



**ANNA UNIVERSITY: : CHENNAI - 25**

**FACULTY OF ARCHITECTURE AND  
PLANNING**

**Approved Special Electives for  
M.S. / Ph.D. Degree Programs  
(upto 21<sup>st</sup> AC 07.01.2016)**

**ANNA UNIVERSITY: CHENNAI – 600 025.**

**SPECIAL ELECTIVES FOR FACULTY OF ARCHITECTURE AND PLANNING**

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>M/C</b>
FA 1911	Traditional-Vernacular Residential Architecture And Its Cultural Aspects	3	0	0	3
FA 1913	Church Architecture	3	0	0	3
FA 1914	Digital Tools for Environmental Architecture	3	0	0	3
FA 1915	Lighting Design For Work Environment	3	0	0	3
FA 1916	Raditional Water Management	3	0	0	3
FA 1917	User - Environment –Behavior Studies and Agent Based Systems	3	0	0	3
FA 1918	Alternative Building Materials and Technologies	3	0	0	3
FA1919	Architecture Under Colonial Rule	3	0	0	3
FA1920	Sustainable Landscape Urbanism	3	0	0	3
FA1921	Heritage Conservation of Urban Areas	3	0	0	3

## **FA 1911 TRADITIONAL-VERNACULAR RESIDENTIAL ARCHITECTURE AND ITS CULTURAL ASPECTS**

### **Course Objective**

**3 0 0 3**

Study on traditional-vernacular residential architecture, its definition, characteristic and its possibility to be used as mode of understanding cultural interactions and interlinkage among different and various regions and countries.

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|----------|--|-----------|
| <b>1</b> | <b>Cultural Studies for Architecture</b> <ol style="list-style-type: none"> <li>1. Defining Culture and Architecture</li> <li>2. Understanding discourses and problems in definition of Architecture               <ul style="list-style-type: none"> <li>• Encyclopedic/ technical definition</li> <li>• Anthropological</li> <li>• Historical</li> </ul> </li> <li>3. Socio-Cultural attribute of Architecture based on various scholar work               <ul style="list-style-type: none"> <li>• Vernacular approach</li> <li>• Architectural Anthropology approach</li> <li>• Symbolism approach</li> <li>• Holistic approach</li> </ul> </li> </ol>   | <b>8</b>  |
| <b>2</b> | <b>Traditional and Vernacular Architecture</b> <ol style="list-style-type: none"> <li>1. Defining and understanding “Traditional” and “Vernacular”</li> <li>2. Architectural understanding of traditional and vernacular architecture (William Noble Knapp, Amos Rappoport, Paul Oliver)</li> <li>3. The cultural role of traditional and vernacular architecture study</li> <li>4. Concept or object of traditional and vernacular architecture</li> <li>5. Attribute and characteristic of traditional and vernacular architecture</li> </ol>  | <b>8</b>  |
| <b>3</b> | <b>Cultural and Historical interlinkage between culture in Different Region in , South-Asia and South-India</b> <ol style="list-style-type: none"> <li>1. History of Southeast Asia, South-Asia and South-India</li> <li>2. Modes of cultural exchange and dynamic               <ul style="list-style-type: none"> <li>• Assimilation</li> <li>• Transformation</li> <li>• Acculturation</li> <li>• Diffusion</li> <li>• Cross Culture</li> </ul> </li> <li>3. Defining Asia, Southeast Asia, South-Asia and South-India</li> <li>4. Discourses of Cultural interlinkage in Asia               <ul style="list-style-type: none"> <li>• <i>Indianized</i> Southeast Asia</li> <li>• Austronesian and Austro-Asiatic Maritime Exploration</li> <li>• Aryan Infiltration into India</li> <li>• Spread of Buddhism</li> <li>• European Colonization</li> </ul> </li> </ol> | <b>9</b>  |
| <b>4</b> | <b>Southeast Asian Architecture and Dwelling Culture</b> <ol style="list-style-type: none"> <li>1. Origin and Dynamic</li> <li>2. Attribute and Characteristic</li> <li>3. Geo-political boundary (mainland, archipelago, islands)</li> <li>4. Discussion Cases (Architecture in Malay peninsula, Thailand, Sumatera Vietnam, Cambodia, Java and Lesser Sunda, Polynesia and Melanesia)</li> </ol>   | <b>10</b> |

