

AA 105 – INTRODUCTION TO ARCHITECTURE AND DESIGN

Course Title	Introduction to Architecture and Design	Course Code	AA-105
Semester	I Semester	Course Group	Core (PC)
Teaching scheme in Hrs (L:T:P)	4:1:0	Credits	3.00
Type of Course	Lecture +Assignments	Total Contact Hours	150
CIE	60 marks	SEE	40 Marks

Pre-Requisites: Nil

Course Outcomes		
CO1	Introduce students to the fundamental concepts, scope, and role of architecture in the built environment.	
CO2	Develop an understanding of basic design elements and principles applicable to architectural and interior spaces.	
CO3	Familiarize students with human factors, ergonomics, and spatial requirements in design.	
CO4	Provide a basic overview of architectural history, building types, and contextual influences.	
CO5	Create awareness about allied design disciplines, sustainability, and professional ethics.	
CO6	Prepare students for advanced architectural and design subjects in subsequent semesters.	
Time Schedule		
Unit No.	Unit Name	Hour
1	Introduction to Architecture	20
2	Fundamentals of Design	30
3	Principles of Design	30
4	Architecture and Human Factors	30
5	History and Types of Architecture	20
6	Introduction to Design Disciplines	20
	Total	150

COURSE CONTENTS

Unit 1: Introduction to Architecture

DURATION:20 HOURS

- Meaning and scope of architecture
- Architecture as art, science, and technology
- Evolution of architecture: shelter to built environment
- Role of an architect in society
- Relationship between architecture, culture, and lifestyle
- Overview of the built environment

Unit 2: Fundamentals of Design

DURATION:30 HOURS

- Meaning and importance of design
- Elements of design: point, line, plane, shape, form, space
- Visual characteristics: size, scale, texture, color
- Introduction to composition in design
- Functional vs aesthetic design
- Design process: problem identification to solution

Unit 3: Principles of Design

DURATION:30 HOURS

- Principles of design: balance, proportion, scale
- Rhythm, repetition, and pattern
- Emphasis, hierarchy, and focal points
- Unity and harmony in design
- Contrast and variety
- Application of principles in built spaces

Unit 4: Architecture and Human Factors

DURATION:30 HOURS

- Human scale and ergonomics
- Anthropometrics in design
- Movement and circulation in spaces
- Psychological aspects of space
- Comfort factors: light, ventilation, acoustics
- Universal design and accessibility basics

Unit 5: History and Types of Architecture

DURATION:20 HOURS

- Overview of architectural styles (brief):
 - Ancient (Egyptian, Greek, Roman)
 - Medieval and Vernacular
 - Modern and Contemporary
- Types of buildings: residential, institutional, commercial, recreational
- Influence of climate and geography on architecture
- Introduction to regional and vernacular architecture
- Contemporary trends in architecture

Unit 6: Introduction to Design Disciplines

DURATION:20 HOURS

- Architecture vs Interior Design vs Landscape Design
- Urban design and planning basics
- Sustainable architecture: basic concepts
- Role of materials and technology in design
- Ethics and professional responsibilities
- Career opportunities in architecture and allied design fields
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Specific Learning Outcomes

CO 1: Introduction to Architecture – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 1.1 Define architecture and explain its meaning and scope.
- 1.2 Explain architecture as an integration of art, science, and technology.
- 1.3 Describe the evolution of architecture from primitive shelters to the modern built environment.
- 1.4 Explain the role and responsibilities of an architect in society.
- 1.5 Relate architecture to culture, lifestyle, and social values.
- 1.6 Identify and explain the components of the built environment.

CO2 Fundamentals of Design – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 2.1 Define design and explain its importance in architecture and interiors.
- 2.2 Identify and describe the basic elements of design such as point, line, plane, shape, form, and space.
- 2.3 Explain visual characteristics including size, scale, texture, and color.
- 2.4 Understand the concept of composition in design.
- 2.5 Differentiate between functional and aesthetic aspects of design.
- 2.6 Explain the stages of the design process from problem identification to solution.

