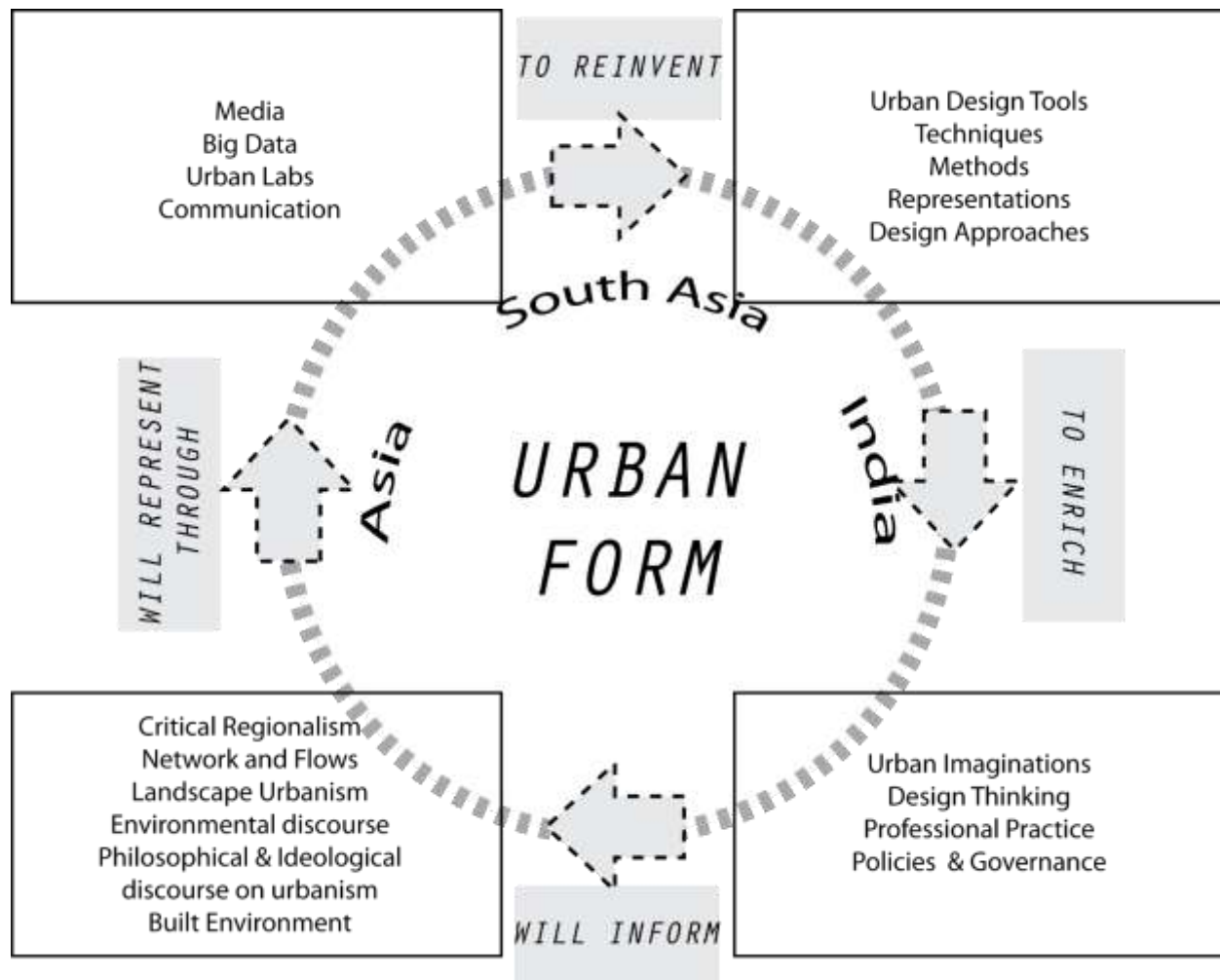## Intent of the Program

The two year postgraduate program in urban design at the School of Planning and Architecture Bhopal explores the multidisciplinary nature of the discipline in offering a flexible and inclusive academic path, encouraging students to engage in contemporary thoughts and design process in the urban domain. The spatial engagement lies in the emerging urban morphologies in India specifically and placing them in the context of Asian and world cities. The studios, lecture-based subjects, tutorials and self-exploratory subjects are designed to generate knowledge which should mutually complement each other.

The urban design curriculum will focus on how **critical regionalism** feeds into the program and informs urban design thinking. In this context the ideas of continuous city, indigenous city, craft based city etc would be discussed. This is the **principle Vision** of the programme. Emphasis is on the 'Indianness' of the program through study of theory, writing on Indian cities and Indian urbanism thinking.

The **concept diagram** represents the various domains of urbanisms the program engages itself in.

Proposed scheme of evaluation of Master of Architecture (Urban Design) programme to be applicable from session 2019-20

I SEMESTER

CODE	SUBJECT	CLASSES			END SEMESTER EVALUATION	CREDITS	EXAM DURATION
		LECTURE	STUDIO/ TUTORIAL	TOTAL			
MAUD 0101	**Urban Design Studio- I**	2	8	10	VV	10	-
MAUD 0102	**Urban Form Study-I** Evolution of Urbanity	2	0	2	WR	2	3
MAUD 0103	**Urban Planning and The City-I** Planning Techniques, Policy And Legislation	2	0	2	WR	2	3
MAUD 0104	**Urban Networks and Systems I** Site and Urban System Planning	1	2	3	VV	3	-
MAUD 0105	**Urban Design Methods and Techniques-I**	1	2	3	VV	3	-
MAUD 0106	**Media Lab – I**	1	2	3	VV	3	-
MAUD 0107	Elective-1 A-Writing about Cities B- Indian Urbanism	1	1	2	VV	2	
	TOTAL	**10**	**15**	**25**	**-**	**25**	**-**

II SEMESTER

CODE	SUBJECT	CLASSES			END SEMESTER EVALUATION	CREDITS	EXAM DURATION
		LECTURE	STUDIO/ TUTORIAL	TOTAL			
MAUD 0201	**Urban Design Studio- II**	2	8	10	VV	10	-
MAUD 0202	**Urban Form Study-II** Urban Design Theory	1	2	3	VV	3	-
MAUD 0203	**Urban Planning and The City-II** Urban Regeneration and Housing	2	1	3	WR	3	3
MAUD 0204	**Urban Networks and Systems II** Integrated Urban Mobility	1	2	3	VV	3	-
MAUD 0205	**Research Methods in Urban Design**	1	1	2	VV	2	-
MAUD0 206	**Media Lab-II**	1	1	2	VV	2	-
MAUD 0207	Elective-II A-Future Cities B- Landscape Urbanism	1	1	2	VV	2	-
	TOTAL	**9**	**16**	**25**		**25**	

