



# CURRICULUM FOR

## “MASTER OF

## ARCHITECTURE - URBAN DESIGN

## (M.ARCH (UD))”

w.e.f. Academic Year 2021-'22

*॥ तमसो मा ज्योतिर्गमय ॥*

### VISION

To provide equal opportunities for value based global education for creating an Enlightened Society

### MISSION

To establish and facilitate educational institutions in the region for providing affordable value based global education to all who aspire to study and to create opportunities to educators, social workers and philanthropists to serve society



**SARVAJANIK  
UNIVERSITY**

INCLUSIVE | INTEGRATED | INNOVATIVE

*creating an enlightened society...*

#### UNIVERSITY OFFICE

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Constituent Institute:

**INSTITUTE OF DESIGN, PLANNING &  
TECHNOLOGY  
(IDPT – SCET)**



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**Course Curriculum**  
**Master in Architecture(Urban Design)**

The Course Curriculum proposed and drafted by Academic and Curriculum Committee of Architecture under the Faculty of Architecture, Design and Planning in the meeting held on 10-12-2021 and recommended to 'BOARD OF STUDIES' for approval.

**Prof. Mahesh Nagecha**  
**Chairman, Academic**  
**and Curriculum**  
**Committee - Architecture**

Place of the meeting  
Sarvajani University Office

  
**Sign**

The proposed Course Curriculum was approved by Board of Studies (Architecture, Design & Planning) under the Faculty of Architecture, Design & Planning in the meeting held on 10-12-2021 and was recommended to the 'FACULTY' for approval.

**Prof. Bhavna Vimawala**  
**Chairman, BOS - Faculty of**  
**Architecture, design &**  
**Planning & Dean - IDPT**

Place of the meeting  
Sarvajani University Office

  
**Sign**

The Course Curriculum approved by the Faculty of Architecture, Design & Planning in the meeting held on 10-12-2021 and was recommended to 'ACADEMIC COUNCIL' for approval.

**Prof. Bhavna Vimawala**  
**Chairman, Faculty of**  
**Architecture design &**  
**Planning & Dean - IDPT**

Place of the meeting  
Sarvajani University Office

  
**Sign**

The Course Curriculum approved by the 'Academic Council of Sarvajani University' in the meeting held on 10-12-2021.

**Prof. Persi Engineer**  
**Chairman, Academic Council**  
**& Hon'ble Provost,**  
**Sarvajani University**

Place of the meeting  
Sarvajani University Office

  
**Sign**

- The approved curriculum is with effect from the Academic year 2021-22 and to be reviewed before 2024 - '25

## PRELUDE

The Sarvajanik Education Society has a presence for more than 112 years in South Gujarat region. With the formation of Sarvajanik University under the aegis of Sarvajanik Education Society, a greater impact on the educational scenario is expected.

Sarvajanik College of Engineering and Technology along with Faculty of Architecture was instituted in 1995 and was the first self-financed educational institute in the state of Gujarat. Since then, Faculty of Architecture has earned a place at both, national and international level, as one of the premier institutions imparting holistic education for aspiring architects. 22 batches have already graduated from FoA- SCET. The alumni have made remarkable contributions at national and international level both in practice as well as academics. A high percentage of graduates opting for post graduate education is a marker of success for the institute and points to igniting a passion for continued learning.

At the onset when the institute with the new name, Faculty of Architecture, Institute of Design Planning & Technology (IDPT), SCET will have full freedom to formulate and execute its progressive and liberal syllabus, it becomes even more pertinent to plan for syllabus content that is both meaningful and relevant for the post graduate programme in Urban Design. A rich blend of experience and expertise among a strong faculty strength, IDPT is all set to start its voyage for the new era by becoming a constituent of the Sarvajanik University.

The M. Arch. (Urban Design) program intends to engage in multi-disciplinary approach and become more effective in forming the vision for a holistic development. The program focuses especially on the Indian scenario and the transformation that Indian urban areas are undergoing. Urban Design is the Emerging Design field in Indian Context with direct application to projects like New Town / Area Development, Water front developments, Open & Public space development, Urban Renewal projects, Various projects in Smart City development, Urban Conservation, urban mobility and a wide range of public projects.

The Urban Design course will address two major issues of relevance and adaptability in its course structure to ensure effectiveness and absorption of graduates into decision making positions in practice and academics. The graduates will be trained to contribute to the development in India at the same time envisaging to address key global issues such as climate change, environmental sustainability, social cities, digital design and its application that are the need of the hour and have a wide spread application. The course also wants to become the epicentre for documentation and



research on Urban Design to generate and augment vital data, especially of the rich Indian urban history and cities of India and the learning from the same is intended to be applied to real life situations and further research.

Guidelines given by Council of Architecture and AICTE have been followed to form the broader framework of the syllabus. The distribution of courses ensures progressive development of student potential. Humanities, Liberal studies and life skills, a plethora of professional and open electives promote trans-disciplinary learning.

An Integrated approach synonymous with trans-disciplinary understanding is crucial to encourage critical thinking, to build linkages between diverse academic inputs and practices. Students will utilize varied and contradictory perspectives to understand current problems and positions contextually and seek Integrated solutions to build a happy society, intrinsic to the stated Vision. Various professional ability and skill enhancement subjects are ensured to build a balanced syllabus.

Innovation is valued as a catalyst to growth. Through innovative approaches to pedagogy, the transaction of curriculum will be based on the principle of joyful learning thereby achieving better learning outcomes. The aim of the program is to develop metacognitive skills, manage learning strategies and direct the learning processes towards meaningful design solutions.



**VISION:**

To strive towards creating responsive Built Environment and self-sustainable communities through 'Design Education' for creating a progressive and happy society

**MISSION:**

To excel with passion in Teaching-Learning, Research and Consultancy for shaping of innovative and ethical design professionals competent to negotiate and mitigate social complexities, environmental challenges and global concerns

**GRADUATE ATTRIBUTES:**

1. Socially responsible and environmentally conscientious.
2. Individuals with critical thinking ability and a passion to innovate.
3. To assume a decision making role in the work sphere and be the agent of change.
4. Adaptable individuals with ability to update and relearn in a fast changing world.
5. Able to identify and ameliorate social and humanistic concerns through design solutions.

**CORE VALUES:**

Institution Level	Individual Level
Equality	Passion to Excel
Affordable Education	Adaptability
Learner Centric Approach	Compassion for All
Nurturing creativity & Sensitivity	Integrity
Holistic Development	Team Work
Freedom & Discovery	Social Responsiveness
Interdisciplinary Collaboration	Accountability
Sustainability	

**PROGRAMME OUTCOME:**

1. To equip and educate architects for design of urban places and urban areas in complex Indian situations.
2. To inculcate critical thinking with innovative solution as outcome for urban issues.
3. To equip students with up-to-date skills in Urban Design projects including digital systems, GIS, information analysis and synthesis.
4. To instil sensitive approach towards environment and ecology while planning for large scale development.
5. To prepare students to deal with development statistics and issues including viability, feasibility and implementation mechanisms.



## GROUP OF SUBJECTS

### A) Urban Design Studio

Studios are the mainstay of the learning at the Urban Design Program and is the synthesis of all the knowledge gained in the subjects related to urban design ideas, planning theories and policy and finance mechanisms. The Foundation semester focuses on understanding urbanism along with analysis and design of urban spaces, while the second semester is a master plan studio focusing on issues of inclusivity and sustainability. The third semester is about urban transformation and the complexity associated with intervention into complex urban situations and the Thesis is a culmination of all the learning.

### B) Urban Theories

These set of subjects provide students with the knowledge and technical skills needed to generate, evaluate, and implement urban scale plans as well as provide insight into physical, economic and environmental changes in cities.

### C) Humanities and Social Sciences

Humanities & Social Science course is the umbrella for several disciplines engaged in studies of Urbanism, including sociology, economics, urban history, planning theories, urban anthropology and research related subjects.

### D) Professional Ability Enhancement

The identified courses for professional ability enhancement are important to make the students skilful in various representation and communication as well as technological advancements such as GIS, Research Writing and Professional Practice. A 6 week professional training is to be done by the student at the end of 04<sup>th</sup> semester.

### E) Professional Electives

Urban Designers work with many other disciplines in practice and these Professional Electives prepare students to work effectively in industry. Elective subjects are offered in a manner that students can have a custom roadmap to pursue their areas of interest. The professional elective component will have electives related to enhancement of knowledge that is required for planning discipline along with topics related to climate change, sustainability, urban design and heritage conservation.

### F) Transdisciplinary Open Electives

These subjects will be offered to widen the horizon of students understanding from allied fields of Law, Management, economics, environment and arts so as to have a holistic development.



Credit Distribution:

Total Credits: 106

Group of Courses		%
A)	Urban Design Studios	52
B)	Urban Theories	18
C)	Humanities & Social Science	8
D)	Professional Ability Enhancement	18
E)	Professional Electives	6
F)	Transdisciplinary Open Electives	4



**EXAMINATION SCHEME**  
**M. ARCH I (SEM I)**

Sr. No	Course Code	Course Name	Credits	Teaching Scheme			Examination Scheme			
				L (Hrs)	S/W/T (Hrs)	Total	CIE	University Exam		Grand Total
								SE	TEE	
1	2	3	4	5	6	7	8	9	10	
1	MRUD13101	Urban Foundation Studio	10	-	10	10	500	200	150/300	500/1000
2	MRUD12102	Urban Planning Process	3	3	-	3	150	60	45/90	150/300
3	MRUD12103	Infrastructure Planning	3	3	-	3	150	60	45/90	150/300
4	MRUD12104	Housing Planning & Management	2	2	-	2	100	40	30/60	100/200
5	MRUD11105	Urban Ecology	2	2	-	2	100	40	30/60	100/200
6	MRUD10106	Urban History & Theory	2	2	-	2	100	40	30/60	100/200
7	MRUD16107	Urban Cartography & GIS	4	2	2	4	200	80	60/120	200/400
		<b>Total</b>	<b>26</b>	<b>14</b>	<b>12</b>	<b>26</b>				<b>2600</b>

**M. ARCH I (SEM II)**

Sr. No	Course Code	Course Name	Credits	Teaching Scheme			Examination Scheme			
				L (Hrs)	S/W/T (Hrs)	Total	CIE	University Exam		Grand Total
								SE	TEE	
1	2	3	4	5	6	7	8	9		
1	MRUD13201	Inclusive & Sustainable Urban Design	12	-	12	12	600	240	180/360	600/1200
2	MRUD12202	Transport Planning & Urban Mobility	4	2	2	2	200	80	60/120	200/400
3	MRUD12203	Planning Legislation & Urban Governance	2	2	-	2	100	40	30/60	100/200
4	MRUD16204	Urban Landscape	2	2	-	2	100	40	30/60	100/200
5	MRUD10205	Urban Sociology	2	2	-	2	100	40	30/60	100/200
6	MRUD10206	Urban Economics	2	2	-	2	100	40	30/60	100/200
7	MRUD14207	Professional Elective- 1	2	2	-	2	100	40	30/60	100/200
		<b>Total</b>	<b>26</b>	<b>12</b>	<b>14</b>	<b>26</b>				<b>2600</b>