CO3 : Principles of Design – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 3.1 Explain principles of design such as balance, proportion, and scale.
- 3.2 Identify rhythm, repetition, and pattern in design compositions.
- 3.3 Explain emphasis, hierarchy, and focal points in built spaces.

- 3.4 Describe unity and harmony in architectural and interior design.
- 3.5 Explain the role of contrast and variety in visual interest.
- 3.6 Apply principles of design in analyzing simple built spaces.

CO4: Architecture and Human Factors – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 4.1 Explain the concepts of human scale and ergonomics in design.
- 4.2 Describe the importance of anthropometrics in spatial planning.
- 4.3 Explain movement and circulation patterns within built spaces.
- 4.4 Understand psychological aspects of space and human perception.
- 4.5 Explain comfort factors such as lighting, ventilation, and acoustics.
- 4.6 Identify basic principles of universal design and accessibility.

CO5: History and Types of Architecture – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 5.1 Identify major architectural styles from ancient to contemporary periods.
- 5.2 Describe key characteristics of Ancient, Medieval, Vernacular, Modern, and Contemporary architecture.
- 5.3 Classify buildings based on function such as residential, institutional, commercial, and recreational.
- 5.4 Explain the influence of climate and geography on architectural forms.
- 5.5 Recognize features of regional and vernacular architecture.
- 5.6 Identify contemporary trends in architecture.

CO6: Introduction to Design Disciplines – Specific Learning Outcomes

After completing this unit, the student will be able to:

- 6.1 Differentiate between architecture, interior design, and landscape design.
- 6.2 Explain the basics of urban design and planning.
- 6.3 Describe fundamental concepts of sustainable architecture.
- 6.4 Explain the role of materials and technology in design development.

6.5 Understand ethical responsibilities in architectural and design practice.

6.6 Identify career opportunities in architecture and allied design fields.

CO-PO MATRIX											
	Basic knowledge	Discipline knowledge	Experiments and practice	Engineering tools	Engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Lifelong learning	
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	Mapped POs
CO1	x				x						1,5
CO2	x	x			x						1,2,5
CO3	x	x			x	x					1,2,5,6
CO4	x				x	x					1,5,6
CO5	x	x			x						1,2,5
CO5	x	x	x		x	x					1,2,3,5,6

EXAMINATION PATTERN							
MID SEM - I EXAM (Duration of Exam: 1 Hour)							
		PART A		PART B	PART C	Total Marks	
Marks/Question		1 Mark each		3 Marks each	5 Marks each	20 Marks	
No. of Questions		4 Questions		2/4 Questions	2/4 Questions		
S.No.	Unit No.	R		U	A	Remarks	
1	UNIT I	1,2		5(a) or 5 (b)	7(a) or 7(b)		
2	UNIT II	3,4		6(a) or 6(b)	8(a) or 8(b)		
Total Questions		4		4	4		
Total Marks		4		6	10	20 Marks	
MID SEM - II EXAM (Duration of Exam :1 Hour)							
1	UNIT III	1,2		5(a) or 5 (b)	7(a) or 7(b)		
2	UNIT IV	3,4		6(a) or 6(b)	8(a) or 8(b)		
Total Questions		4		4	4		
Total Marks		4		6	10	20 Marks	
SEMESTER END EXAMINATION (Duration of Exam: 2 Hours)							
		PART A		PART B	PART C	Total Marks	
Marks/Question		1 Mark each		3 Marks each	5 Marks each	40 Marks	
No. of Questions		8 Questions		4/8 Questions	4/8 Questions		
S.No.	Unit No.	R		U	A	Remarks	
1	UNIT I	4	1		9(a)	13(a)	
2	UNIT II						
3	UNIT III		2		10(a)	14(a)	
4	UNIT IV						
5	UNIT V		3	5,6	9(b)	13(b)	
					11(a)	15(a)	
					11(b)	15(b)	
6	UNIT VI			7,8	10(b)	14(b)	
					12(a)	16(a)	
					12(b)	16(b)	
Total Questions		8		8	8		
Total Marks		8		12	20	40 Marks	

MODEL QUESTION PAPER

STATE BOARD OF TECHNICAL EDUCATION AND TRAINING
BOARD DIPLOMA MID SEM – I EXAMINATION (C-26)

AA 105- INTRODUCTION TO ARCHITECTURE AND DESIGN

Time: 1 hour

Total Marks: 20

- Instructions:
1. Answer all questions.
 2. Internal choice is provided in Part B and Part C.

