

## Architecture

Sl.No	Subject Code	Name of the Subject
1	14PHDAR001	Urban Institutional Management and Governance
2	14PHDAR002	Theory of Landscape Architecture
3	14PHDAR003	Heritage, Conservation and Regeneration
4	14PHDAR004	Site Planning and support System Design
5	14PHDAR005	Urban Infrastructure Planning
6	14PHDAR006	Development Impact Studies
7	Compulsory	Research Methodology

## **14PHDAR001: URBAN INSTITUTIONAL MANAGEMENT AND GOVERNANCE**

**Objective: To provide an insight into the institutional framework and mechanism for Urban Governance in India**

### **OUTLINE:**

- Organization – types, concepts, theories, structure and functions- approaches to understanding organizations – organizational design, development and change organization. Organization Vs. Institution – Institution building – factors and process of institution building.
- Public relations – concepts, types, methods and planning public relations. People participation – theories, methods and planning participation. Human resource planning and Management – tasks, jobs analysis, selection, recruitment, induction and performance appraisal.
- Basic concepts of urban governance. Historical evolution and development to date. Agencies involved with Urban Development.
- Present organizations and agencies governing the urban development, case studies of state departments, urban development authorities and local bodies.
- Issues related to urban development for plan processing, plan implementation and enforcement, relating to governance aspects of the various institutions/organizations involved.
- The institutional frame work and mechanism for urban governance as envisaged in the 74<sup>th</sup> CCA and the new role assigned to the existing planning and development agencies in various stages.
- Role of people's participation in planning process. Involvement of NGOs, other agencies.
- Case studies to be undertaken by the students to understand the important aspects of urban governance.

### **References:**

1. Maria Pinto, Metropolitan City Governance in India, Sage Publications, New Delhi.
2. Jain R.B. Public Administration in India, 21<sup>st</sup> Century challenges for Good Governance. Deep and Deep Publications Pvt. Ltd, New Delhi.
3. Michael Bambarger and Eleanor Hewitt, Monitoring and Evaluating Urban development Programmes: A hand book for program managers. The World Bank, 1988

## **14PHDAR002: THEORY OF LANDSCAPE ARCHITECTURE**

**Objective: To provide the understanding of the evolution of concepts and concerns in Landscape Architecture**

### **OUTLINE:**

- Nineteenth Century Europe: The socio-cultural impact of industrialization and urbanization; its effect on public health legislation and the development of new landscape types: public parks and facilities for sport.
- Open space development in its urban design and planning context. Early industrial towns and the garden city movement.
- USA: Further evolution of the public park as a major component of urban landscape. The work of F.L. Olmsted and other pioneers. Park systems and suburban developments centred on open space.
- Examples of open space development in new towns and urban renewal to illustrate the close conceptual relationship among Town Planning, Urban Design and Landscape Architecture(e.g. Haussmann's Paris, Lutyen's Delhi).
- The modern movement: changing concepts of space and the relationship of architecture to landscape, illustrated through studies of selected works of the modern masters (e.g. LeCorbusier, Frank Lloyd Wright).
- Post-war development in Europe: new Towns in England and the concept of Landscape Structure.
- The influence of Ian McHarg on mid and late 20<sup>th</sup> century Landscape Architecture. The work of Jellicoe, Burle Marx, Halprin and others.
- Contemporary concepts and concerns: "Green" Architecture and Energy-Saving site planning and Landscape Architecture; Cultural landscapes, their definition, identification, characteristics and policies; artistic sensibility in Landscape architecture, land art; new developments in urban landscape design(e.g Parc Villete).
- The Indian Context: Understanding contemporary attitudes to open space design in India: ancient horticultural tradition, Mughal influence, British colonial influence. Trends in Indian landscape design in the late 20<sup>th</sup> Century and the search for a theoretical basis. Development and evolution of the profession in India.

