

SEMESTER –II

COURSE: URBAN DESIGN STUDIO-II INTEGRATED WITH ECOLOGY AND SITE PLANNING			
Course Code:	MAUD201	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:4:6	SEE Marks	50
Total Hours of Pedagogy	12	Total Marks	100
Credits	9	Exam Hours	Viva Voce
<p>Course Learning Objectives:</p> <ol style="list-style-type: none"> 1. The overall goal of this studio shall be to incorporate and test ideas inculcated in the parallel streams of theories and principles. Objectives shall be; 1. To identify and categorize various non formal issues which are relevant in the process of designing an urban environment 2. To understand the process of making a physical planning proposal viable with available techniques of financing and feasibility 3. To understand the role of various interest groups in the realization of urban design scheme. 2. To introduce students to the art of site planning and the concerns of environmental variables in the process of urban design. 			
<p>Studio Outline</p> <ol style="list-style-type: none"> 1. The studio shall begin with documenting implemented urban design as a case in understanding the process followed in each of schemes. Documentation shall be intensive exercises with teams of two who will identify the project (across India) and illustrate the entire process of design as well review the present status of the project and realization of stated objectives. 2. The main studio project shall be chosen within an area of a city (or even a small city) which is undergoing rapid changes triggered by an identifiable event or policy. The studio shall debate the needs of conserving the overall character of the chosen area with an in depth analysis on the social- cultural issues. Design of the proposed built element shall be preceded by a comprehensive urban design scheme which shall be detailed. 3. Projects like; Tourism development; Conservation of Natural and Built Heritage; intervention in an urban area which has not been able to maintain its cultural moorings due to market forces shall be attempted. 			
Teaching Learning Process	Lecture sessions, Site visits, Student presentations, Group discussions and presentation, Periodic Reviews, Workshops are part of the Teaching Learning Process		

Assessment Details (Both CIE and SEE)

Assessment Details (both CIE and SEE) The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation: Continuous Internal Evaluation will be based on Internal Reviews, External Reviews and Final studio report and individual project Submission/VIVA VOCE

Semester End Examination: Viva-voce: The viva voce shall be conducted for a duration of 20 minutes (per student) for the subjects listed under viva voce for all the semesters

Suggested learning Resources

1. The Kinetic City & Other Essays, Rahul Mehrotra, ArchiTangle GmbH; 2021
2. The art of building cities: Camillo Sitte
3. Indian cities: Annapurna Shaw Oxford University press
4. Contesting the Indian City: Global Visions and the Politics of the Local: Gavin Shatkin: Wiley Blackwell
5. Sacredscapes and Pilgrimage systems- editor Rana P B Singh-Shubhi Publications
6. housing & urbanization- Charles Correa
7. Urbanisation in early historic India-George Erdosy
8. Peter Jacobs and Douglas Way, Visual Analysis of Landscape Development, Harvard Press.
9. Gary O. Robinette (Ed), Landscape Planning and Energy Conservation. Van-Nostrand Reinhold.
10. Design with Nature: Ian L. McHarg.
11. The Landscape of Man: Geoffrey Jellicoe and Susan Jellicoe.
12. Geography of Settlements. Author: R.Y. Singh. ISBN,
13. Site Planning and Design Handbook. Thomas Russ (Author) / McGraw-Hill
14. RiverCentric Urban Planning Guidelines. TOWN AND COUNTRY PLANNING ORGANISATION MINISTRY OF HOUSING AND URBAN AFFAIRS GOVERNMENT OF INDIA
15. Landscape Architecture, Fifth Edition: A Manual of Environmental Planning and Design

Web links and Video Lectures (e-Resources)

- 1 <https://www.youtube.com/watch?v=wJwZ0ID06NM>
- 2 <https://www.youtube.com/watch?v=gOGdL7uaBGc>
- 3 <https://www.youtube.com/watch?v=xc4ayMUxuD4>
- 4 <https://www.youtube.com/watch?v=vTLcxny7YSg>
- 5 https://www.youtube.com/watch?v=TV21eP0uu_0
- 6 <https://www.youtube.com/watch?v=ITTyzy1dZ8s>
- 7 <http://environmentclearance.nic.in/writereaddata/FormB/agenda/290120200A101>

Skill Development Activities suggested

1. Study, research and place reading and representation techniques at region/city/precinct scale
2. Mapping the observation and inferring at region/city/precinct scale
3. Skills that enable analysis and identify the Urban design issues
4. Ability to program Urban design strategies and Design project
5. Observation of Natural setting to identify it as an outcome of, Geological, hydrological & climatic

processes.

6. Bring to Note implications of ecology disturbances by human action in our current times.
7. Noting Good practices from Traditional knowledge as well New Research applications.
8. Learning from Awarded projects, workshops conducted.
9. Knowledge bank form Environmental laws, Legal cases, Critiquing Bye Laws.