**M. ARCH II (SEM III)**

Sr. No	Course Code	Course Name	Credits	Teaching Scheme			Examination Scheme			
				L (Hrs)	S/W/T (Hrs)	Total	CIE	University Exam		Grand Total
								SE	TEE	
1	2	3	4	5	6	7	8	9	10	
1	MRUD13301	Urban Transformation	14	-	14	14	700	280	210/420	700/1400
2	MRUD12302	Project Planning & Appraisal	2	2	-	2	100	40	30/60	100/200
3	MRUD16303	Urban Conservation	2	2	-	2	100	40	30/60	100/200
4	MRUD16304	Applied Research and Technical Writing	2	2	-	2	100	40	30/60	100/200
5	MRUD10305	Space Culture & Urban Design	2	2	-	2	100	40	30/60	100/200
6	MRUD14306	Professional Elective-2	2	2	-	2	100	40	30/60	100/200
7	MRUD18307	Transdisciplinary Open Elective - 1	2	2	-	2	100	40	30/60	100/200
		<b>Total</b>	<b>26</b>	<b>12</b>	<b>14</b>	<b>26</b>				<b>2600</b>

**M. ARCH II (SEM IV)**

Sr. No	Course Code	Course Name	Credits	Teaching Scheme			Examination Scheme			
				L (Hrs)	S/W/T (Hrs)	Total	CIE	University Exam		Grand Total
								SE	TEE	
1	2	3	4	5	6	7	8	9	10	
1	MRUD13401	Thesis	16	-	16	16	800	320	240/480	800/1600
2	MRUD16402	Urban Design Practice	2	2	-	2	100	40	30/60	100/200
3	MRUD14403	Professional Elective- 3	2	2	-	2	100	40	30/60	100/200
4	MRUD18404	Transdisciplinary Open Elective - 2	2	2	-	2	100	40	30/60	100/200
5	MRUD16405	Professional Training	6	-	-	-	--	--	300/600	300/600
		<b>Total</b>	<b>28</b>	<b>6</b>	<b>16</b>	<b>22</b>				<b>2800</b>



General Notes:

L= Lecture, S= Studio, W= Workshop T= Tutorial

1. Minimum passing marks are **50% for Column no. 9 & 10**
2. It is compulsory to appear in the **Term End Examination (TEE)** to earn the respective credit for the course.
3. **Minimum 16 Credits** to be earned per semester to qualify for next semester.
4. If a student is not able to earn credits, the same will have to attempted through **remedial examination** or in the next semester with special classes allotted during **summer term**, this will have to be done in guidance of the mentor appointed by the institution.
5. Students are supposed to **select any one subject** from the list of Electives of each group (Professional & Transdisciplinary Open), these Electives will be offered based on the availability of expert and required no. of students.
6. **Related Study Programme (RSP)**- Study Tours / Independent Study Programme (Online Courses/ Workshops/Design Competition, etc.) will have to be done by the students in semester/year break as per the academic calendar, this is a pre-requisites for registration in next semester. Necessary prior approval will have to be taken from the course validation committee for the same.
7. **Professional Training** at the end of the 4<sup>th</sup> semester is mandatory for award of the degree.



# SYLLABUS

SARVAJANIK UNIVERSITY							
INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD13101	Course Name	Urban Foundation Studio				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
10	-	10	10	500	200	150/300	500/1000

Note: Continuous Internal Evaluation (CIE) shall be divided into A. 20% -Attendance B. 80% -Periodic Evaluation

### Emphasis

"Urban Foundation Studio" introduces critical concepts, strategies, and technical skills associated with current thinking about urban planning, and conjecture on the planner's spectrum of role in analysing and shaping urban environments. More generally, the studio aims to develop the necessary literacy to critically engage in bridging the practice of urban development—to understand and interrogate questions related to urban environments, and to produce compelling formal responses. Increased economic, social, and environmental complexities further complicate urban development circumstances, making them more challenging, the studio will expose students to this range of conditions and propel them to think systematically about how to intervene in these varied emergent urban formations.

Prior to that the students will be equipped in mapping and reading the various layers of the city and to correlate them in understanding the complex systems of the city and the dynamics associated with it, this will form a major part of the studio with documentation, analysis and inference of a selected settlement / area / city.

### Course Outcome

At the end of the studio the student will be able to:

- Understand the urban complexity and will be able to read the urban area including the meaning of various terminologies associated with urban development.
- Represent urban understanding in various layers and learn to make drawings for the same.
- Understand urban governance and functioning of the urban systems.
- Identify urban projects and develop programmes for the same.
- Design public open spaces.

### Content

Study, analysis and representation

- City structure, Land use plan,
- Road network and hierarchy,
- Major Open Spaces,
- Neighbourhoods, Types of Streets,
- Typologies, Urban space, and human activity patterns,
- Water supply and drainage systems, elements of landscape,
- Urban aesthetics, Landmarks, Activity generators/nodes.

Design

- Urban Structure and intervention

CIE- Continuous Internal Evaluation, SE-Summative Evaluation(Jury/Viva/Theory Exam), UE- University Exams(Jury/Viva/Theory Exam), TEE-Term End Examination



- Elements, Urban Space, and the built form
- Analysis, guidelines and a demonstration of concerns.

**References:**

1. Lynch Kevin, 1960, Image of the City
2. Christopher Alexander, 1987, A New Theory of Urban Design, Oxford University Press, London
3. Rob Krier, 1991, Urban Space, Academy Editions, London
4. Prabhakar Begde, 1978, Ancient & Medieval Town Planning in India, Carolina Academic Press., Delhi
5. Spiro Kostof, 1991, City Shaped: Urban Patterns And Meanings Through History, Thames and Hudso, London
6. Spiro Kostof, 1992, City Assemble: The Elements Of Urban Form Through History, Thames and Hudso, London
7. Colin Rowe & Fred Koetter, 1984, Collage City, The MIT Press; Reprint edition
8. Lewis Mumford, 1966, City In History: Its Origin, Its Transformation And Its Prospects, Secker and Warburg, London
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10. Geoffrey Broadbent, 1995, Emerging Concepts in Urban Design, Taylor & Francis



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD12102	Course Name	Urban Planning Process				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
3	3	-	3	150	60	45/90	150/300

**Emphasis**

The course aims to introduce concepts of urban planning techniques and quantitative methods of analysis at an introductory level. The emphasis is on enhancing the knowledge of planning techniques in the field of demographic analysis, data collection and analysis processes and statistical analytic techniques.

**Course Outcome**

At the end of the course the student will be able to:

- Gain an In depth knowledge about planning techniques and assessment methods
- Learn different survey techniques and map preparation
- Understand analytical methods used in planning
- Learn different methods of population forecasts and projections
- Know spatial standards, URDPFI guidelines, zoning regulations and development control rules and regulations.

**Content**

- **Module I** - Introduction: Types of Plans: master plan, development plan, structure plan, district plan, action area plan. Hierarchy of plans: Regional plan, sub-regional plan, sectoral plans and spatial plans.
- **Module II** - Base map Preparation: Contents of base maps at various scales, notations – basic disciplines of maps: measurement of areas etc. Data requirement for urban and regional planning: sources of primary and secondary data, questionnaire design, measurement scale and their application, sampling techniques types of socio – economic surveys interviews, mailed questionnaires and observer participation.
- **Module III** - Planning Surveys: Techniques of conducting surveys for land use, building use, density, structural condition of buildings, height of building, land utilization, physical features of land and information required for preparing various types of plans. Data requirement for various types of plans Tabulation of data, graphical presentation of data, techniques of graphical presentation of spatial data.
- **Module IV** - Data Collection, Analysis and Interpretation: Primary and Secondary sources of data, Survey design, Sampling; sample designs, size, types Observational methods;



Triangulation, Types of observation, controlled observation. Mail questionnaire, personal and telephone interview; Sources of various data in India Census – A brief introduction and nature of organization- Tabulation, Classification, Graphical methods- Coding and its construction.

- **Module V** - Demographic Analysis: Population Projection - Simplex population forecasting models – The Linear model, Exponential curves. Modified exponential, Gompertz growth curve, comparative method, ratio method. Composite population forecasting models - The cohort-survival model, Migration model, Multipliers, analysis of labour force; sectoral shifts and employment.
- **Module VI** - Economic Analysis: Comparative analysis techniques - Specialization, Concentration and Independence association Gini coefficients and Lorenz curves, Spatial distribution analysis using centrography techniques, Rent and Gradient models, Location equilibrium of the firm - transport and labour orientation., Market and supply area analysis and thresholds, Pure gravity model, Reilly's law and mapping of trade areas - constrained and unconstrained gravity model - methods for parameter estimation.
- **Module VII** Planning Standards: Spatial standards, performance standards and benchmarks, and variable standards. UDPFI guidelines, zoning regulations and development controls.

**References:**

1. Donald A. Kruekeberg and Arthur L. Silvers. Urban Planning Analysis: Methods and Models. John Wiley & Sons Inc.
2. Hammond, R. and McCullagh, 1974. P.S.: Quantitative Techniques in Geography: An Introduction. Oxford University Press, London.
3. Ian Braken. Urban Planning Methods. Routledge
4. Levin, J., 1973. Elementary Statistics in Social Research. Harper and Row, New York.
5. Lewis B. Keeble. Principles and Practice of Town and Country Planning. Estates Gazette Ltd.
6. Margaret Robert. An introduction to Town planning Techniques. Hutchinson Educational, Hutchinson



SARVAJANIK UNIVERSITY							
INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD12103	Course Name	Infrastructure Planning				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
3	3	-	3	150	60	45/90	150/300

### Emphasis

Urban infrastructure refers to engineered systems (water, energy, transport, sanitation, information) that make up a city. What marks the development of the modern infrastructure since the nineteenth century is its close association with technological development, industrialization, and the dramatic growth of city populations. The course emphasises on introducing essential infrastructure systems-networks, and various aspects of infrastructure planning and management in the context of concurrent urbanization scenario and on understanding the need for integration of infrastructure in the overall process of planning and design at various scales. The course further focuses on understanding various challenges as well as approaches involved in designing sustainable infrastructure that is high performing, cost-effective, resource-efficient, disaster resilient, context responsive and environment-friendly.

### Course Outcome

After completion of this course, students will be able to:

- Understand essential urban services and classification of infrastructure
- Understand significance and role of infrastructure planning in development
- Understand various infrastructure network-systems as layers of built environment and their interrelationship
- Learn about components of each infrastructure system and their interrelationship
- Learn about various aspects related to planning, design, management and financing of infrastructure facilities
- Recognize the need for integrated, inclusive and sustainable approach for infrastructure planning and management
- Integrate the knowledge gained through this course in studio projects

### Content

The course attempts to provide a comprehensive understanding of essential urban services and its relevant infrastructure in the context of smart and sustainable cities i.e. water supply systems, sewerage systems, storm water management, solid waste management, electricity supply, fire safety provision, communication network, mobility networks, public transportation planning, etc. Referring to the challenging demand for sustainable urban development, the course further introduces concepts of "Blue" and "Green" infrastructure and highlights the need for integrated approach of urban planning and design.

The topics further covered in the subject are resource consumption for infrastructure planning, its execution and management, finance, policy guidelines and study of best practices.