<b>5</b>	<b>South Indian Architecture and Dwelling Culture</b>	<b>10</b>
	1. Origin and Dynamic	
	2. Attribute and Characteristic	
	3. Geo-political boundary (Kerala, Tamil Nadu, Karnataka and Andhra Pradesh)	
	4. Discussion Cases (Architecture in Kerala, Tamil Nadu, Karnataka, Andhra Pradesh )	

**Total 45**

**REFERENCES:**

1. Knapp, Ronald G, (2003), *Asia's Old Dwellings – Tradition, Resilience, and Change*, Singapore: Oxford University Press.
2. Oliver, Paul, (1997), *Encyclopedia of Vernacular Architecture*, volume 1,2,3. Oxford : Blackwell Publishers
3. Rapoport, Amos, (1969), *House Form and Culture*, Prentice-Hall, Englewood-Cliffs.
4. Coedes, Goerge, (1968), *Indianized States of Southeast Asia*; Honolulu: East West Centre;
5. Groslier, Bernard Philippe, (2002); "*Indocina – Persilangan Kebudayaan*" ("*Indochina The Cross Culture - Pusat Penelitian Arkeologi dan Forum Jakarta Paris & Ecole Francaise d'Extreme-Orient*", Jakarta : KPG
6. Schefold, Reimar, (2004) "*The Southeast Asian House – Common Features and Local Transformation of an Ancient Architectural Tradition*" in Reimar Schefold, (et al); *Indonesian House*, Singapore : Singapore University Press
7. Waterson, Roxana, (1990). ***The Living House – Anthropology of Architecture in Southeast Asia***, New York : Oxford University Press
8. Acharya, Prasanna Kumar, (1998), *Architect of Manasara*, New Delhi : DK Publisher Distributor P.Ltd
9. Kak, Subhash; *Early Indian Architecture and Art*; "*Migration & Diffusion - An international journal*", Vol.6/Nr.23, 2005, pages 6-27
10. Thampuran, Ashalatha, (2001), *Traditional Architectural Forms of Malabar Coast*, Calicut : Vastuvidyaprasthanam

**FA 1913****CHURCH ARCHITECTURE****3 0 0 3****OBJECTIVE**

The old pictorial approach to Church Architecture still persists almost unchallenged. The objective of this course is to understand the characteristic features of churches in various parts of the world right from its origin.

**UNIT I INTRODUCTION 9**

History and origin of Christianity. Guiding principles for the design of churches according to the spirit of Roman Liturgy. The theological basis of Church Architecture. Church Architecture and liturgy.

**UNIT II CHURCH BUILDING PLANS- THROUGH AGES 10**

Origin and development of churches in various parts of the world. Northern Europe, Middle East countries, England. Characteristic features of churches in Early Christian, Byzantine, Romanesque, Gothic, Renaissance and Rococo periods.

Churches before Constantine- the Basilica- Origin of Basilica- Different types of Basilica. The Western churches and Eastern orthodoxy. Different church plans, the round plan, the octagonal plan, the pendentive and domed Basilica, the cruciform plan, the free standing cross, the cross in square.

**UNIT III CHRISTIANITY IN INDIA 6**

Religious life in Indian churches, the church and cultural life, the Church and social life- Early Indian churches- their origin and establishment.

**UNIT IV CHURCH ARCHITECTURE IN KERALA 10**

History and Origin of Christianity in Kerala, Early Syrian influence. Church Architecture in Kerala in early periods- Comparison with Hindu temple and Jain palli. Interior spaces and plan of indigenous churches of Kerala.

**UNIT V EUROPEAN INFLUENCE IN CHURCH ARCHITECTURE OF KERALA 10**

The Portuguese in India. The Portuguese influence in Goan church Architecture. The British period in India and their influence on church buildings. Influence of European styles in Indian Church Architecture.