III SEMESTER

CODE	SUBJECT	CLASSES			END SEMESTER EVALUATION	CREDITS	EXAM DURATION
		LECTURE	STUDIO/ TUTORIAL	TOTAL			
MAUD 0301	**Urban Design Studio- III**	2	8	10	VV	10	-
MAUD 0302	**Common Pool Elective**	2	1	3		3	-
	A. Urban Design Politics				VV		
	B. City People and Art				VV		
	C. Resilient Cities				VV		
MAUD 0303	**Urban Form Study-III** City Discourses	2	1	3	VV	3	-
MAUD 0304	**Urban Networks and Systems III** Ecology and Environment	1	1	2	WR	2	3
MAUD 0305	**Thesis Programming**	1	2	3	VV	3	-
MAUD 0306	**Summer Internship**		2	2	VV	2	-
MAUD 0307	**Urban Design Project Management**	1	1	2	WR	2	3
	TOTAL	**9**	**16**	**25**		**25**	

IV SEMESTER

CODE	SUBJECT	CLASSES			END SEMESTER EVALUATION	CREDITS	EXAM DURATION
		LECTURE	STUDIO/ TUTORIAL	TOTAL			
MAUD 0401	**Urban Design Thesis**	4	16	20	VV	20	-
MAUD 0402	**Report Writing**	1	2	3	VV	3	-
MAUD 0403	**Urban Studies Lab**		2	2	VV	2	-
	TOTAL	**5**	**20**	**25**		**25**	

NOTATION:
WR- WRITTEN EXAMINATION,
VV- VIVA VOCE

PROPOSED COURSE STRUCTURE

	I- SEMESTER	II- SEMESTER		III- SEMESTER	IV- SEMESTER
STUDIO	Urban Design Studio- I	Urban Design Studio- II		Urban Design Studio- III	
URBAN THEORY	Urban Form Study-I *Evolution of Urbanity*	Urban Form Study-II *Urban Design Theory*		Urban Form Study-III *City Discourses*	
MULTIDISCIPLINARY PERSPECTIVES	Urban Planning and The City-I- *Planning Techniques, Policy And Legislation*	Urban Planning and The City-II- *Urban Regeneration and Housing Policies & Patterns*	**S u m m e r I n t e r n s h i p**	Urban Planning and The City-III- *Urban Design Project Management*	
	Urban Networks and Systems I : *Site and Urban System Planning*	Urban Networks And Systems II : *Integrated Urban Mobility*		Urban Networks And Systems III : *Ecology And Environment*	
TECHNIQUES	Urban Design Methods and Techniques-I	Research Methods in Urban Design			Report Writing
	Media Lab – I	Media Lab-II			
EXPLORATORY STUDIES	Elective-1 *A- Writing about Cities* *B- Indian Urbanism*	Elective-II *A-Future Cities* *B- Landscape Urbanism*		Common Pool Elective *A-Urban Design Politics* *B- City, People and Art* *C- Resilient Cities*	Urban Studies Lab
THESIS				Thesis Programming	Design Thesis or Research Thesis

SEMESTER-I

Subject: Design Studio-I	Subject Code: MAUD0101	Credit: 10

Course Objective:

Introduction to the complexities of the 'Urban' and exploration of the methods of documentation, analysis and interventions. The studio will explore two themes in the semester (as two studio explorations of 8 weeks, or a main studio component and a two week collaborative intensive studio).

Course Content:

- Urban design terminologies through readings, methods of surveys and mapping techniques of tangible and intangible aspects of the urban environment.
- Documentation, analysis and study of relevant urban design case studies
- Design development process with an overview of implementation mechanisms at the urban level.

Course Outcome:

Mapping multiple layers of urban complexities followed by design demonstration through the use of drawings/models/sketches.

Essential Readings:

- Bacon, E. (1967) *Design of Cities.* London: Thames & Hudson.
- Bentley, I. et al. (1987) *Responsive Environments: A Manual for Designers.* Oxford. Architectural Press
- Llewellyn, D. (2000) *Urban Design Compendium.* London: English Partnerships.
- Meeda, B., et.al (2007) *Graphics for Urban Design.* London. Thomas Telford Publishing

Suggested Readings:

- Banerjee, T. and Loukaitou-Sideris, A. (eds.) (2011) *Companion to Urban Design.* London, New York: Routledge.
- Carmona, M. and Tiesdell, S. (2007) *Urban Design Reader.* Amsterdam; Boston, MA: Elsevier.
- Carmona, M., Heath, T., Tiesdell, S. and Oc, T. (2003) *Public Places, Urban Spaces: The Dimensions of Urban Design.* Oxford: Routledge.

- Spriergen, P. (1965) *Urban Design: The Architecture of Towns and Cities*. New York: McGraw Hill.

Subject: Urban Form Study-I Evolution of Urbanity	Subject Code: MAUD0102	Credit: 3

Course Objective: To gain knowledge of how we evolved as 'urban' and the act of creating and shaping urbanity as a critical layer in evolution of urban form and to study the significance of the major components of cities and the way ideology is manifested in its built space and legacy.

Course Content:
- Urban-life world, urban design and civic design, what is urbanity? Why do we need cities? Ways and methods of studying cities, urbanity at the intersection of urban anthropology and architecture of the city.
- Pre-industrial revolution urbanity, practices and urban form, industrial revolution and emergence of town planning, urban responses to industrial cities –industrial city, city beautiful movement, concepts of garden cities in Europe and America, the idea of picturesque city, CIAM and the modern movement, Bauhaus, Corbusier's radiant city and other ideas of modern city, origin of concept of zoning, building regulations, zoning code in 1916, the birth of an American city.
- City of the automobile, technology and modern city 20th century cities and urban form: capitalist, socialists and modernists– their morphology, physiology, ideology and legacy. Urbanity through grand schemes - Washington, greater London plan, Chicago, new Delhi, Canberra, Berlin, Chandigarh
- Urbanity through urbanists - Louis Wirth, Max Webber, Patrick Geddes, Lewis Mumford, Walter Benjamin, Donald Appleyard, Jane Jacobs, Rob And Leon Krier, Saskia Sassen, Richard Sennett, David Harvey, Peter Hall, Richard Florida, James Howard Kunstler etc., new urbanism movement and its influence.
- 21st century cities and urban form: fragmented metropolis, networked societies, spaces and flows in the contemporary city, splintering urbanism emerging urbanities across the world, urbanity in global south, critical urban theory, concepts of just city, right to the city, smart cities and techno-centric urbanism

Course Outcome:

Progressive presentation culmination into a seminar presentation and paper.

