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## 1. COURSE STRUCTURE OF 3 YEAR M.ARCH

3 Years M.ARCH (Executive) Program Structure for admission batch of  
2014-15

**COURSE STRUCTURE OF 3 YEAR M.ARCH**

**COURSE STRUCTURE: FIRST YEAR M.ARCH.  
PROGRAMME**

Ist SEMESTER						
Sl. No.	Sub.Code	Theory	ContactHrs. (L-T-P)	Credit	Internal Evaluation	University Marks
1	PCHD4101	Planning Principles In Human Habitat	3-0-0	3	30	70
2	PCHD4102	Socio-Economic Considerations For Habitat Design	2-0-0	3	30	70
3 (Elective)	PEHD5101	Climatology And Solar Architecture	3-0-0	3	30	70
	PEHD5102	Energy Conservation				
<b>TOTAL</b>			<b>08</b>	<b>09</b>	<b>300</b>	
<b>Total Contact Hours in the Semester</b>			<b>8</b>			
<b>Total Credits in the semester</b>				<b>9</b>		
<b>Total Marks in the semester</b>					<b>300</b>	

IInd SEMESTER						
Sl. No.	Sub.Code	Theory	ContactHrs. (L-T-P)	Credit	Internal Evaluation	University Marks
1	PCHD4103	Habitat Design Theory	4-0-0	3	30	70
2	PCHD4104	Sustainable Architecture And Habitat Management	4-0-0	3	30	70
3 (Elective)	PEHD5103	Environmental Consideration In Habitat Design	2-0-0	3	30	70
	PEHD5104	Modular Co-Ordination				
	PEHD5105	Housing And Community Planning				
<b>TOTAL</b>			<b>10</b>	<b>09</b>	<b>300</b>	
Sl. no	Sub. Code	Sessionals	ContactHrs. (L-T-P)	Credit	Internal Evaluation (Progressive Evaluation- 50 + Final Viva Voce - 50)	
1	PCHD7101	Habitat Design Studio-I	2-0-4	6	100	
<b>TOTAL</b>			<b>06</b>	<b>06</b>	<b>100</b>	
<b>Total Contact Hours in the Semester</b>			<b>16</b>			
<b>Total Credits in the semester</b>				<b>15</b>		
<b>Total Marks in the semester</b>					<b>400</b>	

**3 Years M.ARCH (Executive) Program Structure for admission batch of  
2014-15**

<b>IIIrd SEMESTER</b>						
<b>Sl. No.</b>	<b>Sub.Code</b>	<b>Theory</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation</b>	<b>University Marks</b>
1	PCHD4201	Advanced Landscape Design	4-0-0	3	30	70
2	PCHD4202	Land Economics And Real Estate Management	3-0-0	3	30	70
3 (Elective)	PEHD5201	Infrastructure Planning And Management	3-0-0	3	30	70
	PEHD5202	Virtual Imaging Techniques				
<b>TOTAL</b>			<b>10</b>	<b>09</b>	<b>300</b>	
<b>Sl. no</b>	<b>Sub. Code</b>	<b>Sessionals</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation (Progressive Evaluation- 50 + Final Viva Voce - 50)</b>	
1	PCHD7201	Habitat Design Studio-II	2-0-4	6	100	
<b>TOTAL</b>			<b>06</b>	<b>06</b>	<b>100</b>	
<b>Total Contact Hours in the Semester</b>			<b>16</b>			
<b>Total Credits in the semester</b>				<b>15</b>		
<b>Total Marks in the semester</b>					<b>400</b>	

<b>IVth SEMESTER</b>						
<b>Sl. No.</b>	<b>Sub.Code</b>	<b>Theory</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation</b>	<b>University Marks</b>
1	PCHD4203	Conservation And Renewal Of Heritage Habitat	3-0-0	3	30	70
2 (Elective)	PEHD5203	Project Management	2-0-0	3	30	70
	PEHD5204	Architectural Journalism				
<b>TOTAL</b>			<b>05</b>	<b>06</b>	<b>200</b>	
<b>Sl. no</b>	<b>Sub. Code</b>	<b>Sessionals</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation (Progressive Evaluation- 50 + Final Viva Voce - 50)</b>	
1	PCHD7202	Habitat Design Studio-III	2-0-6	9	100	
<b>TOTAL</b>			<b>08</b>	<b>09</b>	<b>100</b>	
<b>Total Contact Hours in the Semester</b>			<b>13</b>			
<b>Total Credits in the semester</b>				<b>15</b>		
<b>Total Marks in the semester</b>					<b>300</b>	