**TOTAL:45 PERIODS****REFERENCES**

1. The Origin and Development of Early Christian Church Architecture , JG Davies, SCM Press Ltd. Bloomsbury street, London
2. Churches in India- Thomas P -Publication Division Ministry of Information and Broadcasting, Govt. of India.
3. Historic Architecture source Book- Cyril.M.Harris, Professor of Architecture, Columbia University.
4. World Architecture- an illustrated History-Hitchcock H.R - Paul Hamlyn West Book house, Fullham, Broadway London.
5. An Architectural interpretation of History-Gloag John- Adam Chales block London.
6. India and Portugal cultural interactions, Pereira Jose Pal- Mang Publications, Mumbai

**FA 1914      DIGITAL TOOLS FOR ENVIRONMENTAL ARCHITECTURE**

**OBJECTIVE:** To provide exposure to environmental performances & analysis tool based on climatic data models and data structure.

**1. ENVIRONMENTAL FACTORS**

Thermal performances of buildings; Comfort factors and measurements; Climatic design; Solar Control and shading devices, Louvre design; ventilation; introduction to lighting; units of light, colour, lamps, luminaries, Daylight design of general lighting schemes; Energy management and lighting

**2. SOLAR PASSIVE ARCHITECTURE**

Heat transmission in buildings - bioclimatic classification - passive heating concept: direct heat gain - indirect heat gain - isolated gain and sunspaces-passive cooling concepts: evaporative cooling – radiative cooling - thermal comfort- concept of solar temperature and its significance -calculation of instantaneous heat gain through building envelope.

**3. PERFORMANCE ANALYSIS TOOL**

Introduction to ECOTECT, an environmental prediction software package in architecture. to study the simple and intuitive 3D modeling interface and to explore the range of analysis functions

**4. SOLAR THERMAL ANALYSIS OF MODELS**

Use of analytic tools and environmental design software (ECOTECT) for studying solar, thermal and lighting processes in and around real or virtual buildings.

**5. SIMULATION STUDIES**

Generate and analyse climate data for any geographic location, predict microclimatic conditions on urban sites, perform shading, daylighting, airflow, heating and cooling simulation studies, predict indoor temperatures and other environmental conditions, calculate energy requirements and assess environmental impact and life costs of buildings.

**REFERENCES:**

1. Garg H P., Prakesh J., Solar Energy: Fundamentals & Applications, Tata McGraw Hill, 2000.
2. Duffie, J.A. and Beckman, W.A., Solar Engineering of Thermal Processes, John Wiley, 1991.
3. Alan L Fahrenbruch and Richard H Bube, Fundamentals of Solar Cells: PV Solar Energy Conversion, Academic Press, 1983
4. Autodesk Ecotect Analysis 2010 Bible.

**FA 1915**

**LIGHTING DESIGN FOR WORK ENVIRONMENT**

**L T P C  
3 0 0 3**

- UNIT I BASICS OF LIGHT AND LIGHTING 9**  
Fundamentals of light – spectrum of sunlight, spectral energy distribution, laws of illumination, photometry and colorimetric quantities and systems. Eye and vision – visibility -visual acuity, visual activity, contrast sensitivity. Factors governing illumination –glare, diffusion, direction, composition, distribution, visual performance and lighting quality. Types of Lighting- day light, artificial lighting  
History of lighting- Architects and lighting designers – Richard Kelly, Louis Kahn, Mies van der Rohe, Philip Johnson, Eero Saarinen,Jonathan Speirs and Mark Major, Claude R. Engle
- UNIT II LIGHTING EQUIPMENT AND SYSTEMS 9**  
Lighting systems – Incandescent lamps. Discharge lamps, Fluorescent lamps, LED, HID. Luminaires and control gear. Conventional and electronic ballasts. Lamp and ballast as a system and electrical characteristics. Power factor correction and harmonic compensation.
- UNIT III LIGHTING AND ENVIRONMENT 9**  
Vision and human factors. Visual performance and its assessment. Lighting criteria. Effect of lighting on health, physiology of the circadian system, seasonal affective disorder (SAD), alertness, performance, and jet-lag. Visual cognition - Cognitive approach of Vision & Illumination Design-color vision, Measurement of Visual acuity , Aging Eye, Illumination at work, mental Image ability - Characteristics of Mental Images – Imagery and Rotation, size , angle, Shape , and Part -whole Relationship ,Imagery and Interference Imagery & Memory , Cognitive maps.
- UNIT IV LIGHTING DESIGN & CALCULATION 9**  
Light measuring equipments. Illuminance Meter, Luminance Meter, Lighting Software, Chroma Meter, Colour Analyser, Data Management Software, Design objectives and criteria. Design calculations: Illuminance due to point, line and area sources. Lumen method. Calculation of utilization factors. Point-by-point and flux transfer methods
- UNIT V CHOICE OF LIGHTING SYSTEM 9**  
Lamp and luminaires. Integrated ceiling system and heat recovery. Integration of electric light and daylight. Benefits-Energy Savings-Green House Gas Emission- Social Prospective- Deferred from Mercury- Clean disposal options-Discount-Rational Economic Factor- Pay Back Formula. Cost of Light- Energy Cost –Usage hours- Replacement Cost. Trade –off among alternative technology-Daily Lighting Load Curves- Annual Cost of White LED’s-Better investment