Essential Readings:

- Jacobs, J. (1961) *The Death and Life of Great American Cities*. New York: Random House.
- Kostof, S. (1999) *The City Shaped: Urban Patterns and Meanings through History* Boston, MA: Little, Brown and Company.

- Kostof, Spiro. (1999). *The City Assembled: The Elements of Urban Form through History* Thames and Hudson
- Mumford, L. (1961) *The City in History*. London: Pelican.
- Paulsen, Krista & Orum, Anthony & Chen, Xiangming. (2012). *Introduction to Cities: How Place and Space Shape Human Experience.*

Suggested Readings:

- A.E.J. Morris. (1996). *History of Urban Form* before the Industrial Revolution, Prentice Hall
- Hall, Peter. (2014). *Cities of Tomorrow*: An Intellectual History of Urban Planning and Design Since 1880
- Lin, J., (2005). *The Urban Sociology Reader.* New York: Routledge.
- Mumford, L., (1961). *The city in History*. United states of America: Harcourt.
- Sennett, R., (1970). *The Uses of Disorder: Personal Identity and City Life.* New York: W.W. Norton & Company, Inc.
- Short, J. R., (1996). *The Urban Order: Introduction to Cities, Culture, and Power*. John Wiley & sons.

Subject: Urban Planning and The City-I Planning Techniques, Policy and Legislation	Subject Code: MAUD0103	Credit: 2

Course Objective: The aim of the course is to expose the student to the principles of planning and critically evaluate how the cities of India are shaped through different planning processes.

Course Content:

Planning Techniques
- Planning terms and their definitions; classification of cities; city region; spheres of influence, urban rural fringe; internal structure of urban areas; density patterns; land use classification and coding
- Conceptual understanding of socio-economic surveys: data requirements 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
- Overview of techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of building, land utilization and physical features of land; techniques for conducting regional surveys; regional delineation techniques: factor analysis, cluster analysis; row analysis; case studies in regional delineation
- Formulation of spatial standards for residential, industrial, commercial and recreational areas; space standards for facility areas, utilities and networks; population, distance criteria; performance standards; case studies: residential and non-residential density patterns and analysis

Policy and Legislation

- Evolution of planning legislation in India. Overview of legal tools for urban planning & development, (town and country planning, improvement trust and development authorities etc.)
- Various acts pertaining to conservation of natural resources including mining and forestry acts, conservation and management of ancient monuments and archaeological sites and ruins.
- Overview of development control regulations- zoning, sub-division regulations, building regulations and bye laws
- Concepts and theories of planning and their applications as master plans, development plans, laps, zonal development plans, development schemes, urban renewal, development control regulations, URDPFI guidelines, etc.
- Concepts of land use, zoning regulations, mixed use development, special economic zones
- Land acquisition act and process, land pooling and other schemes related to green field projects, transfer of development rights
- Public participation in planning process
- Various urban planning missions and schemes

Course Outcome:

A critical overview planning processes and its impact on the development of an Indian city

Essential Readings:
- Development, M. o. U., (2014). *URDPFI Guidelines Volume-1 & 2.* New Delhi: Govt. of India.
- K. Siddhartha, S. M., (2016). *Cities, Urbanisation & Urban Systems (Settlement Systems).* New Delhi: Kitab Mahal Publishers & Distributors.
- Planning Techniques for AITP, Reader on Institute of Town Planners India
- Ramachandran, R., (1989). *Urbanization and urban systems in India.* Michigan: Oxford University Press.
- Shah, U. C., (2015). *Lectures on Planning Legislation.* Suvidha Law House, Bhopal

Suggested Readings:

- Rao M.P.(2009). *Urban Planning: Theory and Practice.*, CBS Publishers
- Weber R. & Crane. R. ed. (2012) *The Oxford Handbook of Urban Planning.* New York. Oxford University Press

Subject: Urban Networks and Systems-I Site and Urban System Planning	Subject Code: MAUD0104	Credit: 3

Course Objective: To develop skills that enables an urban designer to deal with large sites in a comprehensive manner from ecological considerations to the design of built form, services and related infrastructure.

Course Content:

Site Planning Theory:
- Ecology and urban nature
- Historical perspective of landscape design
- Principles of understanding and evaluating an existing landscape
- Development as a response to constraints and opportunities offered by the site
- Site planning: site and resource inventory methods, analyses and appraisal; landscape suitability analysis

Site Planning Studio:

- Introduction to site and context
- Site reconnaissance - surveys and overlays
- Site resource systems: physiography, geomorphology, geology and soils, hydrology, micro-climate, vegetation, wild life, terrestrial and aquatic and cultural resources.
- Geographical settings and siting
- The focus areas of site planning studio shall be:
  - Inter-relationship of plan form- land form
  - Open space-built space relationship
  - Management built and open spaces
  - Ecological responses & constraints
  - Urban design form & guidelines and contextual design
  - Programme development
  - Circulation, services and allocation of infrastructure
  - Landscape design and planning
  - Other issues such as conservation, urbanization etc.
  - Design demonstration

Course Outcome:

The studio will choose a suitable site where the students will individually map, evaluate, analyze the site followed by design demonstration with the help of drawings and models.

Essential Readings:
- McHarg, I. L., (1995). *Design with Nature.* New York: John Wiley.
- Barry Starke, J. O. S., (2013). *Landscape Architecture: A Manual of Environmental Planning and Design.* McGraw-Hill.
- Dines, C. H. a. N., (1998). *Time-Saver Standards for Landscape Architecture.* New York: McGraw-Hill.
- Lynch, K. (1971) *Site Planning.* Cambridge, MA: The MIT Press.