Course outcome (Course skill set)

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

SI No	Description	Blooms level
CO1	Able to identify urban study theme and the city	IV
CO2	Engage with the place, people/stakeholders ,method of data collection/documentation of the practices/parameters that influences the city and built fabric	V
CO3	Able to Identify issues/conflicts that influence city and precinct	V
CO4	Able to generate UD strategies at city and precinct scale	VI
CO5	Urban Design intervention and design demonstration	VI

Program outcome of this course

SI No	Description	POs
1	Ability to read relate to theme and the city	1,2,8,9
2	Ability to engage, interact and document the place	1,2,4,8
3	Able to generate strategies to address the UD issues	2,3,5
4	Ability to demonstrate urban design solution	5,7,9,10

Mapping of CO s and PO s

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	1	-	-	3	2	2	1
CO2	3	3	2	2	-	2	2	2	2	1
CO3	2	3	3	1	-	-	1	2	3	2
CO4	2	3	2	1	3	1	2	2	2	2
CO5	1	2	2	2	3	2	2	2	2	3
Average	2.2	2.8	2.4	1.4	1.2	1	2.0	2.0	2.2	1.8

Graduate attributes

Know ledge	Analyti cal skills	Applicati on of research	Applicatio n of latest technology and tools	Generate design/s olution	Ethics	Societa l concer n	Environ mental concer n	Collabo rative aptitud e	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Mapping correlation	Low	Medium	High	No
	1	2	3	--

COURSE: URBAN CONSERVATION			
Course code:	MAUD202	CIE Marks	50
Teaching hours /Week (L:P:SDA)	0:2:2	SEE Marks	50
Total Hours of Pedagogy	4	Total Marks	100
Credits	4	Exam Hours	03
Course Learning Objectives:			
The course is intended to introduce and to understand the various issues of urban conservation in terms of feasibility, community participation and heritage charters across the country.			
Module-1			
Introduction to conservation of historic and inner city areas. Concepts of conservation in India and Understanding INTEGRATED HERITAGE MANAGEMENT for historic cities.			
Teaching Learning Process	Introduction to the course content through lectures and discussion		
Module-2			
Socio-Economic development, Tourism Infrastructure Development, and role of Urban Design in Understanding of CULTURAL LANDSCAPES, SACRED CITIES.			
Teaching Learning Process	Introduction to the course content through lectures and case study presentation		
Module-3			
Institutional aspects of Conservation- Charters, World heritage legislation and sites, Conservation Acts and legislation and available institutional frame work of conservation in India-New schemes of Government like HRIDAY for heritage cities, SMART CITIES.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation		
Module-4			
Conservation area practice, Adaptive Reuse, up gradation programs in old areas, infill design and regeneration of inner city areas.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation		
Module-5			
Conservation management, Community Participation, Economic Regeneration, Financing and Implementation of frame work for Redevelopment and Revitalization projects.			
Case studies in India and abroad to illustrate the above mentioned concepts and approaches-Introduction to World Heritage Sites and Site Management Plans			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.		
Assessment Details (Both CIE and SEE)			
The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.			
Continuous Internal Evaluation: Continuous Internal Evaluation will be based on assignments, group or individual assignment/ presentation and submission.			
Semester End Examination:			
Theory examination shall be held for 3-hour duration, students are expected to answer five full questions, one question from each module			

Suggested learning resources:

1. Feildan Bernard, Conservation of Historic Buildings, Butterworth-Heinemann.
2. Fitch James, Historic Preservation- A Curatorial Approach, University Press of Virginia.
3. People-Centered Methodologies for Heritage Conservation: Exploring Emotional Attachments to Historic Urban Places (Critical Studies in Heritage, Emotion and Affect)by Rebecca Madgin and James Lesh
4. Equity in Heritage Conservation: The Case of Ahmadabad, India (Routledge Research in Architectural Conservation and Historic Preservation)by Jigna Desai
5. Sacredscapes and Pilgrimage systems- editor Rana P B Singh-Shubhi Publications.

Web links and Video Lectures (e-Resources)

- 1 <https://www.youtube.com/watch?v=W0GfpZPI1VM&t=3361s>
- 2 <https://www.youtube.com/watch?v=LpL8tuIJgHY>
- 3 https://www.youtube.com/watch?v=_5sTNavbbeQ
- 4 https://www.youtube.com/watch?v=Gath5_YVh8o

Skill development activities suggested

1. Site/city visit and mapping the observation related to urban conservation
2. Policy/ guidelines related to urban heritage conservation and impact on built.
3. Application of conservation management practice and stakeholder

Course outcome (course skill set)

- Identify/Understand and demonstrate the policies/charters that influence urban fabric
- Understand the conservation and related aspects though national and international projects at various scale

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

SI No	Description	Blooms level
CO1	Various concepts conservation and heritage management in India	III
CO2	Indian heritage cities and Urban design approaches	V
CO3	Analyze conservation policy and charters and its impact on built through case studies	V
CO4	Able to identify various heritage conservation approaches to inner core of Indian cities	IV
CO5	Urban heritage management and various approaches	V

Program outcome of this course

SI No	Description	POs
1	Understand Heritage management concepts in conservation	1,2
2	Able to identify the scope of urban design in urban conservation	2,4,7,9
3	Familiarization of various concepts and approaches in conservation of urban core	3,7,8,9
4	Exposure to the policies related to management of heritage sites and plans	1,7,8,10

Mapping of CO's and Po's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	2	-	-	-	1	1	1	1
CO2	3	2	1	-	-	-	2	2	3	2
CO3	1	3	2	-	-	-	2	2	2	3
CO4	1	3	2	-	-	-	2	2	2	2
CO5	1	2	2	-	-	-	2	1	1	2
Average	1.8	2.2	1.8	0	0	0	1.8	1.6	1.8	2.0