MODEL QUESTION PAPER

PART – A

(4 × 1 = 4 Marks)

(Answer ALL questions)

1. Define architecture.
2. Mention one role of an architect.
3. What is a point in design?
4. Define scale.

PART – B

(2 × 3 = 6 Marks)

(Answer ANY TWO)

5. (a) Explain architecture as an art.

OR

- (b) Explain the scope of architecture.

6. (a) List and explain any three elements of design.

OR

- (b) Differentiate between functional and aesthetic design.

PART – C

(2 × 5 = 10 Marks)

(Answer ANY TWO)

7. (a) Explain the evolution of architecture from shelter to built environment.

OR

- (b)** Discuss the relationship between architecture, culture, and lifestyle.
8. **(a)** Explain the design process from problem identification to solution.

OR

- (b)** Explain visual characteristics such as size, scale, texture, and color with examples.

MODEL QUESTION PAPER

STATE BOARD OF TECHNICAL EDUCATION AND TRAINING BOARD DIPLOMA MID SEM – II EXAMINATION (C-26)

AA 105- INTRODUCTION TO ARCHITECTURE AND DESIGN

Time: 1 hour

Total Marks: 20

- Instructions:
1. Answer all questions.
 2. Internal choice is provided in Part B and Part C.

PART – A

(4 × 1 = 4 Marks)

(Answer ALL questions)

1. Define balance in design.
2. What is rhythm?
3. Define ergonomics.
4. What is anthropometrics?

PART – B

(2 × 3 = 6 Marks)

(Answer ANY TWO)

5. (a) Explain proportion and scale in design.

OR

(b) Explain emphasis and focal point in built spaces.

6. (a) Explain movement and circulation in architectural spaces.

OR

(b) Explain psychological aspects of space.

PART – C

(2 × 5 = 10 Marks)

(Answer ANY TWO)

7. (a) Explain principles of design and their application in built spaces.

OR

- (b)** Explain unity, harmony, contrast, and variety with examples.
8. **(a)** Explain comfort factors such as light, ventilation, and acoustics.

OR

- (b)** Explain universal design and accessibility principles.

MODEL QUESTION PAPER

STATE BOARD OF TECHNICAL EDUCATION AND TRAINING
BOARD DIPLOMA SEMESTER EXAMINATION (C-26)

AA 105- INTRODUCTION TO ARCHITECTURE AND DESIGN

PART – A

(8 × 1 = 8 Marks)

(Answer ALL questions)

1. Define built environment.
2. Mention one element of design.
3. Define rhythm.
4. What is human scale?
5. Name one ancient architectural style.
6. Give one example of a commercial building.
7. What is sustainable architecture?
8. Mention one career option in architecture.

PART – B

(4 × 3 = 12 Marks)

(Answer ANY FOUR)

9. (a) Explain architecture as science and technology.

OR

(b) Explain the role of an architect in society.

10. (a) Explain elements of design.

OR

(b) Explain principles of balance and proportion.

11. (a) Explain anthropometrics and its importance in design.

OR

(b) Explain circulation patterns in buildings.

12. (a) Explain the influence of climate on architecture.

OR

(b) Explain features of vernacular architecture.

PART – C

(4 × 5 = 20 Marks)

(Answer ANY FOUR)

13. **(a)** Discuss the evolution of architecture and its impact on the built environment.

OR

(b) Explain architecture in relation to culture and lifestyle.

14. **(a)** Explain fundamentals and principles of design with suitable examples.

OR

(b) Explain composition in design and its importance.

15. **(a)** Explain human factors in architecture.

OR

(b) Explain comfort requirements in buildings.

16. **(a)** Explain major architectural styles from ancient to contemporary.

OR

(b) Classify buildings based on function with examples.

17. **(a)** Differentiate architecture, interior design, and landscape design.

OR

(b) Explain sustainable architecture and professional ethics.