditionally Built Construction.	15-11-2025		
	Retro Fitting Measure for Traditionally Built Construction.	18-11-2025		
	Evaluation, Repair, Restoration and Seismic Strengthening of Buildings.	20-11-2025		
	Evaluation, Repair, Restoration and Seismic Strengthening of Buildings.	22-11-2025		
	Evaluation, Repair, Restoration and Seismic Strengthening of Buildings.	25-11-2025		

Sig. of Teacher

Sig. of H.O.D.

Department of Architecture
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LESSON PLAN

Program Name	Architecture Assistantship
Subject Name	MAJOR PROJECT
Subject Code	AR-5006
Semester	5th
Subject Teacher Name	AR. AMAN DEEP GUPTA

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.	MAJOR PROJECT	-	2	-	40	40	-	60	60

Reference Books	Timesavers standards for Building Types.
	Timesaver standards for Architectural design
	Metric Handbook Planning and Design Data

COURSE OBJECTIVE:

1. To acquaint students about the collection of data pertaining to project.
2. To familiarize student with prototype and site analysis of the project.
3. To make students learn the methods of report writing and presentation.

Course Outcomes (COs)

CO – 1	The students will be able to develop project report.
CO – 2	The students shall learn the background study of any architectural project.
CO - 3	Student will be able to develop and holistic approach towards architecture design process and this would eventually help them in bettering the Major project of VI semester

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
Project Brief	Introduction & topic finalization	2/08/25		
	Case Area Introduction/ Background	23/8/2025		
	Introduction & topic finalization	30/8/25		
	Case Area Introduction/ Background Context	6/09/25		
	Site selection (validity of site/site feasibility) Project Concern, Why This Topic? Aim and Objectives Scope and Limitation (spatial) Context Site selection (validity of site/site feasibility) Project Concern, Why This Topic? Aim and Objectives Scope and Limitation (spatial)	20/9/2025		Synopsis/Viva

Methodology	**Methodology** Methodology chart intent (literature studies/case studies, aim and objectives, design development techniques/tools, list of physical proposals)	27/9/25		
Case Study/Literature Review	**Case Study/Literature Review** Case Studies: Two Live Case studies and one internet studies. Conceptual Literature: Concepts relevant to the architecture and research. Bylaws, design requirements along with area statement. Calculations (if required for the project)	27/9/25 4/10/25 18/10/25 25/10/25 1/11/25		viva viva
Site Analysis	**Site Analysis** Site Introduction: Location, area, proximity. Area statement and built up calculation Existing resources/structures within the site and surrounding Climate Analysis Surrounding/Site Morphology(Contour/topography) Local Architecture Character Building Construction techniques/material	15/11/25 22/11/25		Final Report & viva

Subject Teacher

HOD