## REFERENCES

1. Lighting design basics, Mark Karlen, James Benya , John Wiley and Sons
2. Architectural lighting design By Gary R. Steffy, John Wiley and Sons, 2002
3. Ergonomics and Health Aspects of Work with Computers: International Conference, EHAWC 2009, Held as Part of HCI International 2009, San Diego, CA, USA, July 19-24, 2009, Proceedings
4. Building technology:mechanical and electrical systems, Benjamin Stein, McGuinness, William J. John Wiley and Sons, 1997

## Suggested Reading

- R. Winston, J. C. Minano, P. Benitez, Nonimaging Optics, Elsevier Academic Press, (2004).
- J. Chaves, Introduction to Nonimaging Optics, CRC Press (2008).
- V. Arecchi, T. Messadi, and R. J. Koschel, Field Guide to Illumination Optics, SPIE Press (2007).
- Coaton, J.R. and Marsden, A.M. Lamps and Lighting. 4th Ed. Arnold (1997)

Faculty of Architecture & Planning Approved in 17<sup>TH</sup> AC (Ad hoc) 27.04.2012) **ITEM NO. FA 17.01(2)**

**FA1916 TRADITIONAL WATER MANAGEMENT SYSTEMS L T P C**  
**3 0 0 3**

### OBJECTIVE:

To explore the various aspects of traditional water management systems and their components. To also identify relevance to today's context.

<b>UNIT I INTRODUCTION</b>	<b>9</b>
Introduction to concept of water management as a system as distinct from water harvesting. Importance of studying on a regional and watershed scale as the basis for water management systems. Introduction to traditional water management systems in India and the world. Types of traditional water management systems based on landform, vegetation and climate.	
<b>UNIT II GLOBAL PERSPECTIVES</b>	<b>9</b>
Traditional water management systems of other parts of the world, specifically, study of those in Asia. Case studies of conservation, preservation and restoration of such systems in Srilanka, Indonesia, China and Australia.	
<b>UNIT III COMPONENTS AND PROCESSES</b>	<b>9</b>
Components of traditional water managements systems, Role of communities in these, including regulation of use, conservation of water storage areas, religious protection and practices. Community participation, role of hereditary regulators, and agricultural practices.	



<b>UNIT IV NORTH INDIAN SCENARIO</b>	<b>9</b>
Detailed study of water management systems of North India, that is those located in mountains, plateaus, desert and plains. Opportunities, challenges and issues.	
<b>UNIT V SOUTH INDIAN SCENARIO</b>	<b>9</b>
Detailed study of water management systems of South India, that is those located in plains and coastal plains. Opportunities, challenges and issues.	
<b>Total number of periods</b>	<b>45</b>

**REQUIRED READING :**

1. Kalyan Kumar Chakravarty, [Gyani Lal Badam](#) & Vijay Paranjpye,. Traditional Water Management Systems of India, 2006, Aryan Books International & Indira Gandhi Rashtriya Manav Sangrahalaya.
2. Nitya Jacob, Jalyatra : Exploring India's traditional water management systems, 2008, Penguin publications.
3. Village Tanks of South Asia, Papers and proceedings of the Regional workshop, Madurai, India, 2002.
4. S.M. Ratnavel, P.Gomathinayagam, In search of Ancient wisdom –Irrigation Tanks, 2006, DHAN foundation.
5. A.Vaidyanathan, Tanks of South India, 2001, Centre for Science and Environment.