### **References:**

1. Givoni B -Climate and Urban Design
2. TSS - Landscape Design
3. Ian McHarg -Design with Nature

## **14PHDAR003: HERITAGE, CONSERVATION AND REGENERATION**

**Objective: To provide an overview of issues related to Indian built heritage, its Conservation and Regeneration**

### **OUTLINE:**

- Human habitation in historical context. Tradition and culture as determinant of built form.
- Regional influences, climatic, technological, cultural and political influences on habitat.
- Need for comprehensive conservation of heritage buildings areas. Heritage as a motivating force in urban conservation and/or regeneration.
- Concept of regeneration renewal, reconstruction and redevelopment. Role of design in human habitation, social/cultural/ecological/energy determinants of design.
- Structure of urban spaces – locational criteria of activities and uses. Imageability.
- Redevelopment intervention in urban areas. Need for conservation. Integration of historic monuments/areas in the developmental process as reflected in the relevant landuse.
- Western context of regeneration. Validity of western approach in the Indian Context. Process to evolve a feasible set of goals and objectives for urban regeneration (UR).
- Approaches and methods, tools for UR. Prospects of UR under the available Urban Planning & development system in India.
- Contribution of NGO's/ other agencies in UR. Involvement of Private/Business houses in the scheme of conservation UR.
- Information base for UR. Innovations in the field of UR. Community awareness and involvement in UR. Land re-adjustment as a tool for UR.
- Urbanization scenario : 2050 – NCU recommendations. Specific case studies.
- Urban institutional arrangement for dealing with historic areas, legal instruments, Acts and laws pertaining to conservation/regeneration. Need for new legislation. Institutional reform in UR.

### **References:**

1. Feildan Bernard, Conservation of Historic Buildings, Butterworth-Heinemann.
2. Fitch James, Historic Preservation- A Curatorial Approach, University Press of Virginia

## **14PHDAR004: SITE PLANNING AND SUPPORT SYSTEM DESIGN**

**Objective: To develop sound skills in dealing with large sites in a comprehensive manner while incorporating ecological approach to site planning, disposition and design of site services and related infrastructure.**

### **OUTLINE:**

- Introduction to ecological approach to site analysis and planning with emphasis on study of natural and manmade features of site.
- Landscape components involved in site planning process, plant materials and design concepts, landscape engineering techniques for site and related infrastructure development.
- Historical perspective on natural and manmade landscapes including historic gardens, parks, and other open and public spaces.
- Landscape design concepts and design of open and public spaces, recreational areas, roadside landscapes, etc.
- Introduction to Urban services network at site level and related planning standards, concepts of sustainable infrastructure development from ecological standpoint.
- Solid waste management, surface water harvesting and ground water recharge, water based wastes disposal and recycling concepts towards achieving sustainable development.
- Electrical and other site infrastructure planning standards and disposition criteria.
- Movement network, disposition and design of movement infrastructure, planning and design standards for parking, road geometry, etc.
- Introduction to site and urban networks and components, related planning and design standards, disposition criteria and quantitative assessment methods at site level.
  - Application of above theoretical base into site-specific planning and infrastructure development projects.
  - Application of ecological approach to site analysis and planning process of large sites.
  - Site surveys for natural and manmade features of site and its relationship with larger natural and urban ecological system.
  - Identification and programming of site services and related infrastructure development.
  - Criteria for activity and built form disposition. Design of open space system.

### **References:**

1. Kevin Lynch and Gary Hack, Site Planning, MIT Press, Cambridge.
2. Peter Jacobs and Douglas Way, Visual Analysis of Landscape Development, Harvard Press.
3. Gary.O.Robinette (Ed), Landscape Planning and Energy Conservation. Van-Nostrand Reinhold

## **14PHDAR005: URBAN INFRASTRUCTURE PLANNING**

**Objective: To give an overview of planning for water supply, sanitation, fire protection, electrification and Traffic & Transportation in urban areas**

### **OUTLINE:**

- Concept of basic needs, formulation of objectives norms and standards
- Planning for water Supply. Source of supply, source analysis, quality & quantity.
- Issues related to transmission of water, treatment methods, sequence, benefits.
- Distribution – systems suitable in large city, small town, basic requirements, design guidelines. Technological options for water supply. Aspects of water distribution in far flung areas.
- Standards and locations for pumping stations, WS projects financing & management of water supply. Legal rights, water pricing, water pollution.
- Biological/Environmental/Cultural concepts in environmental sanitation. Low cost sanitation options, biogas, Sulabh Sauchalaya etc. Basic information on alternative disposal systems, and conditions of use.
- Engineering aspects of sewage disposal. Principles of sewage system layout. Collection, transportation & treatment of sewage. Principles of water bound disposal system, storm water drainage systems.
- Different methods of sewage treatments. Issues related to development parameters.
- Solid waste, implementation of land use, Environmental issues of garbage disposal, alternative technological innovations, conversion of garbage into usable forms.
- Planning for fire protection, services and space standards, locational criteria, implications on land use and density.
- Planning for electrification, general scenario, services and space standards of transformers, locational criteria, load forecasting.
- Traffic & Transportation. Basic data required for making Master Plans. Surveys, techniques and sources. Traffic data analysis. Transport and road investment & pricing.
- Institutional arrangements for municipal services, sector issues and assessments, financing systems, administrative set-up, people's participation.