Suggested Readings:
- John A. Flannery, K. M. S., (2008). *Urban Landscape Design*, The Neues Publishing Company.
- Ian Douglas, N. W., (2011). *Urban Ecology: An Introduction. Routledge.*

Subject: Urban Design Methods and Techniques-I	Subject Code: MAUD0105	Credit: 3
Course Objective: The subject shall explore range of methods and techniques to equip students to undertake spatial analysis of the city. By enhancing the skill-set of the students, the course will run as a lateral to the design studio.		
Course content: • Introduction to urban design vocabulary • Graphics, documentation and representation techniques • Techniques of mapping: cognitive maps, layering, etc. • Methods of urban design surveys: quantitative and qualitative • Spatial analysis through models- 3D analysis • The language of media-urban sketching, film and photography		
Course Outcome: A Portfolio comprising of drawings, maps, models, etc		
Essential Readings: • Tibbalds, F., (1992). *Making People-Friendly Towns: Improving the Public Environment in Towns and Cities.* London: Spon press. • Bally Meeda, et al., (2007). *Graphics for Urban Design.* Reston: Thomas Telford Publishing. • Llewelyn-Davies, (2000). *Urban Design Compendium.* Newham: The Housing corporation.		
Suggested Readings: • McGrath. B. (2013). *Urban Design Ecologies*: AD Reader (Paperback). John Wiley & Sons • Campanario, G., (2012). *The Art of Urban Sketching: Drawing On Location Around The World.* USA: Quarry books.		

Subject: Media Lab – I	Subject Code: MAUD0106	Credit: 3

Course Objective: To equip students with GIS software for urban analysis

Course Content:

- Introduction to geo-referencing and projection
- Digitization: introducing vector data and creating vector data
- Building thematic map in GIS: symbology and spatial representation of qualitative and quantitative data using choropleth maps, proportional point symbol, etc.
- Working with elevation data: dem and tin
- Attribute data of vector layer: understanding how tabular data are stored and used, using queries to select records of interest, understanding joins and cardinality concepts and summarizing tables to get statistics on groups
- Data analysis: buffers, overlay, proximity, network analysis
- Non-spatial data – database creation; integration of spatial and non-spatial data; data
- Land suitability analysis through weighted overlay method: land suitability and weighted overlay method
- Create a printable map in GIS: scaling drawings and images; plotting and printing

Course Outcome:

A Project report comprising of application of GIS skills for spatial representation and analysis of a selected precinct.

Essential Readings:
- Chor Pang Lo, A. K. Y., (2006). *Concepts and Techniques of Geographic Information Systems.* Pearson.
- Tim Ormsby, E. N., (2004). *Getting to Know ArcGIS Desktop: The Basics of ArcView, ArcEditor, and ArcInfo* Updated for ArcGIS 9. California: ESRI Press.

Suggested Readings:
- QGIS User Guide (2017)

Subject: Elective-I	Subject Code: MAUD0107	Credit: 2

Course Objective: To expose students to city as a social construct through interactive learning.

Course Outlines:

Elective-I A Writing about Cities

The Course will equip the students read the built environment as a multi-authored text by engaging in urban analysis by interacting with key stakeholders. The intent is to critically observe and understand the physical environment in which we live and apply new perspectives on communities through comparison with other cities around the world through analytical and critical writing.

Elective-I B Indian Urbanism

The course engages in debates on Indian cities through critical questions such as - What can we contribute to an understanding of the problems of the ideas of Indian city, is there an Indian urbanism with longer roots in the ways city space was conceived and used, and spatial practices determined? This subject will focus on urbanism specific to Indian context covering socio-cultural aspects of historical as well as modern era referring to non-spatial dimensions of urbanism beyond enclaves of planning.

Course Outcome:

The subject shall culminate into end term paper written by student on the chosen topic with periodic presentations.

SEMESTER-II

Subject: Design Studio-2	Subject Code: MAUD0201	Credit: 10
Course Objective: Study the complexities of an 'Indian City' as a composition of actors and networks and employing Urban Design strategies in the process of appropriation of urban dynamics. The studio will explore two themes in the semester (as two studio explorations of 8 weeks, or a main studio component and a two week collaborative intensive studio).		
Course Content: - Reading the city as a systemic entity through relevant literature review (specific to the city) and subsequently experiencing the city and its multiple layers of spatial and non-spatial nature. - Analysis and inter-relationships of various factors of historicity, urban identity, morphology, socio-cultural patterns, ethnicity, urban economics, ecology and environment, mobility and global influences form part of the inquiry. - Generating an urban design framework for intervening in the city - Demonstration of Urban Design ideas/strategies at various scales to understand its city level implications.		
Course Outcome: - Systemic understanding of city through spatial analysis of multiple actors and networks. - Design Interventions impacting structural and strategic implications on the city form.		
Essential Readings: - Rossi, A., (1984). *The Architecture of the City*. London: MIT Press. - Lynch, K. (1981) *A Theory of Good City Form*. Cambridge, MA: The MIT Press. - Alexander, C. (1977) *A Pattern Language*. New York: Oxford University Press.		
Suggested Readings: - Rowe, C. and Koetter, F. (1979) *Collage City*. Cambridge, MA: The MIT Press. - Alexander, C. (1987) *A New Theory of Urban Design*. New York: Oxford University Press. - Alexander, C. (1965) *A City is not a Tree*, Architectural Forum, 122(1): 58–61.		

Subject: Urban Form Study II Urban Design Theory	Subject Code: MAUD0202	Credit: 3

Course Objective: Expose students to diverse theoretical discourses on Urban Form.

Course Content:

- Understanding the City: The aim is to explore the range nuances and methods to understand the morphology of the city drawn broadly from disciplines of urbanism, geography, planning and legislative mechanisms.
- Urban Design as a discipline: investigation into theories of place making and the contribution of technology and economy leading to an understanding of what is "urban" today.
- Various schools of thought in urban form studies: The subject shall expose students to various types of models of city from through history. Determinants of urban from can be derived from various theoretical standpoints.
- The emerging urban debates
- The Indian city in the Asian landscape

Course Outcome:
Progressive presentation culmination into a seminar presentation and paper.

Essential Readings:

- Banerjee, T., & Loukaitou-Sideris, A. (Eds.). (2011). *Companion to Urban Design.* Routledge
- Bharne, V. (2013). *The Emerging Asian city: Concomitant urbanities and urbanisms.* Routledge.
- Kostof, S., (1991). *The City Shaped.* London: Thames and Hudson.
- Kostof, S., (2005). *The City Assembled.* London: Thames and Hudson.
- Matthew Carmona, S. T., (2007). *Urban Design Reader*. USA: Architectural Press.