**REFERENCES:**

1. Community and watershed
2. Asit K.Biswas, R.Rangachari, Cecilia Tortajada, Water Resources of the Indian Subcontinent, 2009, Oxford, India.

Faculty of Architecture & Planning      Approved in 17<sup>TH</sup> AC (Ad hoc) 27.04.2012) **ITEM NO. FA 17.01(3)**

<b>FA 1917</b>	<b>USER- ENVIRONMENT –BEHAVIOR STUDIES AND AGENT BASED SYSTEMS</b>	<b>L T P C 3 0 0 3</b>
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<b>UNIT I</b>	<b>ENVIRONMENTAL PSYCHOLOGY</b>	<b>8</b>
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Definition- - system oriented-space over time orientation- -Place identity-place attachment-Environmental consciousness- Behavior settings-Cognitive mapping- Environmental stress- Personal space-Territoriality-Spatial Behavior.

<b>UNIT II</b>	<b>INFORMATION ENVIRONMENTS</b>	<b>7</b>
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Definition-information environments- information and environments in past,present and future contexts –information ecology-information society-.- Information in communities and environments and technologies used for mediation. Information environments and its relationship with human behavior.- new strategies for viewing and managing information in a spatial perspective.

**UNIT III USER TRACKING SYSTEMS AND BEHAVIORAL PATTERNS 10**

Observation methods and interview method to study User –Environment behavior- methods for analysis of behavior –setting data-Mapping the behavior settings. Digital observation Methods for Human tracking and interaction detection – Visual sensors and radio frequency sensors- Learning behavioral pattern –comparing behavior. Comparison of digital versus traditional observation methods.

**UNIT IV USER BEHAVIORAL MODELING 10**

Need for agent based modeling-ABMS -Agent based modeling in User environment context-applications of agent based modeling in supply chain management, sociology, pedestrian, crowd behavior, shopping and other environments.

**UNIT V AGENT - APPLICATIONS 10**

Agent –definition- ABM- (Agent based Modeling) ABS,(Agent based systems)IBM – (individual-based modeling)and ABMS ((Agent based Modeling and simulation) and its applications- Case studies of Agent applications as modeling ,generating and operational tool in various fields.

**TOTAL: 45 PERIODS**

**REFERENCES**

1. Enclosing Behavior- Robert B.Bechtel (Environment Research and Development foundation)TUCSON,Arizona, by Dowden Hutchinson&Ross,Inc.Pennsylvania.
2. Environmental Psychology by Francis T.Mc.Andrew,Brooks/Cole Publishing company,Pacific Grove,California.
3. Human Behavior Understanding: Second International Workshop, Hbu 2011 Amsterdam,Netherlands,2011 By Albert Ali Salah, Bruno Lepri(Eds.)
4. <http://www.informs-sim.org/>
5. <http://www.ddss.nl/>
6. <http://www.biothing.org/>

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Approved in 18<sup>TH</sup> AC 09.08.2014) **ITEM NO. FA 18.05**

**FA1918**

**ALTERNATIVE BUILDING MATERIALS AND TECHNOLOGIES**

**L T P C  
3 0 0 3**

**UNIT I INTRODUCTION: 9**

Energy in building materials, Environmental issues concerned to building materials, Global warming and construction industry, Environmental friendly and cost effective building technologies, Requirements for building of different climatic regions, Traditional building methods and vernacular architecture.

**UNIT II ALTERNATIVE BUILDING MATERIALS: 9**

Characteristics of building blocks for walls, Stones and Laterite blocks, Bricks and hollow clay blocks, Concrete blocks, Stabilized blocks: Mud Blocks, Steam Cured Blocks, Fal-G Blocks and Stone Masonry Block

**UNIT III LIME-POZZOLANA CEMENTS 9**

Raw materials, Manufacturing process, Properties and uses Fiber reinforced concretes, Matrix materials, Fibers : metal and synthetic, Properties and applications,Fibre reinforced plastics, Matrix materials, Fibers : organic and synthetic, Properties and applications, Building materials from agro and industrial wastes, Types of agro wastes, Types of industrial and mine wastes, Properties and application, Field quality control test methods

- UNIT IV ALTERNATIVE BUILDING TECHNOLOGIES 9**  
 Alternative for wall construction, Types, Construction method, Masonry mortars Types, Preparation, Properties, Ferro cement and ferroconcrete building components, Materials and specifications, Properties, Construction methods, Applications, Alternative roofing systems, Concepts, Filler slabs, Composite beam panel roofs, Masonry vaults and domes
- UNIT V COST EFFECTIVE BUILDING DESIGN 9**  
 Cost concepts in buildings, Cost saving techniques in planning, design and construction, Cost Analysis : Case studies using alternative.