### **References:**

1. Khisty and Lal , Transportation Engineering PHI publication.
2. CPHEERI Manual on Water Supply and Sewerage, New Delhi.
3. T.P.Salvats, Environmental Engineering and Sanitation, Wiley and Sons, New York

## 14PHDAR006: DEVELOPMENT IMPACT STUDIES

**Objectives: To develop tools and techniques of assessing the impact of Development on Environment**

### **OUTLINE:**

- An overview of Development : What is Development?; Development theories including Modernization; Dependency; and World System
- Concepts of Conflict and Development Changes: With special reference to Marx – stages of societies including primitive communism, slave, feudal, capitalism, scientific; Regional Development theories;- Equality and Development; and Human Rights and Development (vulnerable, low-income and the excluded groups, social justice and welfare and balancing equities; human interaction and social capital)- Constitutional: Fundamental Rights and Directive Principles.
- Economic Policies of India: New structural Adjustment including Liberalization, Economic Policies with special reference to Development Projects like Power Sector, Coal mines, Industries, Irrigation Projects (With special reference to Narmada), Port, Widening and strengthening of Roads, Upgradation of Highways. Urban Infrastructure-water supply. Sewerage. Etc. New Township Projects with special reference to Navi Mumbai and other related case studies in South Asia., Forest; and Protected Area.
- Impoverishment risk: food in security, morbidity, mortality rate: 8 Impoverishment risks identified by Michael Cernea.
- Environment Impact Assessment (EIA) Guidelines of Development Projects: Types of EA. EA Process, Policies of World Bank including Operational Policy (Ops). ADB.OECF.DFID. and Other Bilateral Agencies; EIA notification as per MoEF (India). IL&FS, NTPC. NHAI etc.
- Methodology of EA of Development Projects: Objectives, techniques, tools used. Environmental Clearance Requirements. Case Studies etc.
- Social Impact Assessment (EIA) Guidelines of Development Projects: Types of SA, SIA Process. Draft National Policy of Rehabilitation and Resettlement. Govt. of India: R&R Policy of World Bank (Social Safeguard Policies: cultural Property OP 4.11. Indigenous Peoples-OD 4.10, Consultations on Draft Policy on Indigenous Peoples OP/BP: Involuntary Settlement OP 4.12, Involuntary Settlement BP 4.12): - Country Assistance strategies- BP 2.11 ; - Development Cooperation and Conflict-OP 2.30, Development Cooperation and Conflict-BP 2.30; Involving Non-governmental Organizations in Bank-Supported activities GP14.70; Policies of ADB. OECF, DFID and Other Bilateral Agencies: EIA notification as per MoEF (India). IL&FS. NTPC, NHAI etc.

- Methodology of SIA of Development Projects: Objectives, techniques. Four Pillars of SIA –Identification of Key Social Development and Participation Issues. Evaluation of Institutional Issues & Options, Definition of participation Framework. Establishment of Mechanisms for Monitoring & Evaluation
- Participatory Approach in Social Impact Assessment: Semi structure interviewing, Focus group discussion. Preference ranking, Mapping and modeling. Seasonal and historical diagramming- PRA to be included specific stage of Project Cycle, Social Assessment Approach, Quantitative & qualitative methods, Focus on attitudes, needs, values, behavior, and responsiveness of organization.
- Monitoring and Evaluation of Implementation of EMP and R&R Activities: Objectives, tools used, Issues including Gender, impoverishment of poverty, grievance mechanism, role of NGOs, community groups etc.
- Legal Tools involved in Development Projects: Demand for Land, Reforms in LA, LA Bill 1998, Applicability of LA in different States of India, Urban Land Ceiling Act, Land Acquisition Act 1894, Improvement Act from 1956, Eviction Act of 1977, National housing policy of 1988, Public Premises Act of 1991
- Institutional Mechanisms in Development Projects: Case Studies
- Case Studies: Multi-purpose Projects, Irrigation Projects, Mining Projects, Industrial Projects, Urban Infrastructure Projects, Highways, Railways, Airports, Waterways etc.

#### **References:**

1. Dominique Gauzin-muller -Sustainable Architecture and Urbanism
2. P.L.Lombardi -Evaluation of the Built Environment for Sustainability
3. B.R.Barthwal -Environment Impact Assessment