### URBAN INFRASTRUCTURE PLANNING:

Understanding "Infrastructure", its types, (physical, social, utilities and services) basic definitions,



concepts, significance, impact on urban form, role of Infrastructure in development, elements of Infrastructure, data required for provision and planning of urban networks and services, concepts and theories for design and operation, components, interrelationship, resource analysis, provision of infrastructure, and land requirements; principles of resource distribution in space; types, hierarchical distribution of facilities, access to facilities, provision and location criteria, Norms and standards, etc

#### 1. PHYSICAL INFRASTRUCTURE

A) Urban Services: Planning and management of urban services i.e. water supply, sewerage, storm, solid waste management, electricity, fire safety, communication, etc., components of each system, and its integration. Study of best practices to overcome the issues and challenges of infrastructure planning and management in the context of Indian Scenario

B) Transport Infrastructure: Significance of transportation in urban planning and design, Relationship of Transportation and urban form, Different types of transportation systems and its relevant infrastructure, elements of transport infrastructure, components of each system, and its integration. Study of best practices to overcome the issues and challenges of infrastructure planning and management in the context of Indian Scenario

#### 2. SOCIAL INFRASTRUCTURE

Understanding need of social infrastructure such as health, education, socio-cultural, etc and its integration in land use plan.

#### 3. INFRASTRUCTURE MANAGEMENT & FINANCE

Infrastructure development models, role of public and private sector, public-private partnership, requirements of appropriate technology, cost recovery, gap analysis.

4. SUSTAINABLE INFRASTRUCTURE: Concepts of "Blue" and "Green" Infrastructure and integrated approach of infrastructure planning and design, study of Best Practices

#### References:

1. Hideo Nakamura, Kotaro Nagasawa, Kazuaki Hiraishi, Atsushi Hasegawa, KE Seetha Ram, Chul Ju Kim, and Kai Xu, 2019. Principles of Infrastructure: Case Studies and Best Practices. Asian Development Bank Institute and Mitsubishi Research Institute, Inc. Japan
2. G.Ramesh, Nagadevra V., Naik G., Suraj A, 2010. Urban Infrastructure and Governance. Routledge Taylor and Francis Group, New Delhi, India
3. TCPO and Ministry of Works and Housing, "Norms and Standards for Urban Water Supply and Sewerage Services", New Delhi.
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6. S.P.Verma.1999. Infrastructure in India Development: Power, Transport and communication, Kanisha Publishers Distributors, New Delhi
7. Mohammad Karamouzetal 2010. Urban Water engineering and Management Taylor and Francis Group, USA
8. A. K. Jain; "Planning Designing and Engineering of Sustainable Urban Transport Systems", Khanna Publishers, New Delhi
9. Solid Waste Management Practices in Urban India: A Compendium. 2019. National Institute of Urban Affairs, Delhi.
10. Urban Transportation in Indian Cities: Compendium of Good practices,2015. PEARL, National Institute of Urban Affairs, Delhi.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture		Programme	M.Arch. (Urban Design)			
Year	I		Version	1.0			
Semester	I		Effective From	June 2021			
Course Code	MRUD12104	Course Name	Housing Planning & Management				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### Emphasis

The objective of the course is to inform the students to have broad understanding of evaluation, planning, design, development and financing of housing projects. The course focuses on various facets of habitat development viz. elements of housing policy and finance, infrastructure and technology, design and project formulation, real estate and housing markets, disaster mitigation and management and legislation.

### Course Outcome

At the end of the course the students will be able to:

- Understand the current situation of condition of housing in India.
- Understand public policy and private markets and their impact on housing, economic development, the local economy, and neighbourhood institutions.
- Become aware of the role of different government agencies and their approach to the improvement of the housing conditions in India.
- To review and critique specific programs, policies and strategies.
- Provide an overview of techniques for framing public and private interventions to meet housing and community development agendas, broadly define, inner city and low income neighbourhoods.
- Give students an opportunity to reflect on their personal sense of the "housing, community, and economic development" process and the various roles that planners play in implementing the elements of that agenda.

### Content

#### Module 1 - INTRODUCTION TO HOUSING

Definition of Basic Terms – House, Shelter, Household, Housing typologies, Objectives and Strategies of National Housing Policies including Rural and Slum Housing Policy, Principles of Housing planning, density and density norms, All basic infrastructure considerations, Introduction to all Institutions for Housing at National, State and Local levels.

#### Module II - HOUSING AND DEVELOPMENT:

Importance and Reflections of Housing on Social, Cultural and Economic Development, Role of Government and Public Agencies in Housing Development, National Housing Policy in India, Comparison of Housing Policies and Programmes of Developed and Developing Countries.



**Module III - HOUSING SCENARIO IN INDIA:**

Housing Stock and its sufficiency in urban & rural settlements, Housing quality and its determinants, Housing supply and demand assessments, external and internal factors of influence on housing development, Five year plans of GOI, Nature and Type of housing development Programmes - Sites and Services, LIG, MIG, HIG Schemes, Rural Housing Schemes - Slum Housing Programmes - Cooperative and Private Sector Housing.

**Module IV - PLANNING AND DESIGN OF HOUSING PROJECTS**

Formulation of Housing Projects – Land suitability analysis, Building Byelaws and Rules and Development Control Regulations, Site Analysis, Layout Design, Design of Housing Units (Design Problems), Housing Project Formulation.

**Module V - CONSTRUCTION TECHNIQUES AND COST-EFFECTIVE MATERIALS**

Innovative Construction Techniques, Cost effective modern materials and methods of construction, Green building concept, Performance Evaluation.

**Module VI - HOUSING FINANCE AND PROJECT APPRAISAL**

Evaluation of Housing Projects for sustainable principles – Housing finance, Cost recovery, cash flow analysis, Subsidy and cross subsidy, Public private partnership projects, Viability gap funding, Pricing of housing units.

**References:**

1. Burton G.L., and Cherry G.E., Social Research Techniques for Planners, George Allen and Unwin, London
2. De, Prasanta, 1988, Review of Literature on Housing Programme for the Urban Poor in India, & De, Prasanta, Reader on Housing, CEPT, Ahmedabad
3. Davis, S. "The House Versus Housing", The Form of Housing, NY: VN/Reinhold, 1977.
4. Diamond, AJ. "Residential Density", in JAE, Vol. 19, No. 3.
5. Francis Cherunilam and Odeyar D Heggade, Housing in India, Himalaya Publishing House, Bombay, 1997.
6. Frampton, K. "The Evolution of Housing Concepts 1870-1970", Lotus, No.10, Nov. 1975.
7. Government of India, National Housing Policy, GOI, New Delhi
8. Government of India, Housing Condition and Situation, handbook of Housing Statistics, 1980
9. Graham Towers, Introduction to Urban Housing Design, Routledge; 2005
10. Goodman, Paul and Percival. Communitas. New York: Vintage Books, 1947 and 1960
11. Meera Mehta and Dinesh Mehta, Metropolitan Housing Markets, Sage Publications Pvt. Ltd., New Delhi, 1999.
12. National Building Organization, Govt. of India, handbook of Housing Statistics, NBO, New Delhi, 1981
13. Rosser, C., 1971, Housing for the lowest income group : the Calcutta experience, Ekistics, No.
14. Ramchandran, P. N., Housing Situation in Greater Bombay, CIDCO report No. 2, Bombay



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD11105	Course Name	Urban Ecology				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### Emphasis

"Urban Ecology" aims to develop an understanding of various ecological phenomena and the impact of human driven development on these systems. The Emphasis of the course is to expose students to various environmental aspects and concerns in the process of urban development and to sensitize them towards various approaches that can lead to design "ecologically sensitive and sustainable urban environment". The focus is on perceiving urban spatiality between natural settings and manmade elements at various scales, analysing the change pattern in landscapes and ecosystems with their causes and consequences and exploring various tools, methods and techniques to efficiently manage and negotiate these transformations. The course also introduces various parameters for assessing environmental impacts of different types and scale of projects and enhances the vision of perceiving the city that is more harmonious with nature.

#### Course Outcome

After completion of this course, the student will be able to:

- Understand significance of "ecology" and "ecosystems" with reference to urban development.
- Understand various layers of urban environment (natural and man-made) and their interrelationships.
- Identify the contextual characteristic of specific area and detect the changes in its various layers over a period of time along with resultant impact on living environment.
- Detect the negative impact and/or risk factors associated with existing and/or proposed development patterns.
- Recognize the importance of ecological planning in order to achieve "sustainable development goals."
- Realize key issues and challenges of ecological urban planning.
- Learn various approaches that can lessen or avoid the detrimental impact of development through study of best practices.

#### Content

Urbanization and its impact on environment, Understanding "Urban Ecology": definitions and concepts, Interrelationship of urban ecology and urban development, Layers of urban environment and their interaction, Urban ecosystem Analysis: identifying tools and methods, concept of "Landscape Ecology" and its application, Managing cities as urban ecosystems: fundamentals, Defining an ecosystem approach to urban management and policy development, application of ecological principles in urban planning and design: case studies, Environmental impact assessment: basics.



#### References

1. Douglas Ian, 2015. Urban Ecology: An Introduction, Routledge.
2. Forman, Richard, 2014. Urban Ecology: Science of Cities. Cambridge University Press.
3. Jari Niemelä, Jürgen H. Breuste, Thomas Elmqvist, Glenn Guntenspergen, Philip James, and Nancy E. McIntyre, 2011. Urban Ecology: Patterns, Processes, and Applications. Oxford University Press.
4. Richter Matthias, 2011. Applied Urban Ecology: A Global Framework. Wiley-Blackwell.
5. Etingoff, Kimberly, 2016. Urban Ecology: Strategies for green infrastructure and land use. Apple Academic Press, Inc. U.S.
6. Jongman, Rob & Pungetti, Gloria, 2004. Ecological Networks and Greenways: Concept, Design, Implementation. Cambridge University Press, UK.
7. Forman, Richard, 1995. Land Mosaics: The Ecology of Landscapes and Regions. Cambridge University Press.
8. Forman, Richard, 2008. Urban Regions: Ecology and Planning Beyond the City. Cambridge University Press.
9. Williams, Michael, 1990. Wetlands: A threatened Landscape. Blackwell, Oxford UK & Cambridge USA.
10. Lim, CJ & Liu Ed, 2010. Smart cities + eco-warriors. Routledge.
11. Matthias Richter, Ulrike Weiland, Applied Urban Ecology: A Global Framework



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD10106	Course Name	Urban History & Theories				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### Emphasis

Contemporary cities have inherited tangled infrastructure, stratified economies and complex social, political and administrative structures. Understanding and shaping the future of 'the city' requires a nuanced understanding of its past. Why and how cities are made? What forces have shaped cities through time? Seeking a better understanding of the history of urban form and urbanization, we propose to examine the city through driving forces – geographic, political, cultural, technological – that have shaped the city and in turn been influenced by it. This course is designed to introduce students to the history of 'the city' with particular emphasis on how history can inform urban analysis; the course also examines synchronic slices of how new ideas about the city, realized or not, were made manifest across distinct geographies and cultures.

### Course Outcome

After completion of the course students will be able to

- Acquire the ability to situate cities in historical context.
- Explain the cultural, social histories that influence Urban Design
- Relate the historical processes to physical form of human settlements.
- Critically describe how history and theory, practices and technology influence spatial, social and technological aspects of urban design.
- Describe history and theories of urban design and their influence on planning and development of past and contemporary cities and their built environment.

