

COURSE TITLE : HABITAT TECHNOLOGY

COURSE CODE : 5017

COURSE CATEGORY : E

PERIODS/WEEK : 4

PERIODS/SEMESTER: 52

CREDITS : 4

TIME SCHEDULE

Module	Topics	Period
1	Climatology- sustainable development- Environmental management	13
2	Interior design	13
3	Landscape architecture	13
4	Lighting- Acoustics- Town planning	13
TOTAL		52

COURSE OUTCOME

Sl.	Sub	Student will be able to
1	1	Understand the reasons for the changes in climate , seasonal changes and climatic factors causing these changes
	2	Understand the concept of sustainable development
	3	Understand the concept and terminologies of Environmental management
2	1	Comprehend the methods and materials of interior design
	2	Comprehend the different methods of landscaping and gardening
	3	Understand Lighting and Acoustics of interior- Process of town planning

SPECIFIC OUTCOME

Upon completion of the study, the student should be able to:

MODULE – I

1.1.0 Know Climatic factors, climate and weather.

1.1.1 Define Micro and Macro Climate

1.1.2 Explain solar radiation, quantity and quality

1.1.3 State various Climatic factors.

- 1.1.4 Explain Earth's Thermal balance
- 1.1.5 Identify Winds & Types of Wind
- 1.1.6 List factors affecting climate
- 1.1.7 Identify different regions- Tropical, sub-tropic and polar
- 1.1.8 List the characteristics of climate in different climatic regions

1.2.0 Understand Sustainable Development

- 1.2.1 Identify the efforts for Sustainable Development.
- 1.2.2 Explain sustainable development in construction industry.

1.3.0 Understand Environmental Management.

- 1.3.1 Explain efforts for protecting atmosphere, air water and earth.

MODULE – II

2.1.0 Apply principles of architecture for designing interior spaces

- 2.1.1 Define interior design and decoration
- 2.1.2 Identify the characteristics of Indoor Space
- 2.1.3 Illustrate the principles of interior design and elements.
- 2.1.4 Explain Shape Enclosures, Interior Planning.
- 2.1.5 Explain the Colour and Texture Properties.
- 2.1.6 Identify Classic and Modern Decorative materials
- 2.1.7 Design and Visualize interior spaces- Residential, office and institution.

MODULE– III

3.1.0 Design of landscape for given site.

- 3.1.1 Understand the principles of Landscape Architecture.
- 3.1.2 Explain the history of gardening in different countries.
- 3.1.3 Explain different types and styles of Garden -.Mughal, English, Japanese and French.
- 3.1.4 Differentiate the Soft and Hard landscaping.
- 3.1.5 Identify the natural and structural components of Landscape design
- 3.1.6 Design landscape for a given premises. – Residential, Institution, recreation.

MODULE – IV

4.1.0 Understand lighting for interior and exterior

- 4.1.1 Explain natural and artificial lighting.
- 4.1.2 State Munsell system of light measurement
- 4.1.3 Identify photometric quantities of light

4.2.0 Understand acoustics of interior spaces

- 4.2.1 Define sound and noise.
- 4.2.2 Differentiate sound and noise
- 4.2.3 Explain the measurement of sound energy.

4.2.4 Identify the threshold values of noise for comfort of users.

4.2.5 Identify noise control methods.

4.3.0 Understand the town planning process.

4.3.1 List the patterns of growth of town.

4.3.2 State the principles of town planning.

4.3.3 Identify causes for development of slums.

4.3.4 Identify the characteristics of slums

4.3.5 Explain the methods for clearance of slums.

CONTENT DETAILS

MODULE – I

Climatology: - Definition – Climate and Weather – Solar Radiation – Quantity and Quality – Earth's Thermal balance – Winds – Types of Wind – Characteristics of Wind force and speed.

Site Climate / Micro Climate: – Local factors, temperature and humidity – Air movement - Vegetation – Urban Climate – Site Climate Data – Macro Climate.

Sustainable Development: – Definition – Sustainable materials and technologies, Global efforts for Sustainable Development – Protection of Atmosphere, Air, Water and Earth, Environmental Management.

MODULE – II

Interior Design and Decoration: – Definition – Duties and responsibilities of designer. Characteristics of Interior Space – Physical and attached qualities.- Perception – Design elements –point ,line, shape, form. Proportion and shape of Enclosures – Ideal Space Proportion –Anthropometry-Ergonomics

Principles of Interior design:- Unity, variety, balance, rhythm, contrast, focus, Harmony Classic and Modern Decorative materials – Colours and Finish.

Properties and application of Colours, Different finishing Textures – Finish of various structural elements – Ceiling – Floor – Walls.

Planning and visualization- furniture lay out- interior elements.

MODULE – III

Landscape Architecture: Definition – Importance – Brief history – Formal and Informal Gardens – Understanding the types, styles and features of Gardens – Mughal Gardens – English Gardens – French Gardens – Japanese Gardens.

Components of Landscape design – Soft and Hard elements – Plants and other decorative vegetation – Hard elements like Ferrocement, Paving blocks, Stone items – Artificially moulded elements.

MODULE – IV

Lighting of interior and exterior:- measurement of light- Types of artificial lights-Glare- Munsell system, Photometric measurements, sky component, Acoustics-Biological and psychological effects-sources-Sound and noise -Noise control.

Town planning:-Principles of town planning-Town growth. Slum: – Definition – Causes of Slums – Characteristics of Slums – Effect of Slum – Agencies and Methods of Slum clearance.

REFERENCES

1. Martin Evans : Housing, Climate and Comfort ; The Architectural Press, London
2. S.Vigneswaran, M. Sundara & D. S. Choudhary: Environmental Management ;Journel
3. Marquita K Hiu : Understanding Environmental Pollution (II nd Edition) ; Cambridge University Press
4. Koenigsberger et-al : Manual of tropical housing and building ; Orient Longman
5. Time Saver Standards in Interior Design
6. Time Saver Standards in Landscape Architecture.