**TOTAL: 45 PERIODS**

**REFERENCES**

1. K S Jagadish -Alternative Building Materials Technology;New Age;2007
2. K S Jagadish -Building with Stabilized Mud; I.K. International PVT. LTD;2010
3. Daniel Vallero and Chris Brasier; Sustainable Design- The science of sustainability and Green Engineering; Wiley; 2008
4. Building Materials & Technology Promotion Council; Production of cost effective, environment friendly and energy efficient building components-user’s manual;2009
5. Building Materials & Technology Promotion Council;Standards and specifications for cost effective innovative building materials and Techiques including rate analysis (second edition);2009
6. Jon Nunan; The Complete Guide to Alternative Home Building Materials & Methods,2009

Faculty of Architecture & Planning Approved in 19<sup>TH</sup> AC 03.12.2014) **ITEM NO. FA19.05 (1)**

**FA1919 ARCHITECTURE UNDER COLONIAL RULE L T P C  
 3 0 0 3**

**UNIT I HISTORICAL, POLITICAL AND CULTURAL BACKGROUND 9**  
 Colonialism in the International and Asian context - a brief history of colonization of India - various colonial powers: the British, Dutch, French and Portuguese - Existing Indian Regionalism in political and cultural terms - Important concepts and images in pre-colonial India.

**UNIT II EARLY COLONIAL ARCHITECTURE UNDER BRITISH RAJ 9**  
 Expression of Identity, Power and Superiority - Building for permanence - Social and philosophical disparities between the ruler and the masses - imposition of life style and behavior of self on the others - the idea of inclusion and exclusion.

**UNIT III POLITICAL CHANGE 9**  
 Decline of Mughal power - early 18<sup>th</sup> century - Sepoy mutiny in 1857 - Rise of British Raj into full ruling power - Creation of Architectural style part indigenous, part European - British finding of Indian Architecture - Indian styles - Hindu, Muslim.

**UNIT IV IMPERIAL VISION 9**  
 Emerging of British royal - Imperial ideology - new urbanity in princely states - the cities of colonial origin; Bombay, Calcutta, Madras - expression of culmination.

**UNIT V SYMBOLIZING OF NEW ERA 9**  
Indo-Saracenic and Classic revival - University of Madras Senate House and Victoria Memorial hall, Calcutta - later colonial period - contribution of Edwin Lutyens and Herbert Baker to the layout and Architecture of New Delhi - Rashtrapathi Bhavan and Parliament house.

**TOTAL:45 PERIODS**

**REQUIRED READING:**

1. Shanti Jayewardene-Pillai “ Imperial Conversation: Indo-Britons and the architecture of South India. Yoda Press, 2007.
2. Metcalf, Thomas R. An Imperial Vision: Indian Architecture and Britain’s Raj. Berkeley: University of California Press, 2002.
3. Metcalf, Thomas R. “Architecture and the Representation of Empire: India, 1860-1910.”

**REFERENCES:**

1. James Ferguson. History of Eastern and Indian Architecture.
2. Christopher Tadgell, The History of Architecture in India, Longman Group, U. K. Ltd., London, 1990.
3. A. Volwahren, Living Architecture - India (Buddhist and Hindu), Oxford and IBM, London, 1969
4. Percy Brown, Indian Architecture (Buddhist and Hindu period), Taraporevala and sons, Bombay, 1983.
5. Sathish Grover, The Architecture of India (Islamic) Vikas Publishing House Pvt. Ltd., New Delhi, 1981.
6. Architecture of the Islamic World - George Michell- (its history and social meaning), Thames and Hudson, London, 1978.

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Approved in 19<sup>TH</sup> AC 03.12.2014) **ITEM NO. FA19.05 (2)**

**FA1920 SUSTAINABLE LANDSCAPE URBANISM L T P C**  
**3 0 0 3**

**OBJECTIVE:**

To analyze the role of Landscape Urbanism – theory (texts) & practice (projects) in forming the contemporary city. To understand the evolution of a new urban morphology for contemporary cities adopting new models & strategies based on the Landscape of the city.