### Content

- Preconditions for Urban growth- Agricultural and Pre Industrial cities
- Early Urban Hearths- spread of urbanism, emergence of town planning, growth of cities like Babylon, Athens, Rome, Mohenjodaro, Chang'an
- Urban Revival in Western Europe-emergence of medieval towns, university towns, pilgrimage and trading towns,
- Growth of Industrial centres and their forms-zoning, residential segregation, residential sorting by class, caste and occupation
- Concept- garden cities, Ebenezer Howard, Abercrombie, Barlow- new Towns in Europe.
- City beautiful and The Picturesque city- Geddes, Mumford, Jane Jacobs, Corbusier's Radiant city
- Emerging concepts – Global city, Inclusive city, Safe city, Future city
- Town planning in ancient, medieval, Renaissance, Industrial and post Industrial India.



**References:**

1. Mumford, Lewis. The City in History: Its origins, its transformations and Its Prospects. Harcourt Brace International
2. Kotkin, Joel, 2006. The City: A Global History. Modern Library
3. Kostof, Spiro, 1993. The City Shaped: Urban Patterns and Meanings through History.
4. Wagenaar, Cor, Happy Cities, Cities and Public Happiness in post war Europe
5. Meller, Helen. 2001 European Cities, 1890–1930s: History, Culture, and the Built Environment
6. David, Nicholas. 2003. Vibrant Europe 1100-1700.
7. Soja, Edward, 1996. Post metropolis. Critical Studies of Cities and regions. Blackwell Publishers.
8. Markman, Ellis, 2001. The Coffee House : A cultural history, New York.
9. Calabi, Donatella, 2004. The Market and the City : Square, Street and Architecture in Early Modern Europe.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	I			Effective From	June 2021		
Course Code	MRUD16107	Course Name	Urban Cartography & GIS				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
4	2	2	4	200	80	60/120	200/400

#### Emphasis

"Cartography" is the science of mapping various layers of particular area. It is a combination of study outcomes, science and techniques which generate informative maps. There could be various mapping like topography, natural features, infrastructure, mobility, etc. Apart from physical mapping, mapping of intangible aspects like social aspects, behavioural patterns, user patterns or even tracing history through mapping historical events could be achieved by cartography. "Cartography" also emphasises on various analytical methods and their representation techniques.

#### Course Outcome

After completion of this course, the student will be able to:

- Understand and Map tangible and intangible aspects of any city or town
- Analyse data through various techniques
- Represent various data through drawings.
- Understand basics of GIS and Q-GIS software and their applicability in analysis and drawing making.
- Prepare technical and analytical drawings using GIS, Illustrator and similar platforms.

#### Content

Study: Mapping Tools and Techniques, Urban Scale Drawings

- Understanding importance of cartography through theoretical understanding followed by exposure to various maps.
- Learning methods and techniques of Cartography.
- Learning Cartographical mapping like topography, rural/urban layers, infrastructure, natural features, etc.
- Learning various analytical techniques.
- Learning spatial information generation through GIS mapping and its extraction.

Learning Tools: GIS, Illustrator and similar platforms

- Understanding interface of GIS and Q-GIS software.
- Learning Q-GIS tools.
- Various plug-ins related to Q-GIS.
- Introduction of Adobe illustrator and similar software to represent Q-GIS data.

#### References:

1. J.B. Harley, 2001 (1st ed. 1988). "Maps, Knowledge and Power", in The New Nature of Maps: Essays in the History of Cartography. The Johns Hopkins University press, Baltimore and London,
2. Dorling Kindersley Ltd, 2016. Great City Maps: A historical journey through maps, plans,



- and paintings, DK.
3. Dorling Kindersley Ltd, 2014. Great Maps: The World's Masterpieces Explored and Explained, DK.
  4. Julie Nichols, 2013. Maps and Meaning: Urban Cartography and Urban Design. Academica Press.
  5. Laura Vaughan, 2018. Mapping Society: The Spatial Dimensions of Social Cartography. UCL Press.
  6. Nigel Peake, 2013. In the City: Drawings by Nigel Peake, Princeton Architectural Press.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD13201	Course Name		Inclusive & Sustainable Urban Design			
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
12	-	12	12	600	240	180/360	600/1200

### Emphasis

It has been recognized that urban design has a vital role to play in fostering sustainable cities as urban spatial structure and urban form have considerable influence on the social, economic and environmental processes in the urban area. The studio seeks to develop an integrated framework, in the local context for promoting sustainable urban design. The studio will discuss the role of urban design in promoting inclusive and sustainable cities and examine the sustainable development principles that should guide urban design. It intends to address that sustainable urban design could only be achieved if the procedural, substantive, institutional, policy and methodological aspects of urban design are interlinked and guided by sustainability principles. The studio will focus mainly on two aspects of Inclusivity and Sustainability and will focus specifically on the social aspects. Sustainability will be looked upon as a holistic entity including environmental, economic and socio-cultural aspects. Students will be encouraged to envisage new developments with inclusive and holistic visions.

### Course Outcome

At the end of the studio the students will be able to:

- Design Masterplans for greenfield / brown field development keeping in consideration the ecological aspects and connectivity.
- Understand the impact of large scale development on environment and ways of minimizing this impact.
- Develop understanding for generating urban form.
- Develop sensitivity towards issues of inclusivity related to age groups, gender, biodiversity, economic groups and all the under-represented groups in large scale development.

### Content

- To understand and evaluate the potential and the environmental condition of the site in the context of the regional setting and with respect to new development.
- To understand the process of Green Field Development and to develop and draw references from the existing built morphology/typology for the new extensions in today's context.
- Socio-Economic concerns in coming up with an inclusive and sustainable development .
- To develop a complete design proposal for the area including principles of site planning, natural features and environment, density pattern and lessons from tradition.
- Understanding Urban Form Determinants

It is recommended that the Studio can focus on the following two themes:

CIE- Continuous Internal Evaluation, SE-Summative Evaluation(Jury/Viva/Theory Exam), UE- University Exams(Jury/Viva/Theory Exam), TEE-Term End Examination



(A) URBAN MOBILITY

- Urban Mobility and Sustainable cities
- Integration of Public Spaces and Mobility Network
- Transit Oriented Development
- Mega Mobility plans and Urban Design (Metro/ BRTS/ High Mobility Corridors/etc.)

(B) URBAN ECOLOGY

- Sustainable Cities
- Sustainable Development and Social Inclusiveness
- Urban Resilience
- Water Sensitive Urban Design

References:

1. Blair Badcock, 2002, Making Sense of Cities: A geographical Survey, 1st Edition, Routledge
2. Brian Richards, 1966, New Movement in Cities, Little Hampton Book Service Ltd.
3. 2008, New Urbanism and Beyond: Designing Cities for the Future, Rizzoli
4. Wheeler, Stephen, 1998, "Planning Sustainable and Liveable Cities", 3rd Edition, Routledge
5. Jane Jacobs, 1992, The Death and Life of Great American Cities, Reissue edition, Vintage
6. Le Corbusier, 1987, The City of Tomorrow and Its Planning, Reissue edition, Dover Publications
7. Peter Katz, 1993, The New Urbanism: Towards and Architecture of Community, 1st Edition, McGraw Hill Education
8. Thakur Vijaykumar, 1981, Urbanization in Ancient India, Abhinav publication, New Delhi
9. Paul D. Spreiregen, 1965, Urban Design: The Architecture of towns and cities, McGraw Hill, New York.
10. Mohsen Mostafavi (Editor) Gareth Doherty (Editor), 2006, Ecological Urbanism, Lars Müller; 4th Revised edition.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD12202	Course Name	Transport Planning & Urban Mobility				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
4	2	2	4	200	80	60/120	200/400

**Emphasis**

The emphasis of the course is to develop a comprehensive understanding about the significant role of transport planning in overall development process along with urban design aspects in mobility planning. The course introduces the integral relationship between land-use and transportation, basic principles, tools, techniques and analysis required for transportation planning, various factors affecting transportation planning decisions and impact of these transport decisions at various scales. The course further focuses on understanding various challenges-issues related to urban mobility and various approaches to address these issues with specific focus on urban design aspects, sustainability and accessibility. The intention here is also to recognize the significance of mobility infrastructure i.e. roads, streets, squares, road junctions and pedestrian facilities etc. as prime components of urban realm and to explore the possibilities of creating walkable, resource efficient and sustainable cities through integration of transportation planning with overall urban development at each scale.

**Course Outcome**

After completion of this course, students will be able to:

- Understand significance and role of transportation planning in development.
- Characterize, describe and analyse various dimensions of transportation planning.
- Understand various transport network-systems, their components, interrelationship and design parameters.
- Understand multi-modal character of urban transport including public and private transport.
- Understand the role of urban design aspects of concerns in transportation planning.
- Recognize the significance of urban roads, streets and junctions as major components public realm and their design opportunities.
- Recognize the need for integrated, inclusive and sustainable approach for transportation planning.
- Integrate the knowledge gained through this course in studio projects.

**Content**

- Basics of Transport and Transportation Planning: Role of transport in urban development, Transport and economic growth, A "System" perspective on transportation, Transportation in system hierarchy, Subsystems of transportation, Transportation system purpose: Concept of mobility and accessibility, Transportation system components, Transportation system Boundary, Performance, Capacity, Control and Impacts, Transportation System Challenges.
- Land use and transportation planning interrelationship, Transport and Urban Form, Land use-transport integration models, Need of Land Use-Transport Models, Early land use-transport models, Concept of Accessibility, Hansen's Accessibility Model, Lowry and his derivative model,



Selection of land use-transport models.

- Concept of mobility and accessibility: Urban Mobility and its evolution, A taxonomy of urban mobilities (Types of movements), Planning for urban mobility: Four Stage Planning Process: Trip generation, Trip distribution, Modal choice and Route assignment, Mobility planning, Comprehensive mobility plan, Urban mobility indicators.
- Traffic engineering: Definition, Concepts, Scope and utility of transportation engineering, Traffic growth, Major traffic studies, Traffic problems, Traffic and transportation surveys and studies, Traffic and travel characteristics.
- Mass transportation planning: Basic systems of urban transportation, Public and Private modes of travel, Motorised and Non-Motorised transport, Para transit system, Mass transit system: Problems and prospects planning of mass transit: city bus transportation, BRTS, metro transport system, tramways, trolley buses, LRTS and MRTS operation characteristics. Urban Mobility: Issues and Concepts: Feeder Services for Public Transport- Integration of Informal and Mass Transportation Challenges and issues in urban transportation planning in India, Examples of best practices, Sustainable Urban Transport: Case Studies, National Urban Transport Policy
- Mobility infrastructure: Basic principles of Transport infrastructure design; Classification of roads – road layout and design, Hierarchy, capacity and geometric design elements of roads and intersections.
- Design elements: Intersection Design, Signal design, Road Markings, Signages. Parking space design, urban road cross section elements and Inter-sections, IRC Standards.
- Pedestrianisation and non-motorised transportation- Issues, policies and case studies, Towards more inclusive cities.
- Design for mobility: Design of transit streets, Design of parking spaces, Design for pedestrians and non – motorised transport, Walkable cities.
- Transit oriented development: Concept, Impact on urban form.