**3 Years M.ARCH (Executive) Program Structure for admission batch of  
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<b>Vth SEMESTER</b>						
<b>Sl. No.</b>	<b>Sub.Code</b>	<b>Theory</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation</b>	<b>University Marks</b>
1	PCHD4301	Development Legislation	3-0-0	3	30	70
2	PCHD4302	Advanced Theories Of Design	3-0-0	3	30	70
3 (Elective)	PEHD5301	Movement And Networks	2-0-0	3	30	70
	PEHD5302	Modular Co-Ordination And Prefabrication				
<b>TOTAL</b>			<b>08</b>	<b>09</b>	<b>300</b>	
<b>Sl. no</b>	<b>Sub. Code</b>	<b>Sessionals</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation (Progressive Evaluation- 50 + Final Viva Voce - 50)</b>	
1	PCHD7301	Habitat Design Studio-IV	2-0-6	9	100	
<b>TOTAL</b>			<b>08</b>	<b>09</b>	<b>100</b>	
<b>Total Contact Hours in the Semester</b>			<b>16</b>			
<b>Total Credits in the semester</b>				<b>18</b>		
<b>Total Marks in the semester</b>					<b>400</b>	

<b>Vith SEMESTER</b>					
<b>Sl. no</b>	<b>Sub. Code</b>	<b>Sessionals</b>	<b>ContactHrs. (L-T-P)</b>	<b>Credit</b>	<b>Internal Evaluation (Progressive Evaluation- 50 + Final Viva Voce - 50)</b>
1	PCHD7302	Seminar Presentation	0-0-3	3	100
2	PCHD7303	Design Dissertation	2-0-10	15	100
<b>TOTAL</b>			<b>15</b>	<b>18</b>	<b>200</b>
<b>Total Contact Hours in the Semester</b>			<b>15</b>		
<b>Total Credits in the semester</b>				<b>18</b>	
<b>Total Marks in the semester</b>					<b>200</b>

## 2. DETAILED SYLLABUS OF 3 YEAR M.ARCH PROGRAMME - 1<sup>st</sup> year

**EXECUTIVE M.ARCH  
(DETAILED SYLLABUS)**

**Total Credits=90**

**FIRST SEMESTER**

**1. PLANNING PRINCIPLES IN HUMAN HABITAT-(PC1) Cr-3**

Concept of Urban Centre/Urban Area, Urbanization and Rural Urban interdependence; Evolution of Town Planning in India-Ancient, Post-Medieval to Contemporary period; Urban morphology and socially rooted determinants of land-use structure; Types of Urban growth; Theories of urban growth and urban structure; Industrial Revolution and its effects on Town planning; Contemporary Modern thoughts in Urban Planning; Futuristic Planning principles.

References:

1. Urban Pattern by Gallion Eisner
2. History of Urban Form by A.F. Morris
3. Land use Planning by Chapin
4. Planning Principles – Reader by AITP
5. The City in History by Lewis Mumford

**2. SOCIO-ECONOMIC CONSIDERATIONS FOR HABITAT DESIGN-(PC2):**

**Cr-3**

Concepts of culture and environment; society; community groups; Social structure and institutions; continuity and change and their impact on structure of human habitat; cities and towns, Demography, Economic base of settlements, Economic growth, Dichotomy of rich-poor in relation to development, etc., and their impact on habitat structure, Economic issues in urban growth – Trends and patterns of Indian urban growth; Real Estate setup, market and demand analysis.

Concept of traditional social values, effects of technology, change, management and characteristics and states of conflict, Struggle for space, density, overcrowding, Urban stress and gender issues, Slums and blights, Crime and spatial structure of cities.

References:-

1. Indian Social Structure by M.N.Srinivas
2. Socio-Economic Indicators for Urban Planning and Development – IIPA publication
3. Socio-Economic Basis for Planning – AITP Reader.