Suggested Readings:

- Cuthbert, A. (2003) Designing Cities: Critical Readings in Urban Design. Oxford: John Wiley & Sons.
- Cuthbert, A. (2007a) The Form of Cities: Political Economy and Urban Design. Vol. 47. Oxford: Blackwell.
- Krier, R. (1993) Urban Space. New York: Rizzoli.
- Larice, M., (2007). The Urban Design Reader.. New York: Routledge.
- Newman, O. (1973) Defensible Space. London: The Architectural Press.
- Sitte, C (1889 orig.) City Planning According to Artistic Principles. See Collins and Collins, 1989.
- Prashad. D., Chetia.S.(2010). New Architecture and Urbanism: Development of Indian Traditions. Cambrige Scholars Publishing.

Subject: Urban Planning and The City-II Urban Regeneration and Housing	Subject Code: MAUD0203	Credit: 3

Course Objective:

Urban renewal and conservation are critical to the recycling and revival of certain city areas and housing is produced in a variety of ways and is a reflection of ethnic, social and economic groups in settlements.

The objective of the course is to equip the students to deal with developments in existing cities and develop an understanding of the dynamics of emerging, traditional and contemporary housing scenarios in India.

Course Content:

Urban Regeneration:

- Historic overview of urban renewal
- Development strategies for regeneration of inner-city areas.
- Case studies of urban renewal, adaptive reuse and brown field projects in India and abroad Infrastructure up gradation, economic regeneration, financing and management of urban renewal schemes eg: AMRUT
- Introduction to conservation, heritage, concepts of historic zones and world heritage sites
- Principles of conservation and successful practices in conservation in India and abroad
- Importance of charters, archaeological Acts, conservation Acts and legislation concepts and approaches to urban conservation in India and abroad.
- Heritage tourism and conservation
- Institutional framework for urban conservation in India

Housing policies and patterns:

- Overview of housing scenario in India, types of housing, demand and shortage
- Traditional housing stock, its contemporary condition and transformations
- Rent control laws, subdivision of property and its effect on traditional housing
- Social housing scenario and the role of the state governments &NGO's
- Slums and squatter settlements, schemes for rehabilitation and improvement
- Role of real estate developers and private builders in the housing sector, comparison with other Asian cities
- Housing as an investment, private public partnership and foreign direct investment their impact on the housing market
- Critical overview of the contribution of central and state governments in the production, control and management of housing
- Housing policy and future housing scenario in India.

Course Outcome:

- Presentation of case studies and fieldwork.

Essential Readings:

- Sykes, P. R. &. H., (2008). *Urban Regeneration*: A Handbook. Sage
- John Diamond, et.al. (Eds.), (2011). *Urban Regeneration Management: International Perspectives.* London: Routledge.

- Michael S. Gibson, M. J. L., (1982). *An Introduction to Urban Renewal*. Hutchinson.
- Couch, C., (1990). *Urban Renewal: Theory and Practice*. London: Macmillan Education Ltd.
- V. Gandotra, et. al., (2009). *Housing: Changing Needs and New Directions*, Authors press.
- Pugh, C., (1990). *Housing and Urbanisation: A Study of India.* New Delhi: Sage Publications.
- Sarkar, P., (2000). *Housing Laws in India: Problems and Remedies*. Eastern Law House.
- Poulose, K. T., (2002). *Reading material on housing.* New Delhi: Institute of Town Planners.
- Dwivedi, R. M., (2007). *Urban Development & Housing in India: 1947 to 2007*. New Delhi: New Century Publications.

Suggested Readings:
- Hutchison, R., (1992). *Gentrification and urban change*. JAI Press Inc.
- Adams, D., (1994). *Urban Planning and The Development Process*. Routledge.
- Alain Durand-Lasserve, L. R., (2002). *Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing Countries.* Routledge.
- Baken, R. J., (2003). *Plotting, Squatting, Public Purpose and Politics: Land Market Development, Low Income Housing, and Public Intervention in India* (King's Soas Studies in Development Geography). Ashgate Pub Ltd.
- Majale, G. et.al., (2004). *The urban housing manual: making regulatory frameworks work for the poor*. London: Earthscan Publication.

Subject: Urban Networks And Systems II Integrated Urban Mobility	Subject Code:MAUD0204	Credit: 3
Course Objective: To understand mobility as an integral component of urban form.		

Course Content:

Integrated Urban Mobility
- Pedestrian networks
- Overview of transportation systems and modes from pedestrian, NMV and IPT to public transport options – BRT, MRTS, LRTs, etc. Issues of public vs. private modes of travel; its design and operating characteristics.
- Classification of roads, road geometries and road components, traffic volume, origin destination, spot speed, speed and delay, parking and pedestrian issues.
- Overview of traffic and transportation surveys
- Introduction to transport planning process- trip generation, trip distribution, trip assignment, modal split, land use transportation models;
- Traffic Management- existing organizational and legal framework, traffic and environmental management techniques; social sustainability in transport and review of the existing traffic management schemes in case cities.
- Design for transit – urban form and movement networks, transit oriented development, last mile connectivity, walkability and pedestrian environments; design and preparation of layout for road intersections, rotaries and signalized intersections
- Integrated urban mobility systems and ITC interfaces

Course Outcome: Presentation of field based assignments.	
Essential Readings: • Kadiyali, L. R., (2011). *Traffic Engineering and Transport Planning*. New Delhi: Khanna. • Papacostas, C. S., (2000). *Transportation Engineering and Planning*. Pearson. • National Urban Transport Policy, (2014) • Jain, A. K., (2008). *Urban Transport: Planning and Management.* New Delhi: APH Publishing Corporation.	
Suggested Readings: • Hutchinson, B., (1974). *Principles of Urban Transport Planning*. USA: McGraw-Hill Inc. • IRC Codes, UTTIPEC and ITDP Street Design guidelines • Comprehensive Mobility plans of case cities.	