**UNIT I LANDSCAPE URBANISM – AN INTRODUCTION 5**

Background(what & why), the emergence of Landscape urbanism, characteristics, reevaluating landscape, history and driving forces, Landscape in practice: Defining competitions of landscape urbanism

**UNIT II LANDSCAPE (SUB) URBANISM IN THEORY AND PRACTICE 10**

LU – a school of thought, Smart growth and LU, New Urbanism, Green Urbanism, From Critical Regionalism to Critical Pragmatism

Practical limitations to innovation – Case study – The Wugong Urban Water (WUW) Landscape Structure Plan, The WUW project in relation to theory

**UNIT III LANDSCAPE URBANISM –PLANNING 6**

Performative Processes – process cycles, processes engaged in design, a democratic urban environment, processes of planning – Surface Strategies – Contemporary Positions – Network city, New pragmatism, philosophy of world complexity, ecological design media – Evolution of Planning Ideals – from the modern to the contemporary, the rise of landscape urbanism

**UNIT IV SUSTAINABLE(SU) & ECOLOGICAL URBANISM (EU) 12**

SU- Urban design with nature – The case for sustainable urbanism – Emerging thresholds – Sustainable neighborhoods – Time: The 2030 Community Challenge – Implementing sustainable urbanism – Rethinking cities for the future – Case studies  
EU- Historic roots and current trends, propositions and principles for the design of resilient cities, Cities – as habitats, part of the natural world, Urban ecosystems, The future of Urban Design.

**UNIT V ASIAN LANDSCAPE URBANISM 12**

Emerging challenges, Relationship between Asian Urbanism and Landscape Urbanism – social & cultural aspects of Asian Urbanism – Landscape Urbanism in India – case studies Hampi, Goa

**TOTAL:45 PERIODS**

**REFERENCES:**

1. Richard Weller, BOOM TOWN 2050 Scenarios for a rapidly growing city, UWA Publishing 2009.
2. Douglas Farr, Sustainable Urbanism – Urban design with nature, Wiley, John & Sons, Incorporated, November 2007.
3. Tigran Haas (Editor), Sustainable Urbanism and Beyond – Rethinking cities for the future, Rizzoli, NY, USA.
4. Mohsen Mostafavi, Ecological Urbanism, Harvard University, Graduate school of design, Lars Muller Publisher.
5. Charles Waldheim, The Landscape Urbanism Reader (paperback)

**REQUIRED READING:**

1. Landscape urbanism – large-scale architecture, ecological urban planning or a designerly research policy, GUNILLA LINDHOLM Senior lecturer, landscape architect, Department of Landscape Architecture, SLU, Alnarp, Sweden – Research paper
2. Steven Velegrinis, Flux-scape: Emerging Challenges of Asian (Landscape) Urbanism, Landscape practice Global Leader, Woods Bagot PO Box 58041, Dubai, UAE.
3. Peter Calthorpe, Urbanism in the age of climate change, Publication Date: June 1, 2013 |ISBN-10:159726721X| ISBN-13: 978-1597267212
4. Jan Gehl, Cities for people, Copyrighted material, September 6, 2010|ISBN-10:159726573X |ISBN-13:978-1597265737, Edition:2.
5. [http://issuu.com/inde/docs/presentation\\_hampi\\_isola/1?e=0](http://issuu.com/inde/docs/presentation_hampi_isola/1?e=0)
6. [http://www.ibs.or.jp/sites/default/files/5\\_publish/09-India.pdf](http://www.ibs.or.jp/sites/default/files/5_publish/09-India.pdf)
7. [http://issuu.com/inde/docs/la31\\_surat/7?e=0](http://issuu.com/inde/docs/la31_surat/7?e=0)

Faculty of Architecture & Planning

Approved in 20<sup>TH</sup> AC 07.07.2015) **ITEM NO. FA 20.03**

**FA1921 HERITAGE CONSERVATION OF URBAN AREAS L T P/S C**  
**3 0 0 3**

**AIM**

- Identify and define themes affecting conservation practice today
- Relate the conservation practices relevant to the planning of historic cities.