#### References:

1. Kadiali, L.R., 1999. Traffic and Transportation Planning. Khanna Publishers, Delhi.
2. Saxena H.M., 2005. Transport Geography. Rawat Publications, Jaipur
3. Singal B.I., 2018. Public Transport Planning: A viable Multimodal Integrated Citywide Network, Copal Publishing Group, UP
4. Kumar C. Sinha et.al. 2007. Transportation Decision Making: Principles of Project Evaluation and Programming. John Wiley and Sons Inc. New Jersey
5. Rodrigue Jean-Paul, Comtois Claude and Slack Brian, 2006. The Geography of Transport System. Routledge.
6. Jean-Paul Rodrigue, 2020. The Geography of Transport Systems. Routledge, New York.
7. National Association of City Transportation Officials, 2016. Transit Street Design Guide. Island Press, Washington, Covelo, London
8. Institute of Urban Transport (India), Ministry of Urban Development, Government of India, 2012. Code of Practice: Part I-V
9. Bruton, M.J.,1970. "Introduction to Transportation Planning," Hutchinson Publication, London.
10. Dimitriou, T. H., 1990. Transportation Planning for Third World Cities. Routledge



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD12203	Course Name	Planning Legislation & Urban Governance				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### Emphasis

This course introduces students to the legal principles governing the development, governance and management of the urban and regional development in India. An overview of the Indian legal system, including the structure and functioning of law-making institutions.

#### Course Outcome

After completion of this course, students will be able to understand the implication of law relating to urban planning and land development and local governance, with an emphasis on statutory authority, finance, and land use control.

#### Content

##### Module I Introduction to basic concepts of urban legislation and governance:

- Evolution of planning legislation in India - An overview of legal tools connected with urban planning and development, Town and country planning act.
- Economic concept of land, economic principles of land use, economic rent land use pattern and land values, location economics.
- Registration of land and land record procedure, factors influencing land value - assessment and prediction of land value and its prices, economics of Town Planning decisions effects of legislation on land development and urban land economics.
- Institutions and Urban planning, Typology of institutions, their role, powers and significance, formal and informal institutions, their interface, conflicts, classified work, and their effectiveness in planning, Analysing the institutions- Methods, process and evaluation.

##### Module II Urban Legislation and Land regulations

- Introduction to laws, basic concepts - law, legislation, ordinance bill, act, regulations and bye-laws - sources of law, Judiciary, legislature and executive powers and rule of law - its relationship to urban planning, Hierarchical System of governance and planning, Central, State and Urban Local Bodies.
- Legislation related to use and control of land -Land Acquisition Act of 1894-2013 - Interpretation of LAA in recent times, Betterment charges and compensation provisions in various planning laws and judicial precedents, Valuation of real estate - concept of ownership - rights and associated features.
- Legislation controlling use of land parcels like non-agricultural permissions, building permission - use of permissions, etc. Significance of land development control objectives and legal tools. BPMC, GTPUD acts would be covered under this section.
- Zoning law relating to slum clearance, housing, landscape and traffic. Approach for formulating rules and bye-laws Policies, laws, acts pertaining to urban land, ceiling on urban and property, urban land (ceiling and regulations) act, 1976 - differences in the interpretation across the

CIE- Continuous Internal Evaluation, SE-Summative Evaluation(Jury/Viva/Theory Exam), UE- University Exams(Jury/Viva/Theory Exam), TEE-Term End Examination



states and important provision, problems.

#### Module III Housing and Planning regulations and laws

- Housing related legislation – residential cooperative housing societies - other forms like non-trading corporations -Slums related legislation, commonalities and variations across the Indian states, important sections - their implications, Planning law and the poor.
- Legislation on related to property transactions (Transfer of Property Act, Income Tax related, etc.), Detailed understanding of Urban Planning and Development Authorities Acts – Procedures and methodology of preparation and implementation of regional plans.
- Legislation relating to urban conservation and restoration, heritage, architecture - archaeological sites—and remains of National importance.
- Environmental Laws and Urban Planning - National Environmental Policy Act Pollution Control Acts - Air, Water and EP Acts - A critical appraisal – Urban Environment and related regulations – wetlands, CRZ, etc– Sustainable Urban development – Problems and Prospects

#### Module IV Latest Trends in Urban Planning and Legislation

- Characteristics and features of modern urban planning – Impact on urban legislation – detailed account of amendments and modifications - modern urban governance – forms and structures.
- 73rd and 74th Constitutional amendments - environment and the modified role and functions of local bodies, local authorities, district - authorities and state level agencies - The institutional frame and mechanism for urban governance as envisaged in 73rd and 74th CAA -Transfer of Power from Centre to State and State to Local government - role of the existing planning and development agencies in various states.
- Role of various institutions in the process of governance and access to government by various stakeholders. Redefined role of other Stakeholders - NGOs, Private Sector, Scientific Network and international institutions –Role of donor agencies - Advanced Locality Management, Resident Welfare Associations, elite groups, industrial and commerce chambers as pressure groups – their role in governance system.
- Role of People's participation in planning process - inclusion and exclusion in urban governance, E- Governance and Grievances Redressal system

#### References:

1. Environment Protection Act, 1986
2. Real Estate (Regulation and Development) Act, 2016
3. Regional Planning Act Goa and Maharashtra
4. Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
5. The Bombay Provincial Municipal Corporations Act, 1949
6. The Gujarat Housing Board Act, 1961
7. The Gujarat Municipal Finance Board Act, 1979
8. The Gujarat Slum Areas (Improvement, Clearance and Redevelopment) Act, 1976
9. The Gujarat Regularization of Unauthorised Development Act 2001
10. The Gujarat Municipalities Act, 1963
11. The Gujarat Town Planning & Urban Development Act 1976
12. The Gujarat Street Vendors (Protection Of Livelihood And Regulation Of Street Vending) Rules 2016
13. The 73rd and 74th constitutional amendments
14. The Special Economic Zones Act, 2005
15. Township policy Gujarat, Maharashtra and Rajasthan
16. Management in Hills, Concept publication Co., New Delhi.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD16204	Course Name	Urban Landscape				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

**Emphasis**

Urban Landscape intend to sensitise students towards creating 'Liveable cities' wherein landscape plays a major role. This subject covers not only landscape but also the importance of creating opportunities to breathe in a city. This subject also gives exposure of worldwide practices in the field of Urban Landscape and also makes aware the students about the positive impacts of landscape on urban environment.

**Course Outcome**

At the end of the Course the student will be able to:

- Understand urban landscape theories and its application in urban design process.
- Employ the techniques learned during the course in green field and brown field development.
- Synthesise knowledge related to hydrology, hydraulics and geology in design.

**Content**

Study: Theory, Approaches

- Understanding Urban Landscape theories and methodology
- Understanding Landscape at Regional, City, Neighbourhood & Plot level
- Understanding City as Landscape
- Understanding brown field and green field development
- understanding water as landscape feature (Hydrology, Hydraulics, Water Harvesting)
- Understanding Landscape sensitive Urban Design

Assignments/ Seminars/ Discussions

- Determinants of Urban Landscapes.
- Elements of Urban Landscapes - Learning through Case studies.
- Implications of theory into Studio project design/ Research Project.

**References:**

1. Francesco Bandarin and Ron van Oers, The Historic Urban Landscape: Managing Heritage in an Urban Century
2. Edward Relph, The modern urban landscape
3. Robert A. Francis, James D.A. Millington, Michael A. Chadwick, Urban Landscape Ecology: Science, Policy and Practice



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD10205	Course Name	Urban Sociology				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### Emphasis

Urbanization as an enduring social process, is an outcome of human growth and civilization. It is a social phenomenon with its own distinct manifestation and links with different social processes. This course will help students get knowledge about urban sociology. It will link their knowledge of Indian society, with serious issues being faced by urban India today such as socio-economic disparities, collapse of social institutions and its implications on society at large.

The subject equips students with an understanding of the foundational ideas and strategies that are confronted and debated in the practice of urban planning and design and in the interface between society and cities. Urban sociology concerns itself with the social and cultural forms assumed by the urban phenomenon in the past and in the present

#### Course Outcome

At the end of the course students will be able to:

- Explain key theoretical approaches to Urban sociology and Urban development.
- Describe how the experience of living in cities is different for different groups based on social & economic class, gender, caste, kinship, occupation, etc.
- Understand urban life & local issues within an Indian context.
- Gain insight into common problems faced by cities.
- Generate ideas about urban social processes.
- Become acquainted with the processes of urbanization, urban social institutions, urban problems & responses to arrest them.

#### Content

- Origin & development; Key concepts; Approaches in Urban Sociology and Scope
- Urban economic processes-- Invasion, Succession, Concentration, Segregation; Models of Urban growth
- Urban Religions – Rise; Difference between traditional and modern ways of worship; Cults, Economics of Religion
- Patterns of migration in India – Scale of migration; its contribution to Urban India; Major paradigms of rural to urban migration; Connection between migration & Urban Informal sector
- Informal settlements – Definitions; Reasons for informal settlements; Policy response to informal settlement

CIE- Continuous Internal Evaluation, SE-Summative Evaluation(Jury/Viva/Theory Exam), UE- University Exams(Jury/Viva/Theory Exam),

TEE-Term End Examination



- Urban middle class & aspirations – dimensions of emergence of middle class; characteristics & features of middle class; middle class aspiration in post- liberalization era
- Public spaces
- Small town cultures – Socio-economic forces in small towns; Changing aspirations
- Poverty – Socio historical analysis; nature of urban poverty; changing Policy perspective
- Digital Urbanization & smart cities – State of urbanization & urbanism in contemporary India; Need for smart cities; Idea, vision & agencies; Limitations of smart cities; role of technology & e-governance
- Urban issues in India

References:

1. Erikson, E Gordon. Urban Behaviour. Macmillan Company, Delhi
2. Flanagan, William, 2010. Urban Sociology: Images and Structure, Rowman and Littlefield Publishers.
3. Gist, N. P., 1974. Urban Society, Thomas Cromwell Company, New York
4. Palen, John, 2008. The Urban World. Paradigm Publishers, Boulder, CO.
5. Ramachandran, R. 1997. Urbanization and Urban Systems in India, Oxford India Paperbacks,
6. Rao, M. S. A., 1974. Urban Sociology in India: Reader and Source Book, Orient Longman, New Delhi
7. Shivaramakrishnan, K. C., 2005. Oxford Handbook of Urbanization in India. Oxford University Press, New Delhi.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture		Programme	M.Arch. (Urban Design)			
Year	I		Version	1.0			
Semester	II		Effective From	June 2021			
Course Code	MRUD10206	Course Name	Urban Economics				
Teaching Scheme			Examination Scheme				
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### Emphasis

The subject of urban economics introduces space into economic models and studies the location of economic activity. Urban economics typically addresses three sets of questions, and this subject is organized around these three areas.

The first set of issues focuses on the development of urban areas. Why do cities exist and why do some grow more rapidly? How can local governments encourage such growth, and if so, how?

The second set of issues addresses patterns of development within metropolitan areas. Why do certain parts of metropolitan areas grow more rapidly than others? How do small and big scale businesses and households decide where to locate within given metropolitan areas? What determines the price of land, and how do these prices vary across space?

