

Architectural Design-IV(26151)Lesson-02

PLANNING CONSIDERATION OF HEALTH CENTER.

A.Describe the consideration of physical structure design:

Designing a physical structure requires a comprehensive approach that balances functionality, safety, aesthetics, and sustainability. Below are key considerations:

1. Structural Integrity & Load-Bearing Capacity

- Ensuring the structure can withstand **dead loads** (self-weight) and **live loads** (occupants, furniture, etc.).
- Accounting for **wind, seismic, and thermal loads** to maintain stability.
- Using appropriate materials like **reinforced concrete, steel, or timber** based on strength and durability.

2. Site Analysis & Environmental Factors

- Evaluating **topography, soil conditions, and climate** before design implementation.
- Considering **sun orientation, wind direction, and natural ventilation** for energy efficiency.
- Implementing flood-resistant or earthquake-resistant features in vulnerable areas.

3. Functionality & Space Utilization

- Designing spaces to serve their intended **purpose efficiently** (e.g., residential, commercial, or industrial).
- Ensuring smooth **flow of movement** (corridors, access points, emergency exits).
- Providing **flexibility** for future expansions or modifications.

4. Safety & Building Codes Compliance

- Following **national and international building codes** to ensure safety standards.
- Implementing **fire safety measures** (fire exits, sprinklers, alarms).
- Ensuring **earthquake-resistant and wind-resistant** designs for disaster-prone areas.

5. Sustainability & Energy Efficiency

- Using **eco-friendly materials** to reduce environmental impact.
- Incorporating **natural lighting, insulation, and passive cooling techniques** for energy efficiency.
- Implementing **rainwater harvesting, solar panels, and green roofs** for sustainability.

6. Aesthetic & Cultural Considerations

- Ensuring the design reflects **cultural identity and heritage** where applicable.

- Balancing **visual appeal** with practicality through proportion, texture, and materials.
- Integrating **landscape elements** for a harmonious connection with nature.

7. Accessibility & Inclusivity

- Designing for **universal access** (ramps, elevators, wide doorways for wheelchair users).
- Ensuring ease of movement for all users, including **elderly and differently-abled individuals**.

8. Cost & Budget Feasibility

- Balancing **design aspirations with financial constraints**.
- Selecting **cost-effective materials** without compromising quality.
- Planning for **long-term maintenance costs** and durability.

A well-designed physical structure incorporates all these factors to create **safe, efficient, and aesthetically pleasing** environments suited to their purpose.

B. Indoor and Outdoor Patient Departments

Hospitals and healthcare facilities are generally divided into **Indoor Patient Departments (IPD)** and **Outdoor Patient Departments (OPD)** based on the type of medical care and duration of treatment provided.

1. Indoor Patient Department (IPD)

The **Indoor Patient Department (IPD)** refers to the section of a hospital where patients are admitted for treatment that requires continuous medical supervision and hospitalization.

Key Features of IPD:

- Patients stay in the hospital for **one or more days** under medical care.
- Includes **general wards, private rooms, ICU, CCU, and post-operative care units**.
- Provides **24/7 medical supervision, nursing care, and specialized treatments**.
- Common for patients undergoing **major surgeries, chronic illness treatment, and intensive care**.

2. Outdoor Patient Department (OPD)

The **Outdoor Patient Department (OPD)** is where patients receive **medical consultation, diagnosis, and minor treatments** without being admitted to the hospital.

Key Features of OPD:

- Patients visit for **check-ups, minor treatments, and follow-up consultations.**
- Includes **specialized consultation rooms for different medical disciplines (e.g., cardiology, dermatology, orthopedics, etc.).**
- Patients receive **prescriptions, diagnostic tests, and minor procedures** but do not require hospitalization.
- Used for **preventive care, initial diagnosis, and post-treatment monitoring.**