**3. CLIMATOLOGY AND SOLAR ARCHITECTURE-(PE1) Cr-3**

Role of Climate in Habitat Design-Climate responsive vernacular settlements, urban climate, dynamics of the urban heat island, meso-climatic changes caused by urban heat island, climatic and urban design, city aerodynamics, the aerodynamics of a tall building, Wise effect, Monroe phenomenon, Venturi, Cell and Row Effect, wind effects in the vicinity of tall buildings, preliminary idea about wind tunnel.

Need for solar architecture, solar geometry and shading Solar Passive architecture, Direct gain heating, water wall heating, water wall cooling, trombe wall, greenhouse heating and cooling, roof ponds, Thermosiphoning air systems, Active solar systems, Collector systems for heating and cooling purposes, air systems, liquid systems, flat plate and parabolic reflectors, photo voltaics.

References:

1. Wind in Architectural and Environmental Design by Michelle G. Melargano
2. Architectural Aerodynamics by R.M. Anysley, W. Melbourne and B.J.Vickery.
3. Solar Heating and Cooling – Sunset Home Owners Guide.
4. Design with Climate by Victor Olgay
5. Solar Energy Fundamentals in Building Design by Bruce Anderson
6. Design for Cold Climates by Mathus.

## **SECOND SEMESTER**

### **1. HABITAT DESIGN THEORY – (PC3):**

**Cr-3**

Components of human habitat, Dimensions of Urban Design-Grain, texture, scale, etc. Habitat Design, Urban Design and their relation with planning and architecture, Views of habitat as extension architecture (mega architecture) and as architectural expression of planning.

Evolution of concepts of urban form and design in different cultures and in India, Utopian concepts, Concept of informal sector, concern for urban poverty and its impact on habitat,

Concepts in Urban Design and Planning, Urban Design survey, inventories, techniques/approaches to Urban Design.

Behavioral issues in Urban Design, Principles of urban spatial organization; urban scale, urban spaces, urban massing; quality of urban enclosure.

Image ability, townscape and elements of urban design, Historical examples of urban design projects.

References:

1. Urban Design: The Architecture of Towns and Cities by Paul D. Speireigen
2. Design of Cities by Edmund Bacon
3. Image of the City by Kevin Lynch
4. Townscape by Gordon Cullen Responsive Environment by Ian Bentley et al

### **2. SUSTAINABLE ARCHITECTURE AND HABITAT MANAGEMENT – (PC4):**

**Cr-3**

Sustainable Development-various viewpoints:- Environmental Sustainability, Economic Sustainability and Social Sustainability.

Definition of Sustainable Architecture, Ecological Building-Environment, Building Fabric and Building Technology, Principles of Sustainable Design, Sustainability and embodied energy and operational energy in building, Application of Renewable Sources of energy, Eco-sensitive building materials, Waste reduction, Concept of recycling and adaptive reuse, Cost reduction techniques in buildings.

Energy conservation through sustainable lighting design, Life Cycle Concept in Building Design, Design for environment, Water and Energy Reduction, Indoor air quality and Rain Water harvesting.



References:

1. Ecology and Sustainable Development by P.S.Ramakrishnan
2. Houses: Reduce Building Costs by Laurie Baker
3. An Architecture for People: The Complete Works of Hassan Fathy by James Steele.
4. Papers on Green Architecture and Adaptive Reuse and various seminar proceedings on Sustainable and Green Architecture.

**3. ENVIRONMENTAL CONSIDERATIONS IN HABITAT DESIGN (PE2)**

**Cr-3**

Introduction to Ecology and environment; Land as an environmental resource; Water as an environmental resource; Global Conferences on Environmental issues and concerns. Agendas and resolutions, Land as a basic resource, Conservation of Wetlands, Desertification – Causes and implications, Air, Water and noise pollution and resultant environmental problems, Environmental Acts and Policies, Non-Conventional energy resources, Environmental economics, Environmental Impact Assessment.