Subject: Research Methods– I	Subject Code: MAUD0205	Credit: 2
Course Objective: This course introduces students to the realm of methods and tools commonly deployed in urban research.		
Course Content: • What is urban research? • Design: images, presentations, and tests • Research: concepts, hypotheses, and tests • Research and design cooperation • Research methodology: approaches, designs, and settings • Research quality • Archival research • Urban ethnographic research • Observing physical traces • Observing environmental behavior • Focused interviews • Standardized questionnaires • Quantitative techniques		
Course Outcome: Field based assignments on application of diverse research methods.		
Essential Readings: • Zeisel, J., (2006). *Inquiry by Design: Environment/Behavior/Neuroscience in Architecture, Interiors, Landscape, and Planning.* W. W. Norton. • Ward, K., (2013). *Researching the City.* University of Manchester, UK: SAGE Publications Ltd.		
Suggested Readings: • Groat, D. et al., (2013). Architectural Research Methods. John Wiley		

Subject: Media Lab-II	Subject Code: MAUD0206	Credit: 2

Course Objective: To equip students with advanced software and computer aided techniques for urban analysis

Course Content:
- Space syntax: key concepts of space syntax and their development, spatial properties - connectivity, integration, intelligibility, etc. - of the built environment and explore their impact on user behavior, visual field/isovist characteristics - compactness, occlusivity, clustering coefficient, etc. - of the built environment and explore their impact on user behavior, analyse architectural and urban layouts using space syntax methods - convex analysis, justified graph, axial analysis and visibility graph analysis.
- Overview of Auto CAD, SketchUp, Illustrator, Photoshop and InDesign
- Use of excel software for analyzing data; applications of features of excel- basic and selected advanced features
- Data analysis: Advanced Excel, SPSS
- Technical report writing

Course Outcome:
Presentation of field based lab assignments.

Essential Readings:
- Hillier, B. & Hanson, J. (1984). *The social logic of space.* Cambridge: Cambridge University Press.
- Tal, Daniel. (2009). *Google SketchUp for site design: a guide for modeling site plans, terrain and architecture.* John Wiley
- Gaur, Ajai S (2011). *Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS.* Response books, New Delhi
- Becker, Lucinda M. (2015). *Writing Successful Reports and Dissertations.* Los Angeles. SAGE

Suggested Readings:
- Batty, M. (2001). *"Exploring isovist fields: space and shape in architectural and urban morphology,"* Environment and Planning B: Planning and Design 28, 123-150.
- McClelland D. (2003). *Photoshop 7* Bible Professional Edition. New York Wiley Publishing.

Subject: Elective-II	Subject Code: MAUD0207	Credit: 2

Elective-I(A) Future Cities

Course Objective: To explore the forces that will direct the future of urban evolution through deliberation on the ways new smart technological revolutions are redefining urban life and their potential impact on the discipline of urban design.

Course outline: The course will address the ways in which big data can have an impact in shaping urban theory, how autonomous vehicles will affect urban form, the new forms of civic models in a data intensive world, the potential of IoT architectures in shaping new urban experiences and the role and human impact of A.I. technologies in our cities of tomorrow, as well as the new technologies that will drive future practices of urban design. Students will complement the debate through guided group discussions in the classroom, based on readings and written assignments.

Elective-I(B)- Landscape Urbanism

Course Objective: This subject will focus on the relationships between landscape, ecology, and urbanism, and the theories, tactics, and workings of the field of Landscape Urbanism.

Course outline: Through the lens of landscape, the subject operates within contemporary conditions whereby urban environments are understood as interconnected and related landscapes with far reaching implications at local and global scales. Their implications are reflected in current environmental concerns such as climate change, energy crisis and widespread pollution.

Course Outcome:
The subject shall culminate into end term paper written by student on the chosen topic with periodic presentations.

SEMESTER-III

Subject: Design Studio-3	Subject Code: MAUD0301	Credit: 12
Course Objective: Designing in the transforming urban environment with a focus on urban regeneration, participatory mechanisms or urban extensions. The studio will explore two themes in the semester (as two studio explorations of 8 weeks, or a main studio component and a two week collaborative intensive studio).		
Course Content: • Study of degraded urban fabric, patterns of decay, socio-political issues and urban regeneration strategies/intervention to be explored in this studio. • Shaping urban extensions through morphological approach, infrastructure inserts, addressing environment concerns and imageability. • The involvement of user groups and decision-making agencies is a part of the studio methodology.		
Course Outcome: • Urban Design response in terms of guidelines/strategies, programme formulation, design demonstration, phasing and feasibility analysis to address urban transformations		
Essential Readings: • Trancik, R. (1986) *Finding Lost Space – Theories of Urban Design.* New York: Van Nostrand Reinhold. • Barnett, J., (1974). *Urban design as Public Policy: Practical Methods for Improving Cities.* Michigan: Architectural Record Books.		
Suggested Readings: • Krier, L. (1978*) Urban transformations* (Special Issue) The Architectural Design, 48(1).		

Subject: Common Pool Elective	Subject Code: MAUD0302	Credit: 3

Elective-I(A) Urban Design Politics

Course Objective: To investigate the nature of the relations between urban form and politics.

Course outline: This is a course about the ways that urban design contributes to the distribution of political power and resources in cities. "Design," in this view, is not some value-neutral aesthetic applied to efforts at urban development but is, instead, an integral part of the motives driving that development. Though many urban designers and architects often seem to regard "good design" as somehow independent from social and political factors affecting its production and use, design efforts are influenced by politics in at least two important ways. First, urban design proposals may be subject to challenge by a variety of groups during the planning process. Second, political values, whether tacit or explicit, are encoded in the resultant designs. The course investigates the nature of the relations between built form and political purposes through close examination of a wide variety of situations where public and private sector design commissions and planning processes have been clearly motivated by political pressures, as well as situations where the political assumptions have remained more tacit. Cases from both developed and developing countries will be explored.

Elective-I(B)- City, People and Art

Course Objective: To reveal cities in their various aspects by learning from diverse art forms.

Course outline: Every city is represented in its visual, performing and literary arts. The city is either a constant backdrop or the central character in all valid artistic productions which deal with urban situations. A city's socio-cultural and morphological transformations remain documented in its literature, paintings, plays and films and in spite of inevitable changes in its urban fabric over time, certain images remain embedded in the public memory of place, which are associated with the very identity of the city. In this elective, learning from diverse arts pertaining to cities, would reveal cities in their various aspects and equip a designer to take up critical design initiatives with a perception of the presence of the past and the future and the presence of the particular, the *locus solus.* The course will have a strong component of art generated by urban communities across cultures.

Elective-I(C)- Resilient Cities

Course Objective: To systematically understand urban resilience that connects both man-made as well as natural conditions in the urban context.