Knowledge	Analytical Skills	Application of Research	Application of latest technology /tools	Generate Designs/Solutions	Ethics	Societal Concern	Environmental concern	Collaborative aptitude	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Graduate attributes

Mapping Co-relation	Low	Medium	High	No
	1	2	3	-

COURSE: CONTEMPORARY THEORIES OF URBANISM AND ARCHITECTURE			
Course code:	MAUD203	CIE Marks	50
Teaching hours /Week (L:P:SDA)	3:0:0	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	03
Course Learning Objectives:			
To expose the students to the current theoretical trends in architecture and urbanism, with focus on Western architecture but with cross reference to Contemporary Indian trends using relevant examples.			
Module-1			
Post Modernism and post functionalism. Post script to the modern movement. Semiotics and structuralism. Post structuralism and Deconstruction. (Eg. Works of Robert Venturi, Robert Stern, Charles Moore, Peter Eisenman, Bernard Tschumi, Zaha Hadid, Daniel Libeskind and similar architects with examples.)			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and case study presentation		
Module-2			
Urban theory after Modernism, Contextualism, Main Street and beyond. Collage city and towards the contemporary city.			
Teaching Learning Process	Introduction to the course content through lectures and discussion.		
Module-3			
School of Venice, territory and architecture, an analogical architecture. Political and ethical agenda, the ethical function of architecture. (Vittorio Gregotti, Aldo Rossi).			
Teaching Learning Process	Introduction to the course content through lectures, discussion and debate		
Module-4			
Heidegger's thinking on architecture, a look at the phenomenology of architecture, Phenomenology and meaning of place. (Christian Norberg-Schulz, Juhani Pallasmaa, Spirit of Place and Indian temple towns and vernacular architecture).			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.		
Module-5			
Critical regionalism, local culture and universal civilization. Tectonic expression. Brief review of the issues of Gender in architecture. City design examples such as Lutyens Delhi, Chandigarh, Bhubaneswar, Shantiniketan and Relevance of Postmodern theory in India.			
Teaching Learning Process	Introduction to the course content through lectures , discussion, debate and presentation.		
Assessment Details (CIE and SEE)			
The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.			

Continuous Internal Evaluation:

Continuous Internal Evaluation will be based on assignments, presentation and submission..

Semester End Examination:

Theory Examination shall be held for 3-hour duration, students are expected to answer FIVE full questions, one question from each module.

Suggested learning resources:**Books:**

1. Kate Nesbit, Theorizing a new agenda for architecture, Princeton Architectural Press, 1996.
2. Michael Hayes, Architecture Theory since 1968, MIT Press, London.
3. Kevin Lynch, Good City Form, MIT Press, London.
4. Bernd Evers, Architectural Theory From Renaissance to the Present, Taschen, Cologne, 2002.
5. Geoffrey Broadbent, Emerging Concepts in Urban Space Design, Taylor & Francis, 1995
6. Jon Lang, Concise History of Modern Architecture in India, Permanent Black, 2010
7. Dr. Solomon Benjamin, Urban Informality
8. Shilpa Ranade, Gender and Space

Web links and Video Lectures (e-Resources)

<https://www.youtube.com/watch?v=nBUq21iahpl&t=23s>
<https://www.youtube.com/watch?v=esPJRnKEyHU&t=11s>
[youtube.com/watch?v=aW4LY3iHJal](https://www.youtube.com/watch?v=aW4LY3iHJal)
<https://www.youtube.com/watch?v=0wLsMZ4tsQ&list=RDLVaW4LY3iHJal&index=5>
<https://www.youtube.com/watch?v=jgBU3yJD5d4>
<https://www.youtube.com/watch?v=8MK1vEQkego>
<https://www.youtube.com/watch?v=YsNpJp4DKTw>

Skill development activities suggested

The following skills with respect to urban and built form:

- Critical Reading
- Presentation of analysis
- Identifying other relevant perspectives
- Critique of urban and built form

Course outcome (course skill set)

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

SI No	Description(refer module outcome)5 module=5outcome	Blooms level
CO1	Assume a critical position	V
CO2	Identify theoretical lens of project or reading	IV
CO3	Positional analysis of urban and built form	V
CO4	Clarify perspectives of stakeholders	III
CO5	Factors determining urban and built form	VI

Program outcome of this course

Sl. No.	Description	POs
1	Perspectives of Individual and the collective	1,2,3
2	Constructs linking urban and built form to other disciplines	2,3
3	Identifying intentions and challenges of urban and built form	3,4,7
4	Implementing critique to urban and built form	3,4,9,10

Mapping of COs and POs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	1	-	-	2	2	-	-	1
CO2	3	3	2	-	-	1	2	-	2	2
CO3	1	3	2	2	-	1	2	2	1	2
CO4	-	2	3	2	-	1	2	1	2	3
CO5	-	-	2	2	-	1	1	1	2	2
Average	1.2	2.0	2.0	1.2	-	1.2	1.8	0.8	1.4	2.0

Graduate attributes

Knowledge	Analytical skills	Application of research	Application of latest technology/tools	Generate design/solutions	Ethics	Societal concern	Environmental concern	Collaborative aptitude	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Mapping co-relation	Low	Medium	High	No
	1	2	3	-