The third set of issues concerns the economics and spatial dimensions of urban problems, especially related to poverty, racial segregation, and suburban sprawl.

### Course Outcome

At the end of the course students will be able to:

- Identify the factors that have driven the growth of cities historically and that drive it today, including agglomeration economies.
- Explain the concept of spatial equilibrium, and how it shapes land price dynamics.
- Analyse and explain the evolution of urban land use patterns and density.
- Analyse the costs and benefits of different kinds of land use regulations.
- Assess the likely effects of different policies to encourage local economic growth.
- Examine the costs of urban sprawl and justify different policies to address it.
- Evolve clear economic arguments advocating for policies to address such challenges as suburban sprawl, urban poverty, and racial segregation.
- Identify challenges facing cities in the future and how cities can manage them.

### Content

Introduction and Principles of urban economics, Agglomeration and Location Theory, Land Market economics, Public policies and market economics, Housing and real estate economics, Urban and Regional Labour Markets, Sprawl and gentrification, Transportation economics, Poverty, underdevelopment and crime, Education, employment and development economics, Socio-economic measures of development.



**References:**

1. Arnott, Richard; McMillen, Daniel P., eds. 2006. A Companion to Urban Economics. Blackwell Publishing.
2. Capello, Roberta; Nijkamp, Peter, eds. 2004. Urban Dynamics and Growth: Advances in Urban Economics. Elsevier Inc.
3. Garreau, Joel. 1992. Edge City: Life on the New Frontier, Anchor.
4. McCann, Philip 2001. Urban and Regional Economics. Oxford University Press.
5. O'Sullivan, Arthur 2003. Urban economics. Boston, Mass: McGraw-Hill/Irwin.
6. Obeng-Odoom, Franklin., 2016. Reconstructing Urban Economics: Towards a Political Economy of the Built Environment, Zed.
7. Quigley, John M. 2008. "Urban economics". The New Palgrave Dictionary of Economics (2nd ed.).
8. Strange, William C. 2008. "Urban agglomeration". The New Palgrave Dictionary of Economics (2nd ed.).
9. Stilwell, Frank. 1993. Understanding Cities & Regions: Spatial Political Economy.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	I			Version	1.0		
Semester	II			Effective From	June 2021		
Course Code	MRUD14207	Course Name	Professional Elective 1				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### 207.1 Resilient Cities

Around the globe, cities seek to improve their resilience to face the stresses and shocks that are expected from global climate change and other threats. In implementing urban resilience policies, they are guided by different urban resilience conceptualisations. What is meant by the concept differs between scholars, governments, as well as international organisations that seek to study, advise on and implement urban resilience policies and governance interventions.

This course will focus on the opportunities and challenges associated with climate adaptation and resilient strategies in urban planning and design. This includes analysing the forecasting and implementation of concrete climate adaptation solutions, ranging from technical solutions, critical city infrastructures, engagement with stakeholders, tools. This elective course is based on robust climate science evidence and will also address the challenges between reducing climate change impact (climate mitigation) and adapting to its effects (climate adaptation) at the city planning and design level. The course will provide an insight on how urban development professionals' climate adapt the city, engage local decision-makers and gain public acceptance. The course also addresses how climate change has become a driver and an opportunity for accelerating sustainable urban development. Finally, the course provides an overview of the multidisciplinary nature of the urban resilient planner.

### 207.2 Geo-Spatial Techniques

Emphasis of this elective is on capturing geographic relationships in basic data structures, this course extends these to 3-D, network and field representations and their respective analysis functions. A focus of this course is the development of geoprocessing workflows. While most techniques have a geographic origin, we will address all geo-spatially relevant methods, including geophysical, landscape ecological, econometric, epidemiological, and regional science approaches. On the practical side, students will be introduced to different software packages about advanced editing, geoprocessing and thematic mapping techniques. Automation of ArcGIS workflows,



using the application ModelBuilder and scripting in the Python programming language, constitute central course elements.

### 207.3 Cities: The Past, Present & Future Of Urban Life

This elective course would provide opportunity to understand the past, present and future of cities, with the aim of teaching students how to better understand, appreciate and improve urban areas. The course will explore key concepts of urban development by examining cities around the world. This elective course will also include a historical exploration of cities: how ancient city states like ancient Rome resulted from consolidation of imperial power, how colonial cities like Sao Paulo grew as important hotbeds of industry, and how industrial cities like Seattle became hubs of technology and human capital. This elective would also highlight prevailing social and urban planning issues like public health, transportation, zoning, gentrification, cost of living, crime, and congestion. The elective would try to explain complex interrelationships of disciplines, including sociology, economics, urban planning, journalism, anthropology, history, art & music, to provide learners with a greater understanding of all aspects of urbanism.

Note: The above electives are suggestive and alternative or additional electives can be offered from time to time by the institute.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD13301	Course Name	Urban Transformation				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
14	-	14	14	700	280	210/420	700/1400

**Emphasis**

Urban Transformation can be understood as a participatory act performed to stimulate community involvement in order to create social awareness regarding urban issues. The interventions can be Performative, Social, Political and Spatial and the studio aims at developing a holistic understanding in a student to weave all the above processes of intervention as a part of the approach to address transformation issues at Spatial Intervention level. The studio emphasis is to expose students to the larger idea of City and 'Urban' not just as a product but as a complex and dynamic process.

Urban areas in developing economies face major spatial challenges with a long lasting impact on urbanization process. The drivers for urban transformation are manifold and include technological change and digitalization, migration and demographic shifts, climate change, increasing relevance of agglomeration economies as well as post- and re-industrialization. Spatial implications of structural change and the organization of such transformation demand for deliberate strategies to revitalize the traditional manufacturing cores. These include a wide range of new forms of interventions such as social innovation, governance, resilience, urban laboratories and urban strategy.

This arm of the studio examines that in the process of growth and change a number of areas, buildings and open spaces become obsolete and the city offers a fantastic opportunity for renewal/ restructuring of such areas. This Studio focuses on Urban transformation and how in the process of transformation, the present urban 'development' which is labelled as characterless and undifferentiated can be made specific and rooted.

**Course Outcome**

At the end of the course student will be able to:

- Understand and synthesize social, political and spatial issues related to the issue of urban transformation.
- Do design interventions in complex existing situations.
- Develop an economic model for creating a sustainable development.
- Understanding the importance of community participation and various means of involving them in the development process.

**Content**

The collaborative approach for this studio will address the issues of equity, rights of the city, and implementation mechanisms in the economic and political situations and most importantly the future of urban development. It intends to encourage the future cities idea with taking into



consideration the current scenario and intervening in the best possible manner for creating a better living environment.

- Understanding urban development's mechanism, incorporating multiplicity and guide the preferred change.
- Addressing the Global v/s Local contrast
- Address 'Context', 'Sense of Place' and 'Character' in a fragmented city.
- Reinterpreting and redefining current / future concepts of neighbourhood, public private, control and freedom.
- The studio encourages students to think of Urban Designers role as an activist.

**References:**

1. Broadbent, Geoffrey, 1997, Emerging Concepts in Urban Design, Penguin, India.
2. Koolhaas, Ram, 1997, Delirious New York: A Retroactive Manifesto for Manhattan, The Monacelli Press
3. Tschumi, Bernard , 1994, Event-Cities, The MIT Press.
4. Tschumi, Bernard, 2001,Event Cities 2, The MIT Press
5. Tschumi, Bernard, 2005, Event Cities 3: Concept vs. Context vs. Content, The MIT Press.
6. Tschumi, Bernard, , 2010, Event City 4: Concept- Form, The MIT Press
7. Ram Koolhaas, S, M, L, XL, The Monacelli Press
8. Christian Norberg Schultz, Return to the Centre: Culture, Public Space, and City Building in a Global Era
9. Patricia Aelbrecht and Quentin Stevens, 2019, Public Space Design and Social Cohesion: An International Comparison, 1st Edition, Routledge
10. Christiane Crasemann Collins (Author), George R. Collins (Author), Camillo Sitte (Author),2006, Urban Acupuncture, 1889 Edition, Dover Publications



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD12302	Course Name	Project Planning & Appraisal				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### Emphasis

The course focuses on introducing planning and evaluation techniques which are vital for any of the project/organizations. The emphasis is on understanding the involvement of various actions in the planning process that are essential to achieve the project goal and objectives. Further it generates a comprehensive understanding about various technical, financial and managerial aspects of project right from the stage of conception to execution to operation and maintenance, including role of various people, organizations, institutions associated with the project. The core intention is to introduce Planning, Analysis, Selection, Financing, Implementation, Review and Appraisal Techniques for various scale of Projects. It is a course to justify the project through analysis, which is a way to determine project feasibility and cost-effectiveness.

### Course Outcome

After completion of this course, the student will be able to:

- Initiate and define a project
- Formulate and organize project, considering the interrelationship among various aspect/agencies.
- Develop a project plan, including scoping, sequencing tasks, and determining a critical path
- Understand financial and technical aspects of project management.
- Assess, prioritize and manage project risk
- Forecast cash flows and attributes of the project.
- Understand capital budgeting and project financing.
- Evaluate feasibility and carry out appraisal of a project.
- Blend judgements with analytical reasoning for the projects.

### Content

#### Project Formulation:

The concept of projects and Importance of project formulation, feasibility studies, appraisal and management; generation and screening of project ideas, project identification, preliminary analysis, market, technical, financial, economic and ecological-pre-feasibility report and its clearance, project estimates and techno-economic feasibility report, detailed project report, different project clearances required

#### Project Appraisal:

Project evaluation: meaning, objectives, scope, stages, approach and steps, Technical and Financial Appraisal (NPV, BCR, IRR, ARR, urgency-payback period), Economic and Social Appraisal (Use of social assessment methods: PRA, SARAR, Social-Cost-Benefit Analysis, UNIDO and Returns, SRR) Environmental and Institutional Appraisal (Environmental Impact Assessment, Capacity Enhancement Need Assessment (CENA) - various aspects of institutional appraisal – Policies and



legality), assessment of various methods, Indian practice of investment appraisal, international practice of appraisal, analysis of risk, different methods for selection of a project and risk analysis in practice, ownership structures; BOT, BOLT, BOOT etc. models.

**Project Management:**

Parameters of project performance, time, cost and quality and their interrelationships, schedule and cost control tools and techniques, performance reporting, audit, corrective and preventive actions, fund flow control, management information system and application of management software.

**References:**

1. Prasanna Chandra, 2016. Project Planning: Analysis, Selection, Financing, Implementation and Review. MC Graw Hill Education (India) Private Limited, Chennai.
2. Gray & Larson, 2011. Project Management: The Managerial Process. MC Graw Hill Education (India) Private Limited, Chennai.
3. Joy.P.K., 2007. "Total Project Management - The Indian Context". New Delhi, Macmillan India Ltd.
4. Steven J. Peterson. (2005). "Construction Accounting and Financial Management", 2nd Edition, Pearson Education International, NJ. 5. Kumar Neeraj Jha (2012). "Construction Project Management", 2nd Edition, Pearson Education International, New Delhi.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD16303	Course Name	Urban Conservation				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### Emphasis

Heritage management is one of the key challenges of urbanization, historic cities are losing their identity due to rapid and fast pace changes in economic, social and political systems. Addressing this issue, urban conservation deals with identification, preservation, management and integration of heritage assets- natural, cultural and built, in the process of planning and development. The course in its broad terms provides an exposure to understand the large spectrum of urban heritage, ranging from conservation of a historical monument to renewal and rejuvenation of urban fabric to conservation of natural resources in the context of sustainability. In addition, cultural and economic dimensions are equally important as physical growth and development of any society is a direct reflection of people, their traditions, their skills and their value system. It also includes the Acts and Laws, Policy and programmes, that recognizes conservation/regeneration of historic areas/cities, heritage toolkit and legal framework to achieve the aims of urban conservation.