References:

- 1.Ecology by Odum
- 2.Environmental Planning Reader by AITP
- 3.Environmental Impact Assessment Reader by ITPI
- 4.Survey of the Environment - Hindu Publications Earthscape by Simmonds

**4. HABITAT DESIGN STUDIO-I(PC8)**

**Cr-6**

### **3. DETAILED SYLLABUS OF 3 YEAR M.ARCH PROGRAMME - 2<sup>nd</sup> year**

### **THIRD SEMESTER.**

#### **1. ADVANCED LANDSCAPE DESIGN (PC6)**

**Cr-3**

Hardscape and Softscape elements in Landscape Design: Role of vegetation, windbreaks and shelterbelts; planting for wind reduction around buildings, role of vegetation for noise control, controlling air quality and pollution control; Matching plant materials to design criteria;

Landscape design for energy conservation: application of landscape elements in passive cooling, landscape design strategies for water conservation, retrofitting for solar energy, Site microclimate mapping, microclimate modification through landscaping, guidelines for site planning for energy conservation and solar energy utilization, slope analysis and grading, drainage considerations;

Pedestrian systems, connectors and linkages, access for the handicapped.

Field identification of plants, shrubs and groundcovers suitable for tropical climates

Reference Books:.

1. Landscape design for energy conservation By Gary Robinette.
2. Tropical Gardens& Plants by Bose & Choudhury
3. Residential Landscaping by Theodore Walker.

#### **2. LAND ECONOMICS AND REAL ESTATE MANAGEMENT (PC7):**

**Cr-3**

Land use planning and Urban Land Management; Basic components of Urban Land Policy; Land as a resource for urban development and management aspects; Urban Land Market: characteristics , assessment techniques, factors affecting land market; Supply and demand of land; Land related legislations; Land assembly /land pooling techniques; Land pricing and disposal techniques; Growth Management concepts; plans and tools and programmes for growth management; Real-estate market and assessment techniques; economic cycles; demand and supply, values and rental structure, Public – private participation; and real estate development agencies; Real estate laws, rent control laws.

References:

1. Urban Landuse Planning by S.Chapin & L. Keeble
2. Urban Development Management - I.T.P.I.
3. Reading Material on Land Economics – I.T.P.I.

#### **3. INFRASTRUCTURE PLANNING & MANAGEMENT : (PE3)**

**Cr-3**

Concepts of urban infrastructure, Social and physical infrastructure; Urban social infrastructure – qualitative and quantitative techniques of assessing requirements, Planning Amenities and institutions; Public and private sector role in resource mobilization and infrastructure development and related issues; Financing systems; sources of finance, leasing and contracting methods, pricing and financing ; major National and International agencies involved in infrastructure provisions; Managing infrastructure development, corporatisation and related goals, decentralized and people

led infrastructure provisions, social goals and equity, environmental and economic issues and assessments etc., related to physical infrastructure, Quality control mechanisms, institutions and instruments of resource mobilization, new opportunities and initiative in infrastructure development and management, Case studies from Asian cities of successful and innovative infrastructure provisions and equitable economic development, management and maintenance schemes, Nagarapalika Bill (74<sup>th</sup> Amendment) and hierarchical structure of urban development bodies and development financial structure.

**References:**

1. Five Year Plans, Planning Commission, Govt. of India
2. Urban Planning in a Changing World By Taylor and Francis Group, London.
3. Group Action and Popular Participation By R.P.Mishra.
4. The India Infrastructure Report: Policy Implications for Growth of Welfare.  
By Rakesh M.
5. N.I.U.A. Research Study Series – 73<sup>rd</sup> and 74<sup>th</sup> Amendment of the Constitution.
6. Actioning New Partnerships for Indian Cities, Cities , Vol..20.

**4. HABITAT DESIGN STUDIO-II (PC5)**

**Cr-6**

To study and understand the fabric of an existing habitat, To understand the forces responsible for the formation and growth of the habitat. The studio work would include study of an existing area/areas with an eye on its infrastructure, ecological aspects, land and land area coverage, character of built form, transportation network, uses of built form, and study of fenestration and façade treatment. The study would have to be presented in the form of documentation to be compiled in the form of a report. Studio work may be carried out individually or in groups depending upon the complexity of the problem.

**FOURTH SEMESTER**

**1. CONSERVATION AND RENEWAL OF HERITAGE HABITAT (PC9):**

**Cr-3**

Concepts and approaches to conservation; historic and inner city areas and other Natural elements, Concepts and approaches to conservation in India ;and other countries.