COURSE: URBAN GOVERNANCE AND PROJECT FINANCE			
Course code:	MAUD204	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:0:2	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	03
Objective: Introduction to the mechanism of urban governance and fiscal foundations of urban development.			
Module-1			
1. Basic concepts of urban governance and definitions. Principles of governance of urban areas. Local administration, Structure of local bodies and their role in urban governance, plan making and implementation. Recent amendments to the Constitution and their implications on governance. Concepts of capacity building and related issues of development of man power. Central and State systems of local administration.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and case study presentation		
Module-2			
People's participation- theories, concepts and methods. Participatory governance definition, processes and methods. Role of people's participation in plan making. People, NGOs and civil society and urban development.			
Teaching Learning Process	Introduction to the course content through lectures and discussion.		
Module-3			
The economics of geographical concentration -urbanization, history of urbanization, agglomeration economics, and simple theory of interurban location, location decisions of households			
Teaching Learning Process	Introduction to the course content through lectures, discussion and debate		
Module-4			
Finance mechanisms of local administration. Various forms of revenue generation and budgeting. Innovations in methods of revenue generation.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.		
Module-5			
Types of urban development projects, project cycle, Project identification, selection, preparation, appraisal, monitoring and evaluation.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.		
Assessment Details (CIE and SEE) The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.			
Continuous Internal Evaluation: Continuous Internal Evaluation will be based on assignments, presentation and submission.			
Semester End Examination:			

Theory Examination shall be held for 3-hour duration, students are expected to answer FIVE full questions, one question from each module.

Suggested learning resources:

Books:

1. Maria Pinto, Metropolitan City Governance in India, Sage Publications, New Delhi.
2. John Abbott, Sharing the City: Community participation in urban Management, Routledge, Abingdon, 1996.
3. Jain R.B. Public Administration in India, 21st Century challenges for Good Governance. Deep and Deep Publications Pvt. Ltd, New Delhi.
4. Michael Bambarger and Eleanor Hewitt, Monitoring and Evaluating Urban development Programmes: A hand book for program managers. The World Bank, 1988.

Web links and Video Lectures (e-Resources)

1. Governance as theory: five propositions by Gerry Stoker.
https://mycourses.aalto.fi/pluginfile.php/1382648/mod_folder/content/0/AR3%20-%20Stoker%2C%201998.pdf?forcedownload=1
2. Urban Governance by Mike Raco, International Encyclopedia of Human Geography (Second Edition), 2020. <https://www.sciencedirect.com/topics/social-sciences/urban-governance>
3. World development report, 2017. <https://www.worldbank.org/en/publication/wdr2017>
4. Governance Matters by Daniel Kaufmann, Aart Kraay, Pablo Zoido-Lobaton
<https://www.imf.org/external/pubs/ft/fandd/2000/06/pdf/kauf.pdf>
5. Urban Actors according to Economic and Social Commission for Asia and the Pacific (UNESCAP, 2009) https://www.researchgate.net/figure/Urban-Actors-according-to-Economic-and-Social-Commission-for-Asia-and-the-Pacific_fig4_322581192
6. Governance in the Twenty-first Century by James N Rosenau
<https://www.jstor.org/stable/27800099>
7. Evaluating the quality of public governance: indicators, models and methodologies by Tony Bovaird and Elke Löffler
https://www.researchgate.net/publication/249688561_Evaluating_the_Quality_of_Public_Governance_Indicators_Models_and_Methodologies
8. Global governance and global rules for development in the post-2015 era by United Nations
https://www.un.org/en/development/desa/policy/cdp/cdp_publications/2014cdppolicynote.pdf
9. Transnational Governance and Democratic Legitimacy: A Conceptual Overview By Peter van Ham
<https://www.clingendael.org/sites/default/files/2016-02/Transnational%20Governance%20and%20Democratic%20Legitimacy%20%28conceptual%20overview%29.pdf>
10. TRANSNATIONAL GOVERNANCE Introduction: A World of Governance – The Rise of Transnational Regulation by Marie-Laure Djelic and Kerstin Sahlin
https://www.researchgate.net/publication/258837392_TRANSNATIONAL_GOVERNANCE_Introduction_A_World_of_Governance_-_The_Rise_of_Transnational_Regulation
11. Governance network theory: past, present and future by Erik-Hans Klijn and Joop Koppenjan
https://www.researchgate.net/publication/272138186_Governance_Network_Theory_Past_Present_and_Future
12. Governing Policy Networks: a Network Perspective on Decision Making in Network Society by Erik-Hans Klijn and Joop F.M. Koppenjan
<https://research.tudelft.nl/en/publications/governing-policy-networks-a-network-perspective-on-decision-makin>
13. Ladder of Citizen Participation, Sherry Arnstein 1978
<https://organizingengagement.org/models/ladder-of-citizen-participation/?print=pdf>
14. Rapid rural appraisal, participatory rural appraisal and aquaculture by Philip Townsley, Chapter 3: <https://www.fao.org/3/w2352e/W2352E03.htm#ch3>

15. N. Narayanasamy, Participatory Rural Appraisal: Principles, Methods and Application (New Delhi, India: SAGE Publications India Pvt Ltd, 2009),
 25. <https://sk.sagepub.com/books/participatory-rural-appraisal>
 16. Robert Chambers, "The Origins and Practice of Participatory Rural Appraisal," World Development 22, no. 7 (July 1994): 954-957

Skill development activities suggested

The following skills with respect to urban governance and project finance

- Critical Reading
- Spatial understanding of city and governance
- Functioning of city
- Identifying other relevant perspectives

Course outcome (course skill set)

Students should be able proficient in

- Concepts of urban governance, overlapping of territory, various stakeholder and their role in the city
- Infrastructure and finance aspects of local administration.