### Course Outcome

After completion of this course the students will be able to:

- Identify and classify urban heritage and develop sensitivity as well as objectivity for conserving heritage assets.
- Learn various terminologies related to conservation and various perspective on urban conservation.
- Understand value-based approach of conservation along with concepts, methods, techniques and processes.
- Define and analyse current urban conservation issues.
- Attain a fundamental understanding of conservation principles for a small Architectural to a large-scale Urban Precinct; Urban Ecological/ Cultural Assets.
- Recognize the significance of urban heritage management in the process of urban development and need for integration.
- Judge the performance and sensitivity of urban proposals, projects, policies and processes with reference to urban heritage.
- Understand role of various institutes and organizations in heritage planning and management and know about various policies, plans and schemes under the umbrella of urban heritage conservation.
- Know about various International Charters pertaining to Area Conservation and Historic Cities.
- Know about concept of "world heritage" and its significance.



#### Content

- Understanding urban heritage, urban heritage conservation and various terminologies
- Heritage conservation perspective: a value-based approach of conservation
- Conservation concepts, methods, techniques, processes and divergent approaches
- Criteria for listing heritage buildings, methodology of listing and grading of heritage buildings
- Overview of National Conservation Policy for Monuments, Archaeological sites and remains, Protected by Archaeological Survey of India, May 2013, Archaeological Survey of India, New Delhi.
- Problems and issues confronting historic core and urban areas, planning interventions
- World heritage, world heritage sites: protection and management
- International Charters pertaining to Area Conservation and Historic Cities
- Conservation Scenario \_ International case studies
- Conservation Scenario in India \_ case studies

#### References:

1. Burnham, Bonnie, 1974. The Protection of Cultural Property – Handbook of National Legislation. The International Council of Museums.
2. Bernard, Fielden, ' Between two Earthquakes' ICCROM
3. Davis L. Uzzel, 1989. Heritage interpretation, the Natural and Built Environment. Belharm Press.
4. Allan Dobby. Conservation and Planning. London
5. ICOMOS – UK Charters, Venice, Buva, Flourence.
6. ICOMOS – UK draft – August 95, Guidelines for recording of Monuments, groups of Buildings and Cultural sites.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD16304	Course Name	Applied Research & Technical Writing				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

**Emphasis**

This course introduces students to the research process, through critical exploration of published research, relevant to their field of interest. The course provides the understanding and use of the research terminology and integrates the elements of the research process within quantitative, qualitative, and mixed scientific methods approaches.

**Course Outcome**

After successful completion of the course, the student will be able to:

- Develop the skill to identify, decipher and interpret issues relating to urban planning and urban design based on research enquiry methods.
- Employ qualitative, quantitative, and mixed research methodologies to conduct research in urban planning and urban design topics.
- Apply the research process to problems in urban design and planning.
- Master the literature in particular area of interest pertaining to urban planning and design.
- Design a research study using relevant approach and methods.
- Critically read, interpret, and evaluate research proposals and publications.
- The student will gain knowledge of different methods of conducting research and research writing.

**Content****Introduction**

Basic research issues and concepts- orientation to research process- types of research: historical, qualitative, co-relational, experimental, simulation and modelling, logical argumentation, case study and mixed methods- illustration using research samples.

**Research Process**

Elements of Research process: finding a topic- writing an introduction- stating a purpose of study identifying key research questions and hypotheses- reviewing literature- using theory defining, delimiting and stating the significance of the study, advanced methods and procedures for data collection and analysis- illustration using research samples.

**Researching And Data Collection**

Library and archives- Internet: New information and the role of internet; finding and evaluating sources- misuse- test for reliability- ethics. Methods of data collection- From primary sources: observation and recording, interviews structured and unstructured, questionnaire, open ended and close ended questions and the advantages, sampling Problems encountered in collecting data from secondary sources.

**Case Studies**

Case studies illustrating how good research can be used from project inception to completion- review of



research publications.

**Report Writing/ Paper Writing**

Research writing in general- Components: referencing- writing the bibliography, developing the outline presentation; etc.

**References:**

1. Creswell J., 2011, Research design: Qualitative, Quantitative and Mixed Methods Approaches; Sage Publications, New Delhi.
2. Groat, L. and Wang D., 2002, Architectural Research Methods, John Wiley & Sons. Gibbs, J.P., 1988, Urban Research Methods, Von Nostrand.
3. Kumar R., 2011, Research Methodology- A step by step guide for beginners-3rd Edition ; Sage Publications, New Delhi.
4. Knight, A. and Ruddock,L., 2008, Advanced Research Methods in Built Environment, John Wiley & Sons.
5. Khanzode, V.V., 1995, Research Methodology -Techniques and Trends, APH Publishing.
6. Smith JA., Flowers P., 2009, Interpretative Phenomenological Analysis: Theory, Method and Research, Sage Publication.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD12305	Course Name	Space Culture & Urban Design				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

**Emphasis**

Industrialization in 19<sup>th</sup> Century brought monumental changes to the City form and Human life, one of the main elements of this phenomenon was population explosion resulting in large-scale migration of people from rural areas to urban centres. The negative effects of industrialization were the fissures caused in the city fabric, architecture of the city changed and the quality of life was disturbed.

Even the most wealthy and progressive cities could not offer even elementary necessities of life; they remained as man-heaps, machine-warrens and not organs of human association. This adverse impact continues to haunt urban life even today. The emphasis of the course is to understand notion of space, the very fundamental element of locating human life that is subjected to change and new definitions. The course will make an attempt to understand this new urban structure and answer the questions in designing the built environment so as to identify and contain the very purpose of human life.

**Course Outcome**

At the end of the course the student will be able to:

- Observe the nuances of an urban life in urban spaces.
- Develop an understanding of human behaviour in public spaces and its repercussions on the resultant urbanity.

**Content**

Students will be engaged into an investigative process to read and analyse urban areas and examine it for its human angles. This course will be conducted as series of discussions supported by case studies and observation and analysis of urban spaces, this will be based on the topic selected by students and the inclination of the group.

**References:**

1. Trancik, Roger, 1986. Finding Lost Spaces: Theories of Urban Design. Van Nostrand Reinhold, New York :
2. Hillier, Bill, Hanson, Jullian, 1984. The Social Logic of Space. Cambridge University Press



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD14306	Course Name	Professional Elective 2				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### 306.1 Participatory Planning

Urban planners, urban designers and scholars of urban studies have acknowledged the potential of participatory planning since 1960s. Today, the emphasis on participation increasingly permeates both academic conversations and policy debates. Participation is often invoked as a remedy, a universally applicable technique able to ensure equitable and fair outcomes in urban design and urban management. But participation is a tool rather than a goal and in the field planners and policy makers face many challenges to use it properly. What strategies are to be implemented in order to ensure the effectiveness of participatory techniques at all scales remains an open question.

This elective course will address these issues by demonstrating practical examples of different participatory theories and processes, across the world. It will also discuss the potentialities and challenges of participation in diverse contexts, by providing examples of projects. It will cover significant participatory planning processes from Africa, South Asia, and the Middle East, ranging from public space renewal to neighbourhood redevelopment.

### 306.2 Urban Design Theories & Criticism

The emphasis of the course is to expand the knowledge base and to intensify one's critical abilities in evaluating and discussing design tactics for an urban design grounded in the history of disciplinary knowledge. Focusing on the body of history and theory that informs contemporary issues in urban design, the course will examine the state of the contemporary discourse in urbanism, the historical trajectory of contemporary urban design theory, and its impact on design strategies as they pertain to the construction of the urban landscape.

While exploring the broader contexts of urban processes, the course also explores specific design strategies and devices established to negotiate competing social and spatial forces in the urban landscape. The learning will be accomplished through an extensive set of readings that discuss the key issues arising throughout 20th century



urban design theory and practice, and by examining the transformation to the present urban situation.

### 306.33. Rural Development

The main objective of this elective course is to provide knowledge on the key development challenges of the developing countries like India. It deals with the concepts and theories of development, poverty analysis, and problems of education, health, aid, role of NGOs and civil society, and regional disparity in the developing world. This elective would focus on rural poverty, improvement of the quality of life and social and economic development of rural areas. More attention would be paid to management of development institutions, infrastructure and physical resources. Sectoral and spatial planning is equally emphasized along with the management of rural development programs and local development projects to strengthen rural communities for sustainable development.

Note: The above electives are suggestive and alternative or additional electives can be offered from time to time by the institute.



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Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD18307	Course Name	Transdisciplinary Open Elective 1				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

### 307.1 Public Policy & Politics

This elective examines the process of public policy formation including internal and external influences that may affect policy outcomes. This elective will focus study of urban public policy including government institutions and the policy-making process; concepts and methods of policy analysis; and decision-making regarding public policies at the local state and national level, specifically as they relate to urban areas. Review of healthcare, welfare, social security, education delivery and other urban policies. Each segment of society is affected by public policies in our daily lives. Some public policies are benign, such as where to locate a flyover, while others are not, such as where to build a new toxic waste dump. Affecting public policy begins with analysis of the issue, analysing current public policy is as much an art form as it is a discipline. It requires critical thinking and disciplined thinking.

### 307.2 Real Estate Development Management

Intent of the elective course is to impart detailed knowledge of all aspects related to management of Real Estate Projects to train the students in Real Estate Project Management. This subject provides students with skills and experience in synthesizing mixed-use real estate development projects. It addresses the interaction among design, finance, market and public policy factors. As potential professionals, or participants in the development process, students need to understand steps in conceiving a project, what good design in the private sector is, how to make it financially viable, and how to synthesize a project from multiple constraints. This elective course is based on the philosophy that real estate development is a creative process. Students are encouraged to innovate as they synthesize all aspects of a project. At the end, it is expected that students would submit a professional proposal for development that reflects their ingenuity and progress across the term.

### 307.3 Smart Cities- Management Of Smart Urban Infrastructure

Over the past few years, advancements in the Information and Communication Technologies (ICTs) have significantly challenged the traditionally stable landscape of



urban infrastructure services. The result is an increasing interest in the transitioning of cities towards “smart cities initiatives” – an interest expressed both by technology advancements and public authorities. Although such “smart technologies” can provide immense opportunities for citizens and for service providers alike, the ICTs often act as disruptive innovators of urban infrastructure service provision.

Through this elective students will gain a thorough understanding of the challenges and opportunities associated with “smart urban infrastructures” as well as how these infrastructures can be managed in order to deliver desirable performance in cities. More precisely, throughout this elective they will learn about the most important principles for the management of smart urban infrastructures as well as about the application of these principles to vital urban management sectors, namely governance, planning, urban transportation and urban energy systems.

Note: The above electives are suggestive and alternative or additional electives can be offered from time to time by the institute.