Course outline:
Urban Resilience is a lens for addressing the challenges of cities, which grow ever more complex as the world becomes more globalized and urbanized. This course will address resilience as a process of community-context interaction where communities navigate and negotiate their social, cultural, environmental and physical resources in order to improve

their wellbeing by altering urban adversities. The course focus is on culture of cities as an accelerator to the social dimension of resilience by strengthening the social capital of a city, fostering their expressions of creativity, encouraging cohesion and integration, and promoting pluralism and equality in cities. The course will look at various models of resilient cities and the role of urban design through emphasis on creativity, heritage, individual and collective expression, the promotion of local knowledge systems and the protection of cultural diversity.

Course Outcome:
The subject shall culminate into end term paper written by student on the chosen topic with periodic presentations.

Subject: Urban Form Study-III City Discourses	Subject Code: MAUD0303	Credit: 3

Course Objective: Expose students to an advanced understanding of Urban form through multidisciplinary theoretical discourses.

Course Content:

Cities and Culture
Overview of cross-cultural influences in city development
Subaltern urbanism, gentrification and, gender politics
Memory violence and urban space
Urban life-style diversity and spaces of consumption

Globalization and Cities
The politics of globalization and liberalization and their manifestations in the post-colonial city
From the geographies of modernity to post-modernity and beyond, the case example of any Megalopolis and contemporary development trends across the world
Discoveries and implications of the post-metropolis, globalization and transnational urbanism
Contemporary trends in the Asian city, conflicts, contestations and hybridization within the multilayered urbanities of Indian cities

Cities and Network Society
City as a human network - social structure and urban form
Big-Data and urban development studies
Virtual knowledge systems, consumption patterns and urban space

Course Outcome:

Progressive presentation culmination into a paper presentation.

Essential Readings:

- Colin Rowe, F. K., (1978). *Collage City*. Massachusetts: MIT Press.

- Venturi, Robert, Denise Scott Brown (1977) *Learning from Las Vegas: The Forgotten Symbolism of Architectural Form*
- Cuthbert, A. R., (2011). *Understanding Cities: Methods in Urban Design.* New York: Routledge.

Suggested Readings:

- Andres Duany, E. et al., (2000). *Suburban Nation: The rise of sprawl and the Decline of American Dream.* New York: North point press.
- Ellin, N. (1999) *Postmodern Urbanism.* Vol. revised edition. New York: Princeton architectural press.
- Hayden, D. (1997) *The Power of Place, Urban Landscapes as Public History.* Cambridge: The MIT Press.
- Zukin, S. (1995) *The Cultures of Cities.* Cambridge, MA: Blackwell.
- Lefebvre, H., (1974). *The Production of Space.* Massachusetts: Basil Blackwell Ltd.
- Sassen, S., (2001). *The Global City: New York, London, Tokyo.* New Jersey: Princeton University press.
- Castells, M., (1996). *Rise of a Networked Society.* U.S.A: Blackwell Publishing.
- Steve Graham, S. M., 2001. *Splintering Urbanism.* London: Routledge.
- Harvey, D., (2012). *Rebel Cities: From the Right to the City to the Urban Revolution.* London: Verso.
- Sennet, R., (1977). *The fall of Public Man.* New York: Alfred A. Knopf Inc.

Subject: Urban Networks And Systems III Ecology and Environment	Subject Code: MAUD0304	Credit: 2

Course Objective: To place urban design within the framework of environmental issues as well as to provide an overview of efforts to mitigate the negative inputs from development. The aim of the course is to inform the student of the latest theories and techniques available as tools for design and development, create awareness of the legislative mechanisms for environmental protection, climate change and Environmental Impact Assessment (EIA).

Course Content:
- Introduction to urban ecology, notions of carrying capacity, human-nature interaction, degradation of forests, land and water, housing resources and its impact on urban environments, city design, management of resources.
- Environmental issues with respect to current problems like global warming, climate change-how urban design play role in this dynamic natural world.
- Government policies, environmental laws and programmes, politics of environment in cities and urban areas, ecological-economical discourse with respect to development and case studies of meaningful urban design responding to nature and ecology.
- Overview of international and national policies and programmes - Stockholm Conference, Bunntdland Commission, Earth Summit, Agenda 21, Habitat I, II & III, Kyoto Protocol etc.

- Strategies and concepts of sustainable development for resource conservation as relevant to settlement planning & design
- Environmental Planning techniques - analysis of carrying capacity, ecological footprint and land suitability, vulnerability assessment and microzonation, pollution modeling, eco city development etc.
- Case studies of application of concepts at various scales - regional, settlement and buildings (emphasis on urban eco systems green buildings, pollution control, energy use, water harvesting, waste treatment, solid waste management etc.)
- Definition of environmental Impact assessment, methods of EIA, procedures - formats, Important clearances, time frame, legal framework of EIA
- Climate change and cities- resilient cities, future cities

Course Outcome:

Students shall be judged on the basis of end term seminar in this subject. Periodic assessment shall be scheduled to keep the constant progress of the seminar.

Essential Readings:

- Pickett.,S.T.A. et al., (2013). *Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities*. Springer.
- Hahs, A.K. et. Al. (2009). *Ecology of Cities and Towns: A Comparative Approach*. Cambridge University Press.

Suggested Readings:

- Douglas, Ian, ed.(2011). *Routledge handbook of urban ecology*. London. Routledge.
- Kulkarni V. S.,et al.(2002).,*Handbook of EIA*. Scientific Publishers, India
- *EIA Manual*, Ministry of Environment and Forests (2001), Govt. of India
- Hardy. J.T,(2003).*Climate Change – Causes*, *Effects and Solutions*, Wiley

Subject: Thesis Programming	Subject Code: MAUD0305	Credit: 3

Course Objective:

Initiation into the thesis idea through rigorous process of literature review and case studies culminating into an identified thesis proposal.

Course Content:

- Identifying the areas of interest in the contemporary or specific urban design theories by simultaneously identifying current issues of urban design.
- Role of urban designer and the kind of approach required to the various issues and application of theory and enquiry
- Conventional steps, stages and concept and framing a thesis/research proposal and making a literature review
- Framing the issue or research question, approach and way of inquiry into probable domains (Indian cities/specific precinct), literature review, relevant case studies, writing the proposal for design /research based thesis

Course Outcome:

Thesis proposal containing:

- Thesis title
- Literature review
- Best practices/Case studies
- Identified methodology
- Identified sites/demonstration areas
- Work schedule

Subject: Summer Internship	Subject Code: MAUD0306	Credit: 2
Course Objective: to undergo professional training and understand diverse aspects of urban projects.		