SI No	Description(refer module outcome)5 module=5outcome	Blooms level
CO1	The application of people participation in the existing system	V
CO2	Role of NGOs and stakeholders in people participation	IV
CO3	Need for the people participation in making of Urban Design project	V
CO4	Existing municipal finance system and future	III
CO5	Identify the various project stages	IV

Program outcome of this course

Sl. No.	Description	POs
1	Able to relate theories involved in governance with development	1,2,3
2	Able to identify various methods and process involved in people planning	2,3
3	Understand the Structure of ULB and its functional relation with state	5,6,7
4	Prepare various stages involved in project cycle	8,9,10

Mapping of COs and POs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	1	-	-	2	2	-	-	1
CO2	2	3	2	-	-	1	2	2	2	2
CO3	1	3	2	3	-	1	2	3	1	2
CO4	1	2	3	2	-	1	2	2	2	3
CO5	-	-	2	2	-	1	1	1	3	2
Average	1.2	2.0	2.0	1.4		1.2	1.8	1.6	1.6	2.0

Graduate attributes

Knowle dge	Analytic al Skills	Applicat ion of Researc h	Applicat ion of latest technol ogy/too ls	Generat e Designs /Solutio ns	Ethics	Societal Concer n	Environ mental concern	Collabo rative aptitud e	Opport unity for continu ed learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
Mapping co- relation		Low		Medium		High		No	
		1		2		3		-	

COURSE: PUBLIC PARTICIPATION IN GOVERNANCE			
Course code:	MAUD215A	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:0:2	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	----
Course Learning Objectives:			
The course is intended to introduce concept of people's participation in urban design project.			
Course outline			
<ol style="list-style-type: none"> 1. Concept and importance of people's participation/planning, types and relevance, existing system and scope. 2. Identification of stake holders, issues and interactions, institutionalization of people participation. 3. Individual/NGO/CBO efforts in peoples planning with example, national and international. 4. Role of urban designer in process of people participation in urban design project, example. 			
Teaching Learning Process	Introduce each subsection through talk/presentation, case study and generate discussion through article reading		
Assessment Details (CIE and SEE)			
The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is 0%. The minimum passing mark for the CIE is 50% of the maximum marks. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation).			
Continuous Internal Evaluation:			
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.			
Semester End Examination: (not applicable)			
Suggested learning resources:			
<ol style="list-style-type: none"> 1. Partha Chatterjee, the Politics of the Governed, New York: Columbia University Press, 2004. 2. Report-seminar on good urban governance new Delhi 2001-2002, Nagarapalika journal, reports etc. 			
Web links and Video Lectures(e-Resources):			
https://www.youtube.com/watch?v=-vojtrw9Ys https://www.youtube.com/watch?v=tACf-kiuHwU https://www.youtube.com/watch?v=P8u5YQYv0d8 https://www.youtube.com/watch?v=hFDCCrySV9A			
Skill development activities suggested			
<ol style="list-style-type: none"> 1. Field visit to enable students to identify conflicts related to governance 2. Stakeholders and their roles 3. Manage and conduct of public/stakeholders participation meet 			

Course outcome (course skill set)

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

Sl. No.	Description	Blooms Level
CO1	The application of people participation in the existing system	III
CO2	Role of NGOs and stakeholders in people participation	III
CO3	Need for the people participation in making of Urban Design project	VI

Program outcome of this course

Sl. No.	Description	POs
1	Able to relate various people planning systems and opportunities	1,3,9,10
2	Ability to identify stakeholders and manage peoples planning activities	2,6,7
3	Relate and integrate the people planning approach while making of Urban Design project	4,9,10

Mapping of COs and Pos

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	-	-	2	2	2	3	3
CO2	1	3	2	-	-	2	3	2	2	2
CO3	1	1	2	-	2	2	3	3	3	2
Avg.	1.6	2	2	-	.6	2	2.6	2.3	2.6	2.3

Graduate Attributes

Knowl edge	Analytic al skills	Applicati on of research	Application of latest technology and tools	Generate design/sol ution	Ethics	Societal concern	Environ mental concern	Collaborativ e aptitude	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Mapping Co-relation	Low	Medium	High	No
	1	2	3	-

