DESIGN STUDIO IV

ENAR 251

Lecture : 0 **Year : II**
Tutorial : 0 **Part : II**
Practical/Studio : 10

Course Objectives:
This course equips students to design climate-adaptive structures that integrate local architectural principles and contextual influences. The objective is to develop skills in designing buildings, such as climate-sensitive homes, cultural centers, and small public facilities, like high school, community library, college with a user-centered and environmentally responsive approach. The studio focuses on applying knowledge from the building science course, supported by previous and current coursework, to explore concepts, and develop construction details to create culturally resonant, practical designs.

1 Project Introduction (10 hours)

1.1 Introduction to building typologies
1.2 Programmatic and functional requirements
1.3 Overview of architectural and structural systems
1.4 Focus on climate-responsive design

2 Literature Review and Case Studies (30 hours)

2.1 Conduct literature review on climate-responsive design
2.2 Review of relevant standards and guidelines
2.3 Analyze case studies on space planning and design
2.4 Extract design strategies for climate-adaptive solutions

3 Site Analysis (10 hours)

3.1 Conduct site analysis: Physical, sociocultural, environmental
3.2 Identify site-specific climate conditions and influences
3.3 Prepare site analysis diagrams

4 Conceptual Design (10 hours)

4.1 Develop climate-responsive design concepts
4.2 Explore massing, form, spatial organization
4.3 Focus on sustainability and energy efficiency
4.4 Create schematic designs

5 Design Development (65 hours)

5.1 Application of inferences from literature and case studies
5.2 Refine design into detailed drawings
5.3 Focus on floor plans, sections, elevations
5.4 Integrate climate-responsive and sustainable strategies
5.5 Develop physical model

6 Final Design Representation and Presentation (12 hours)

6.1 Prepare and present final drawings and models
6.2 Refine presentation with climate-responsive focus
6.3 Submit final drawings and 3D model

7 Final Presentation and Defense (7 hours)

8 Time Problem (6 hours)

References

1. Balmer, J., Swisher, M. T. (2013). Diagramming the Big Idea. Routledge.
2. Ching, F. D. (2023). Architecture: Form, Space, and Order. Wiley.
3. Neufert, P. (2012). Architects' Data. Blackwell Publishing Ltd.
4. Unwin, S. (2003). Analyzing Architecture. Routledge.
5. White, E. T. (1975). Concept Sourcebook. Architectural Media Ltd.
6. White, E. T. (1983). Site Analysis. Architectural Media.
7. Hyde, R. (2000). Climate Response Design: A Study of Buildings in Moderate and Hot Humid Climates. Spon Press.