**OBJECTIVES:**

- Apply a critical conservation framework of analysis to urban sites.
- Analyze conservation at various scales, from the broad impact of regional governance to the efforts of individuals and groups at discrete urban sites.

- Broaden views of conservation beyond the built environment to include cultural landscapes and intangible heritage, and urban management.

**UNIT I INTRODUCTION TO HERITAGE AND CONSERVATION 9**

Overview and introduction to the basic concept of conservation - Integrated urban conservation: principles, international charters, guidelines and standards for conservation of historic monuments, sites and heritage zones; aesthetic and social dimensions, economic, legal and tourism aspects.

Conservation philosophy - International agencies - ICCROM -, UNESCO and their role in conservation - Comparative overview of conservation movement in Europe, U.K. and Italy during 19<sup>th</sup> and 20<sup>th</sup> century - Eastern and Western approaches to conservation - International charter and changing trends - What and why to conserve - Issues and Challenges in conservation in Developing Countries.

Concept of Management - Overview and introduction to basic concepts of Heritage Management.

**UNIT II ANALYSIS OF HISTORICAL STRUCTURES IN AN URBAN SETTING 12**

Evaluation techniques of built heritage - Mapping and Inventory - Documentation, analysis and investigation of existing condition [surveys, inventory and analysis] in terms of historical, architectural and conservation. - Technical analysis - Analysis of urban functions and evaluation of structural conditions - Critical analysis of the urban structures and its adaption for appropriate usages - Summary of methodological procedure - inspection and surveys, investigation techniques, methods for inventories and documentation, identification and reporting on heritage zones - Conservation plans and its implementation for revitalization.

**UNIT III HISTORY OF URBAN CONSERVATION IN INDIA 8**

Architectural vs Urban conservation in India - Understanding the character, history of cities and historical sites - role of ASI - Review of existing laws of ASI - Role of INTACH - heritage precincts - financial incentives historic cores - Projects - selected case studies.

**UNIT IV CONSERVATION LEGISLATION, PLANNING TOOLS AND FINANCIAL INCENTIVES 8**

Central and State Govt. - Policies - legislations - TDR- urban conservation and heritage tourism and national and international policies pertaining to Heritage Conservation. - National policy for conservation - Review of existing bylaws and conservation laws in the city and country - Incentives in conservation planning.

**UNIT V CASE STUDIES AND ON GOING RESEARCH 8**

Case studies on inventory, database and mapping systems in successful urban conservation examples

Review of national and international Case studies on Assessing values and needs, Stakeholder's analysis and community participation, Participatory mapping and information technology (GIS) , Integrating heritage conservation in municipal planning frameworks.

**TOTAL : 45 PERIODS**

**REFERENCES:**

1. The Fort Precinct in Bombay - A proposal for Area conservation by Rahul Mehrotra and Sandhya Sawant
2. Manish Chalana; "Of Mills and Malls: The Future of Urban Industrial Heritage in Neoliberal Mumbai, : Future Anterior 9 no.1 (Summer 2012): 1-15.
3. Vikas Dilawari, " Mumbai: An Overview of Policies and their Impact on the Historic Fabric, " Context: Built, Living and Natural 5 no.1 (Spring/Summer 2008):167-174.

4. Debashish Nayak and Anand Iyer, "The Case of Ahmedabad: Heritage Regulations and Participatory Conservation," Context: Built, Living and Natural 5 no.1 (Spring/Summer 2008): 275-182.

**TEXT BOOKS:**

1. Donald Appleyard, The Conservation of European Cities, M.I.T. Press, Massachusetts.
2. James M. Fitch, Historic Preservation: Curatorial Management of the Built World University Press of Virginia; Reprint edition (April 1, 1990)
3. Bernard Feilden, Conservation of Historic Buildings, (1994) , 2<sup>nd</sup> Edition, Butterworth, UK.
4. Christopher Brereton (1991), The Repair of Historic Buildings. Advice on principles and methods: English Heritage
5. Gerald Glenn, "Presentation & Rehabilitation", (1996). ASTM International.
6. Jukka. Jokilehto, " A History of Architectural Conservation", (1<sup>st</sup> Pub. 1999, Reprint 2005)-Elsevier Butterworth, Oxford, UK.