COURSE: URBAN MANAGEMENT			
Course Code:	MAUD215B	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:0:2	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
Course Learning Objectives:			
The course intends to help students understand and illustrate the complex challenges in the functioning of a city and develop their skills in addressing such complexities through efficient management of resources in the Urban Environment.			
Studio outline			
Introduction: the students are introduced to Complexity theory and its relevance in urban planning, urban design (in creating city image) and other relevant management disciplines. The theory stresses the overlay of city management players such as the economy, infrastructure, people and nature. Topics such as sustainability and equity are introduced as a result of effective and efficient management system. The course will introduce theoretical understanding with case studies and encourage students to hands on experience under the following urban systems.			
1. People and the city: Human resource management – The role of people or citizens as primary stakeholders in managing a city, importance and relevance of participatory decision making explained through case studies. Theory of Informality and its associations with the city’s life. Topics such as Livelihood, health, well-being and quality of life as prescribed by world organizations and a comparative analysis drawn to sensitize on India’s scenario. The systems that involve fundamentals and effective management of Human resources in urban area including HR policies and Laws.			
2. Nature and the city: Natural resource management system – sustainability beyond greening, green Urbanism, urban form and sustainability, and other relevant topics that discuss the efficient and effective use of natural resources, significant stake holders in play and management strategies that recognizes developmental pressures, its impact on nature to suggest resilient solutions.			
3. Economy and the city: Urban finance management system - Understand fundamentals of urban finance, Effective and efficient budget in ULBs, financial planning and management. Understand the economic flows that bind development needs and people-centric solutions through case studies across the world. Assess India’s scenario by dissecting into concepts of “competitiveness” and “Happiness”			
4. Urban project management system: Holistic management with equal importance even to the role of people/citizens, the natural systems of the context and the financial as well the development trajectories that trigger largely in decision making. Assessing Time management modules through evaluation and monitoring of ongoing small and large scale urban projects.			
Teaching learning process	Lectures with case studies, Student discussions, Peer reviews, Workshops, Action Planning as a sub-course to procure real time data for ongoing urban challenges.		
Assessment Details (CIE and SEE)			
The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is 0%. The minimum passing mark for the CIE is 50% of the maximum marks. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation).			
Continuous Internal Evaluation:			
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.			

Semester End Examination: (not applicable)

Suggested learning resources:

1. Portugali, J. (2011). *Complexity, cognition and the city* (pp. 22-42). Berlin: Springer.
2. Bettencourt, L. M. (2015). Cities as complex systems. *Modeling complex systems for public policies*, 217-236.
3. Bettencourt, L. M. (2021). *Introduction to urban science: evidence and theory of cities as complex systems*.
4. Ahluwalia, I. J. (2014a). *Improving our cities through better governance*. London, England: LSE Cities
5. Ahluwalia, I. J., Kanbur, R., & Mohanty, P. K. (2014). *Urbanisation in India: Challenges, opportunities and the way forward*. New Delhi, India: Sage India
6. World Bank. (2012). *Lessons from business plans for Maharashtra, Rajasthan, Haryana and international good practices*. Washington, DC: Author.
7. Brosius, J.; Peter Tsing; Anna Lowenhaupt; Zerner, Charles (1998). "Representing communities: Histories and politics of community-based natural resource management". *Society & Natural Resources*.
8. Batty, M., & Marshall, S. (2012). The origins of complexity theory in cities and planning. In *Complexity theories of cities have come of age* (pp. 21-45). Springer, Berlin, Heidelberg.
9. Batty, M. (2016). Complexity in city systems: Understanding, evolution, and design. In *A planner's encounter with complexity* (pp. 99-122). Routledge.
10. Scott, A. & Storper, M., 2007. Regions, Globalization, Development. *Regional Studies*, 41(1), 191.
11. Campbell, S. (1996). Green cities, growing cities, just cities?: Urban planning and the contradictions of sustainable development. *Journal of the American Planning Association*, 62(3), 296-312.
12. Florida, R. (2005). THE WORLD IS SPIKY Globalization has changed the economic playing field, but hasn't leveled it. *Atlantic monthly*, 296(3), 48.
13. Feiock, R. C., Jae Moon, M., & Park, H. J. (2008). Is the world "flat" or "spiky"? Rethinking the governance implications of globalization for economic development. *Public Administration Review*, 68(1), 24-35.
14. Montgomery, C. (2013). *Happy city: Transforming our lives through urban design*. Penguin UK.
15. Lehmann, S. (2011). What is green urbanism? Holistic principles to transform cities for sustainability. *Climate Change-Research and Technology for Adaptation and Mitigation*, 243-266.

Web Links and Video lectures (E-resources):

1. Poli-Plex-Icon: A tool for city image visualization in the age of complexity by Efrossyni Tsakiri in *The Urban Transcripts journal*, Volume 2, No.2, June 2020.
2. <https://journal.urbantranscripts.org/article/poli-plex-icon-a-tool-for-city-image-visualization-in-the-age-of-complexity-efrossyni-tsakiri/>
3. E-article on Bettencourt and Sahasranaman attempt the first detailed analysis of Indian cities as complex systems. March 14, 2019. journal article topic: Urban geography and scaling of contemporary Indian cities. <https://miurban.uchicago.edu/2019/03/14/bettencourtsahasranaman/>
4. Wilensky, U. (2007). NetLogo Urban Suite - Cells model. <http://ccl.northwestern.edu/netlogo/models/UrbanSuite-Cells>. Center for Connected Learning and
5. Computer-Based Modeling, Northwestern University, Evanston, IL.
6. The happy city experiment | Charles Montgomery | TEDxVancouver | 2014 <https://www.youtube.com/watch?v=7WiQUzOnA5w>
7. Fight of the Century - Keynes vs. Hayek - Round One (2010) and Two (2012)
8. <https://www.youtube.com/watch?v=d0nERTFo-Sk&t=392s>
9. <https://www.youtube.com/watch?v=LA1-1DlhuXU&t=298s>
10. Complexity, citizen engagement in a Post-Social Media time | David Snowden |

TEDxUniversityofNicosia I 2018. <https://www.youtube.com/watch?v=JkJDyPh9phc>
 11. TEDxRotterdam - Igor Nikolic - Complex adaptive systems I 2010.
https://www.youtube.com/watch?v=jS0zj_dYeBE

Skill development suggested:

1. Skills to understand cities as complex adaptive systems and decode the complex layers in the working of a city i.e., the economic, the physical, the social and the environmental.
2. Skills to prepare surveys for assessing urban issues/real time data as part of action planning.
3. Skills to map the stakeholders in play, the governance strategies arising from the complex layers and assessing them.
4. Access, analyze and interpret data to provide recommendation.