Socio-economic development, tourism infrastructure and development, and role of urban conservation;

Institutional aspects of conservation-Charters-World Heritage Legislation and Sites Conservation Acts.

Legislation, Archaeological Acts and Institutional framework for conservation in India and other countries.

Historic overview of recycling cities;

Conservation Area practice, adaptive reuse, up gradation problems in old areas, infill design.

Conservation Management, community participation, economic regeneration. Upgrading infrastructure, financing and implementation framework for redevelopment and revitalization projects;

Recent successful practices in urban conservation and regeneration in India and other countries.

Reference:

1. A Manual for Conservation By Sir Bernard Fielden
2. Conservation & Development in Historic Towns and Cities By Pamela Ward.
3. Planning for Conservation. By Kain Roger.

## **2. PROJECT MANAGEMENT (PE4)**

**Cr-3**

Corporate Management: Systems approach to urban management, manpower planning, performance appraisal, motivation and morale.

The concept of project evaluation, identification and estimation of project impacts; desirable and undesirable project impacts.

Single criterion project evaluation, details of cost benefit analysis and its application with case studies; cost benefit analysis of public and private sector projects;

Concept of multi-network and monitoring, PERT and CPM with their application in planning projects, project monitoring under resource constraints,

Cost Benefit analysis, Identifying costs and benefits, pricing, opportunity costs, shadow prices, cash flow, payback periods, internal rate return.

References:

1. Project Planning Analysis & Review by Prasanna Chandra
2. Project Management – The Managerial Process by Gary & Lawson
3. Project Planning & Control with PERT & CPM – By Dr. P.C.Punmia and others
4. Economic Analysis of Agricultural Projects – By J. Price Gittinger
5. Project Management by K. Natarajan

## **3. HABITAT DESIGN STUDIO-III (PC10)**

**Cr-9**

Studio problem would deal with urban design at micro – level in the design of public architecture: plaza design, water front, transportation corridors. It would address issues of public spaces design, principles of site planning and micro site detailing.

## 4. DETAILED SYLLABUS OF 3 YEAR M.ARCH PROGRAMME - 3<sup>rd</sup> year

## **FIFTH SEMESTER**

### **1. DEVELOPMENT LEGISLATION (PC11)**

**Cr-3**

Overview of legal tools connected with urban planning & development.

Legislation related to use and control of land, land acquisition.

Significance of land development control – objectives and legal tools, critical evaluation of Zoning, sub-division regulations, building regulations and byelaws, Development code.

Legislation on conservation of natural resources including Mining and Forestry Acts, Conservation and Management of Ancient Monuments and Archaeological sites and ruins.

Coastal Zone Regulations, Transfer of Development Rights – Concepts and related issues.

Environment Management Systems (ISO – 14001 and its planning implications, Need of ISO certified industry, Environmental and Financial implications  
Benefits of ISO.

### **2. ADVANCED THEORIES OF DESIGN (PC12)**

**Cr-3**

Design Theory and its impact on Architecture of shared spaces-the vocabulary of designing for people –centric spaces;

Behavioural issues at the level of public architecture, activity profile of people in public spaces, memory and mental mapping, public and private domain, open-endedness and prophecy, environmental perception.

Situational analysis of public architecture from macro level to micro level situations, site planning techniques, spatial organization and scale, built-environment and open space relationship, micro-level aspects like street furniture, colours, textures, surfaces, enclosures, visual details.

Analogical examples, bipolarity - old & new, utopianism, partial realization, various models of city level design-cosmic model, organic model, machine model, myths, mythology and symbolism; formality & informality in public design, interfaces in an urban context.

### **3.HABITAT DESIGN STUDIO-IV(PC13)**

**Cr-10**

## **SIXTH SEMESTER**

### **1. SEMINAR PRESENTATION (PC14) Cr-2**

Each student has to present a seminar on the perception study and other design issues of any one component of an existing urban area.

## **2. DESIGN DISSERTATION (PC15)**

**Cr-20**

Each student is required to prepare a thesis on a topic approved by the Department. Topic should be on current research and professional design interests