Course Content:
- Each student shall have to undergo professional training for a period of at least 6 weeks in an establishment approved by the department.
- The practical training will commence during the summer break between second and third semester.
- Scope of services for different projects like master plan for urban area, zonal district plan, sector/neighborhood; layout, group-housing schemes, commercial centers, industrial estates, etc.
- Preparation of urban design programme and coordination of various authorities
- The internal assessment marks for the practical training will be awarded to each student by the Prof. in charge in consultation with the course coordinator on the basis of the performance report from the firm/organization under which the training was carried out.
- The external jury will award the marks for the practical training on the basis of viva-voce examination of the student on the work rendered by the student during training.

Course Outcome:
A student will be required to submit a performance report from the firm/organization under which training is undertaken as well as a detailed report on the work carried out by him during the training.

Subject: Urban Design Project Management	Subject Code: MAUD0307	Credit: 2
Course Objective: to introduce the students of the various methodologies, policies and financial frameworks pertaining to urban projects.		
Course Content:		

- Introduction to Development Planning and management; Society, State and Market; Privatization, Liberalization and Decentralization; Equity and Development
- Introduction to project planning, theories, concepts and management
- Overview of the various methodologies of project definition, planning and formulation.
- Norms, standards, aspects and methods of project appraisal

- Concepts of Project management, systems, frameworks and techniques
- Implementation strategies, scheduling, activities, progress reviews, corrective actions etc
- Economic and financial feasibility concepts and methods
- Project funding, economic feasibility and methods of recovery
- Mandatory legal and environmental approvals
- Special projects such as special economic zones, export processing zones, townships etc.
- Case studies of successful projects and planning schemes are encouraged to be used as learning models.

Course Outcome:
Students shall be judged on the basis of periodic assessment through assignments.

Essential Readings:

- *A Guide to the Project Management Body of Knowledge*, (2008). Fourth Edition. Project Management Institute, USA.
- Sears. S.K, et. al.(2008) *Construction project management: A Practical Guide to Field Construction Management*. John Wiley & sons
- Chitkara. K. K. (1998). *Construction Project Management: Planning, Scheduling and Controlling*. Tata McGraw-Hill
- Chandra. P. (2008). *Financial Management*. Tata McGraw-Hill
- Ramaswamy B. S., (2003) *Contracts and their Management.* Lexis Nexis
- Batra.L. (2009). *A Review of Urbanisation and Urban Policy in Post-Independent India* (Working Paper Series). JNU

Suggested Readings:
- PAR, DSR, DAR, etc. and contract documents by CPWD.
- CPWD, MES, FIDIC, JCT, ADB, World bank, etc.: General & Special conditions of contract and standard operating procedures.
- Shaw, Annapurna. (1996). *Urban Policy in Post-Independent India: An Appraisal.* Economic and political weekly. 31. 224-228.
- Harvey, D. (1989). *From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism*. Geografiska Annaler. Series B, Human Geography, 71(1), 3-17

SEMESTER IV

Subject: Design Thesis	Subject Code: MAUD0401	Credit: 20
Course Objective: An opportunity to undertake independent research enabling students to apply principles of Urban Design at an advanced level, generating design proposals/research thinking to complex urban issues in diverse urban settings.		
Course Content: This thesis is a self-directed exploration of an urban design topic of the students' choice, which may be submitted for examination in the form of a **Research Thesis Alone OR a Written Dissertation with a Design Proposal.** Both types of products are presented to an external jury for final review where students are expected to position their work in the context of contemporary urban design theory and to defend their research conclusions and/or design propositions with context to application of the contemporary urban design theory and practice. The students will work on and complete the written master thesis independently. In the process, they will develop their own position and viewpoint with regard the concept-, planning-, or design-oriented theme that they have drawn from their research and practical experience. The students will choose the theme themselves and develop a research proposal on it (the enquiry might be carried out by design or by research methods) and eventually concluding in a design or a written thesis and it should correspond to the advanced level of knowledge gained in the subject area Urban Design.		
Course Outcome: • Final submission in the form of thesis report, drawings, and models as stated in the Thesis Manual.		

Subject: Report Writing	**Subject Code: MAUD0402**	**Credit: 3**

Course Objective:

The course will run parallel to the design/research thesis with intent to help students to progressively refine and complete the thesis report.

Course Content:

The course will help students in creatively and critically writing about the various theoretical explorations undertaken in the thesis.
This thesis report will include the title page, abstract, table of content, list of tables, illustrations, graphs, diagrams, introduction, literature review, methodology, precedents – exemplars – best practice, design: site, analysis, design, exploration, options, conclusions, further studies, bibliography, annexes and appendices. The above list is just indicative. Students may use different terminology to name the different parts/sections of their research or the general structure may differ from the above mentioned due to the nature of the research.

Course Outcome:

The Thesis Report will be in A4 Format and will also contain A3 folded prints of sheets and maps. Word limit of the report would be from minimum 10000 words to maximum 20000 words.

Subject: Urban Studies Lab	Subject Code: MAUD0403	Credit: 2
Course Objective: The Urban Studies Lab will give an opportunity (in a span of four semesters including summer and winter breaks) for explorations on urban form and also collective pursuits of design of cities. The objective of urban studies laboratories is to allow free experimentation and in-depth inquiry into the patterns and processes of cities as well as connected production of urban form and space.		
Course Content: Students may choose from any of the following: • Workshops- Minimum number of days should be 1 week • Winter/Summer schools /Certificate Courses (in the realm of Urban design/Urban Studies) opted for should be certified by recognized universities • For Urban Design competitions, the work will be evaluated and credited by a team of experts. Maximum persons in a group should be 4. (or as decided by the subject coordinator) • For paper presentations/ publication in journals, magazines etc., maximum number of students in a group would be 2. (or as decided by the subject coordinator) **Note**: For all the above, prior discussion, selection and sanction of the type/ scale/mode of exercise to be adopted need to be done with the subject coordinator (s). It is required to establish connection to Urban Design.		
Course Outcome: Presentation and report of exploratory studies with policy input carried out successfully by the student in the span of the course, the evaluation of which would be conducted in the 4th Semester.		