Course outcome (course skill set)

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

Sl. No	Description	Blooms level
CO1	Identify and decode the complex layers of the urban challenges/issues	IV
CO2	Identify and map the roles and responsibilities of key stakeholders	IV
CO3	Generate methodologies in data collection, sampling and survey techniques	V
CO4	Analyze and assess the data collected	V
CO5	Provide strategic planning techniques to address the issues and recommend	VI

Program outcome of this course

Sl. No	Description	POs
1	Ability to understand complex layers in the management of a city	1,2,3,7,8,10
2	Ability to comprehend the inter-relatedness of the layers, networks and flows	2,3,4,9
3	Documentation of identified challenges and the layers	2,3,4,9
4	Analysis to provide strategies and solutions	2,3,4,5,6,9

Mapping of CO s and PO s

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	3	1	-	1	2	2	1	2
CO2	2	2	3	1	-	1	2	2	3	1
CO3	1	3	2	3	2	2	1	1	3	2
CO4	2	3	2	3	1	2	-	-	2	2
CO5	1	2	2	3	3	2	2	2	2	2
Average	1.8	2.4	2.4	2.2	1.2	1.6	1.4	1.4	2.2	1.8

Graduate attributes

Know ledge	Analyti cal skills	Applicati on of research	Applicatio n of latest technology and tools	Generate design/ solution	Ethics	Societal concern	Environ mental concern	Collabor ative aptitude	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Mapping correlation	Low	Medium	High	No
	1	2	3	--

COURSE: GIS (GEOGRAPHICAL INFORMATION SYSTEMS) -II			
Course Code:	MAUD215C	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:0:2	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
Course Learning Objectives:			
<p>The course is intended to understand GIS as a decision-support tool in the urban spatial planning process. The prerequisite to this course is GIS-I in the previous semester. GIS II deals with an understanding of advanced GIS concepts, advanced GIS models, techniques and real-world applications in spatial planning. The course also introduces Geographic Query and Analysis, Application in an Urban project and provides a glimpse of the future of GIS.</p> <p>It also establishes a bridge between the conceptual realms - Architecture /Site - Terrain Analysis/ Landscape architecture/Urban Design and Urban planning. The Output is digital, online and printed maps.</p> <p>Outcome: Students will complete lab exercises using any good Spatial information systems software. This will help in creating maps and output of spatial queries in the urban context.</p>			
Course outline			
Advanced-Data Models			
<p>Surface representation, Grid model, other models, Practical observations – Accuracy, Three–dimensional objects, Representation of time.</p> <p>Network model, Model for movement over surfaces, Combination of models, representation of networks, Node-node adjacency matrix, Computation of shortest paths on a network and Terrain Analysis.</p>			
Geographic Query and Analysis			
<p>Types of spatial analysis - Queries and reasoning, Measurements, Transformations. Optimization techniques, Hypothesis testing, Spatial interpolation- Inverse distance weighting, Density estimation and potential, Advanced spatial analysis.</p> <p>Descriptive summaries–Centers, Dispersion, Histograms and pie charts, Scatter plots, Spatial dependence as a correlation method.</p>			
The Future of GIS			
<p>Future data: Easy access to digital data, Remote sensing and GIS, GPS as a data source for GIS. Image maps and GIS, Data exchange and GIS. Location-based services and GIS.</p> <p>Future hardware – The workstation revolution, The network revolution, The microcomputer revolution, The mobility revolution, The impact of the revolutions, prospects of hardware, Future software – Software trends. The raster versus vector debate, object-oriented GIS, Distributed databases, GIS user needs, and GIS software research.</p> <p>GIS interoperability, Future issues and problems – Privacy, Data ownership, Scientific visualization, New focus.</p>			
Creating Reports			
<p>Definition, components of web GIS, internet, web GIS v/s Internet GIS, Sharing Work, and Publishing Maps over intranet/Internet, collaborative web mapping, Web Mapping Services, Open Layers, and Google maps.</p>			