SARVAJANIK UNIVERSITY							
INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	IV			Effective From	June 2021		
Course Code	MRUD13401	Course Name	Thesis				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
16	-	16	16	800	320	240/480	800/1600

**Emphasis**

The emphasis of this course is to demonstrate students' ability to synthesis the learning based on the various aspects related to urban design explored in the previous semesters through a culmination project where it is expected to translate the knowledge and skills gained over the urban design program. The students can choose the subject as per their individual interest to investigate through theoretical premise of project, forming an enquiry, definite argument or hypothesis in the design thesis, making proposition. Students must bring out the control mechanisms, room for variations and freedom within a clearly identified set of values and objectives through their design.

**Course Outcome**

After completion of this course, the student will be able to,

- Understand the particular topic by detailed research and exploration having in-depth knowledge in the selected subject thoroughly
- Develop design philosophy and vision of the project through critical thinking and research inquiry, develop appropriate framework based on project premise with an enquiry based design programme
- Learn to address the public realm and designing of public spaces transcending different scales, derive new typologies of spaces, explore urban design elements, exploring urban form and character through innovative spatial configurations.

Learn to formulate various urban design guidelines, legal frame work, implementation mechanism and phasing of urban design project

**Content**

The primary objective of the design thesis is to provide opportunities to select a topic from varied choice ranging from urban transformation, redevelopment-renewal, urban extension, ecology, mobility or cultural identity and specialised urban design project to explore thoroughly. The broad category can be based on issue based, site based, time based or even system based design project. It is important to explore a theoretical premise and its potential through a design project to establish that urban design is to be approached as a matter of public policy and not as a large scale architectural project. Further it is essential to conceptualize, investigate and synthesize environmental objectives, design methods, and contextual issues at urban scale. The key elements include identification of issues, developing design program having vision of the project and value addition considering larger level impact at city/town/area level to explore ideas in the fields of future of cities.

**References:**

1. Designing urban design, Towards a holistic perspective. Metudsymp 2016. Proceedings, International symposium on urban design.
2. Urban Desing Tools & Techniques for the Planning Professionals. Routledge, Taylor & Francis Group.



SARVAJANI UNIVERSITY							
INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD13402	Course Name	Urban Design Practice				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### Emphasis

The course focuses on developing an understanding regarding the state of affairs of urban design practice at nation as well as international level. The emphasis is to make students well versed with the opportunities, responsibilities and liabilities of urban design profession. This subject will also expose them to the world scenario and this in turn will help in bringing an awareness towards creating qualitative urban spaces.

#### Course Outcome

At the end of the course the students will be able to:

- Understand the responsibilities and opportunities related to the professional practice of Urban Design.
- Get an exposure to world-wide practice of Urban design and various types of projects.
- Learn about the aspects related to tender, Expression of Interest and various components of bidding for a project.

#### Content

Study:

- Pedagogical, Ethical Urban Design practices.
- Importance of Public Participation & Consultation in any urban project.
- Role of various government, semi-government authorities.
- Bidding process and various models including EOI, Design Competition, Tenders, etc.
- Implementing an urban project, getting approval from various Government Departments.
- Understanding various laws related to project implementation and professional liability.

Assignments/ Seminars/ Discussions

- Stages of implementing an Urban Project
- Case Studies

#### References:

1. Sebastian Loew, Urban Design Practice: An International Review

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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD14403	Course Name	Professional Elective 3				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### 403.1 Environmental Impact Assessment

This elective course examines principles, procedures, methods, and applications of environmental impact assessment. The goal of the course is to promote an understanding of how environmental impact assessment is conducted and used as a valuable tool in the engineering project management decision making process. Topics include: overview of environmental impact assessment; selection of scientific, engineering, and socioeconomic factors in environmental impact assessment; identification of quantitative and qualitative environmental evaluation criteria; application of traditional and other techniques for assessing impacts of predicted changes in environmental quality; approaches for identifying, measuring, predicting, and mitigating environmental impacts; modelling techniques employed in environmental impact assessment; environmental standards and the environmental impact assessment process; and methodologies for incorporating environmental impact assessment into management decision-making. Students learn to prepare an environmental impact assessment, review and critically analyse an environmental impact statement, use mathematical models for environmental impact prediction, and apply environmental impact assessment as a tool in management decision-making.

#### 403.2 Water Wise Cities

Building water-wise cities is a pressing need nowadays in both developed and developing countries. This is mainly due to the limitation of the available water resources, climate change and aging infrastructure to meet the needs of adapting to social and environmental changes and for urban liveability. This elective would provide comprehensive insights into theoretical, systematic and planning aspects of water-wise cities with a broad coverage of global issues. The elective aims to (1) provide a theoretical framework of water-wise cities and associated sustainable water systems including key concepts and principles, (2) provide a brand-new thinking on the design and management of sustainable urban water systems of various scales towards a paradigm shift under the resource and environmental constraints, and (3) provide a technological perspective with



successful case studies of technology selection, integration, and optimization on the “fit-for-purpose” basis.

#### 403.3 Gender and Cities

This elective course examines aspects of gender in contemporary urban landscape and the impact upon them as a result of development and incorporation into global, economic and political systems. The course begins with theoretical approaches to gender and development, development theory, and feminist critiques, then turn to how social change (positive or negative development) happens like; How are gender identities linked to discourses about the city? How do gender identities and gender relations shape the social and material construction of different urban spaces, places, and landscapes; and vice versa? How do other social identities intersect with gender to produce varying experiences of different places, and even the same places and spaces? What sorts of changes have women (and other marginalized groups) brought about in cities? These are the sorts of questions that lie at the heart of this course. While the course has a nominal emphasis on women, there will be a strong focus on the intersectionality of gender, race, class, and other social markers and their role in influencing space, the political economy, and experiences in the city.

Note: The above electives are suggestive and alternative or additional electives can be offered from time to time by the institute.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Architecture			Programme	M.Arch. (Urban Design)		
Year	II			Version	1.0		
Semester	III			Effective From	June 2021		
Course Code	MRUD18404	Course Name	Transdisciplinary Open Elective 2				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
2	2	-	2	100	40	30/60	100/200

#### 404.1 Urban Land Management

Land is a resource and at the same time it is non-renewable hence it should be utilized very carefully as it is the base for all the development activities. This elective course is designed to give enough competence for analysis and solving of complex problems within "land management and cadastre" with special emphasis on "land tenure rights". The students shall learn valuation with emphasis on real property valuation for taxation purposes and its connection to cadastre systems. To reach this goal, the teaching shall give the students' knowledge of fundamental property formation methods and systems with connection to juridical, economical and also to technical property register systems. Emphasis will also be put on the ability to integrate real estate planning with detail urban planning, environment, sustainable development and social and economic responsibilities.

Urban land management means organization of land survey, zoning, classification in to type & create a land use pattern to do the town planning in the better manner. This elective would focus on the various land management techniques like master plan approach, development plan, land acquisition, and land pooling and readjustment methods.

#### 404.2 Greening the Economy- Sustainable Cities

As our world becomes increasingly urbanized, cities face growing social, economic, and environmental challenges that pose the questions: "what does a Greening the economy of sustainable cities really look like?" and "for whom are they designed?" In this elective course, students will have the opportunity to explore green economy and sustainable cities through the following topics: transportation & mobility, land & urban ecosystems, food systems, water, energy, buildings & infrastructure, and waste resource recovery.

The purpose of this elective course is to help us critically evaluate the concept of sustainable economy from an urban perspective. Greening of economy is not something that most people would be opposed to, but that does not make it unproblematic. To



uncover the key political, social, environmental, and economic challenges of it, this elective course will examine urban environmental topics from the various case studies from international cities from both scholarly journal articles and the required course book. Looking at the topic of greening of economy from a critical perspective, this elective course will also examine how policies impact who has access to green amenities and healthy, affordable food sources, while exploring efforts by cities to create more just, sustainable urban communities. Finally, the elective course will touch on our own relationships to the built and natural environments, the characteristics that we think a green urban economy should have, and the larger meaning and significance of urban environmental sustainability.

#### 404.3 Planning For Eco-Tourism

This elective course presents an overview of ecotourism as a form of sustainable development; discusses the principles and goals of ecotourism development. This elective would also cover discussions on ecotourism planning and development process, including the institutional and legal frameworks for ecotourism, the need for collaborative planning and assessment criteria for ecotourism from a broad perspective with focus on ecotourism market segments and best practices. During the course students would be taught about issues associated with ecotourism and how it can be managed in the context of a sensitive, untouched, wilderness areas. The main elements are, broadly, a focus on the natural environment, ecological and cultural sustainability, education and interpretation, and local and regional benefits.

Note: The above electives are suggestive and alternative or additional electives can be offered from time to time by the institute.



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INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY							
Faculty	Planning			Programme	M. URP		
Year	II			Version	1.0		
Semester	IV			Effective From	June 2021		
Course Code	MRUD16405	Course Name	Professional Training				
Teaching Scheme				Examination Scheme			
Credits	Lecture	S/W/T	Total	CIE	UE		Total
					SE	TEE	
6	-	-	-	--	--	300/600	300/600

Note: Professional Training will have to be pursued as a part of the Summer term, it can be in the form of internship at ULB's or Govt./Semi Government organizations or under a recognized Urban Design or Planning professional; or do field works or research as approved by the equivalence committee setup by the institute.

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**SARVAJANIK UNIVERSITY**

**M.ARCH. - URBAN DESIGN  
INSTITUTE OF DESIGN, PLANNING & TECHNOLOGY (IDPT)-SCET**

		YEAR 1				YEAR 2			
		(Foundation)				(Exploration)			
		SOCIALLY RESPONSIVE				CRITICALLY EVOLVED			
		Foundation Semester		M-Arch UD		M-Arch UD		M-Arch UD	
SUBJECT GROUP		SEM 1		SEM 2		SEM 3		SEM 4	
		Credits	Credits	Credits	Credits	Credits	Credits	Credits	Credits
Professional Core Courses (MUD-PC)		UNDERSTANDING URBANISM		INCLUSIVE & SUSTAINABLE URBAN DESIGN		URBAN TRANSFORMATION		THESIS	
		10	10	12	12	14	14	16	16
URBAN THEORIES	Urban Planning Process	3	3	1. Urban Ecology 2. Mobility	4	1. Urban renewal	2	1. Design Thesis 2. Research Thesis	
	Infrastructure Planning	3	3	Transportation planning & Urban Mobility	2	Project Planning and Development Finance	2		
	Housing Planning & Management	2	2	Planning Legislation & Urban Governance	2	Urban Conservation	2		
	Urban Ecology	2	2	Urban Landscape	2				
Humanities (MUD-HU)		2	2	Urban Sociology	2	Research Methods & Writing	2		
Professional Ability & Skill Enhancement Courses (MUD-PA)		4	4	Urban Economics	2	Space Culture & Urban Design	2		
ELECTIVE (PE) & (TOE)	No elective			Prof. Elective - 1	2			Professional Practices for Urban Design	2
	No elective					Prof. Elective - 2	2	PROFESSIONAL TRAINING	6
Credits / Contact Hours		26	26			TOE - 1	2	Prof. Elective - 3	2
	No. of Subjects	7	7	7	7	7	7	TOE - 2	2
									28