Urban Project		
Application of GIS through an URBAN Project taken from the previous semester.		
Teaching learning process	Introduction of the course through lectures. Major areas of application through lectures, videos, field data collection and hands-on on the software.	
Assessment Details (CIE and SEE)		
The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is 0%. The minimum passing mark for the CIE is 50% of the maximum marks. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation).		
Continuous Internal Evaluation:		
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.		
Semester End Examination: (not applicable)		
Suggested learning resources:		
<ol style="list-style-type: none"> 1. Anita Graser, "Learning QGIS" PAKT open source, 2016. 2. Dr. John Van Hoesen, Dr. Luigi Pirelli, Dr. Richard Smith Jr., GISP Kurt Menke, " A refreshing look at QGIS: "Mastering QGIS", PACKT Pub., 2016. 3. Discovering GIS and ArcGIS by Bradley A. Shellito. 		
Web Links and Video lectures (E-resources):		
https://sites.duke.edu/envgis/tutorials/introduction-to-google-earth/		
Skill development suggested:		
Site Visits, hands-on various software like Global Mapper, QGIS, cross domains with emerging architectural trends in Geospatial Industry		
Course outcome(Course skill set)		
At the end of the course the student will be able to:		
Sl.No	Description	Blooms Level
CO1	Understanding 3D Model with Terrain Analysis.	I
CO2	Working with advanced spatial analysis techniques.	II
CO3	Understanding the Future scope of geographic information systems like GIS.	III
CO4	Working with web mapping services other than GIS.	IV
CO5	Working on an Urban project using GIS and outcome through spatial queries.	V
Program outcome of this course		
Sl No	Description	POs
1	Understand mapping and Spatial analysis as crucial tools in data analysis of the Urban scenario.	1, 2, 4, 10
2	Analyzing urban scenarios project using Geographical information system.	1, 2, 3, 4, 9,10
3	Spatial analysis of various types of data using advanced spatial analysis techniques.	1,2, 3,4, 5,7, 9, 10

Mapping of CO s and PO s

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	3	1	-	-	-	2	2
CO2	3	3	3	2	2	-	1	1	1	3
CO3	2	1	-	1	-	2	1	2	2	2
CO4	-	2	2	3	-	1	1	1	3	1
CO5	3	3	2	2	3	-	1	1	3	3
Average	2.2	2.2	1.8	2.4	1.2	0.6	0.8	1	2.2	2.2

Graduate attributes

Know ledge	Analyti cal skills	Applicati on of research	Applicatio n of latest technology and tools	Generate design/s olution	Ethics	Societal concern	Environ mental concern	Collabor ative aptitude	Opportunity for continued learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Mapping correlation	Low	Medium	High	No
	1	2	3	--

COURSE: DATA ANALYTICS			
Course Code:	MAUD215D	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:0:2	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
Course Learning Objectives:			
<p>Urban analytics: is the practice of using new forms of data in combination with computational approaches to gain insight into urban processes looking to data to find better ways to manage cities and urban areas around the world. Gain insight into methods and techniques employed in analysing contemporary planning issues, policy outcomes and impacts. Understanding of the nexus between urban life and digital technology.</p> <p>This elective course provides the knowledge and skills to design and conduct appropriate analyses, and experience of working with cutting-edge datasets.</p>			
Course outline			
<ol style="list-style-type: none"> 1. Urban systems and management: <ul style="list-style-type: none"> • Understanding urban systems and supporting urban planning and management. • Introduction to basic terms and concepts, the roles of different types of cities in urban networks. • Practical and analytical skills to explore, visualise, and to understand city-scale spatial data. Data Analytics as a key component in architecture and Urban research domain 2. Interdisciplinary methodological skills: <ul style="list-style-type: none"> • Concepts and terms in data analytics, Introduction to Big data, different forms which big data take to design solutions to the world's urban challenges – capitalising on emerging developments in data analytics and digital technologies. 3. Principles and application of GIS software: <ul style="list-style-type: none"> • Use of spatial methods and geographic information systems (GIS). Its fundamental theories and methods. Application of GIS in practice to real world problems using appropriate GIS software. (preferably open source) 4. Programming tools for urban analytics: <ul style="list-style-type: none"> • Different analytical tools, Analysis of trends and spatial patterns with indicators, Baseline profiling and making use of neighbourhood statistics. • Monitoring of change: time series and spatial movement. • Model of communication; Visualizations as data and maps, 5. Quantitative data analysis: <ul style="list-style-type: none"> • Introduction to basic statistics and data analysis. Understanding Quantitative and qualitative analysis techniques; univariate to multivariate linear regression. taking a data set example-Summarise, analyse and present data in a valid way. 			

	<p>6. Processing quantitative data:</p> <ul style="list-style-type: none"> • Data analysis with Excel, DBMS and GIS (This includes vector operations like buffering, clipping and intersection, as well as raster-based manipulations such as applying map algebra, or calculating slope and exposition from digital elevation models) • Different approaches, such as land-use transport interaction models, cellular automata, agent-based modelling, etc., These models will be considered at different time scales, such as short-term modelling, e.g. diurnal patterns in cities, and long term models for exploring change through strategic planning. <p>7. Sustainable urban features:</p> <ul style="list-style-type: none"> • Understanding Urban features, Area typologies and its classifications, Projections and scenario building. • Sustainable urban futures, knowledge of interdisciplinary urban analytical methods. <p>8. Urban Policies and evaluation:</p> <ul style="list-style-type: none"> • Policy development and strategic plan-making, present results for policy audiences. • Techniques and methods used to analyse and evaluate spatial issues and planning policy. <p>9. Urban analytics project:</p> <ul style="list-style-type: none"> • Application of Data Analytics through an URBAN Project taken from previous semester. Development of a urban project using concepts learnt in this course.
Teaching learning process	<p>Introduction of the course through lectures.</p> <p>lecture and hands on lab exercises: Students will complete lab exercises using any good Spatial information systems software such as QGIS/ Global mapper/ Autocad MAP3D/ ArcExplorer/coding in python or R software/ GRASS.</p>
<p>Assessment Details (Both CIE and SEE) Assessment Details (CIE and SEE) The weightage of Continuous Internal Evaluation (CIE) is 100% and for Semester End Exam (SEE) is 0%. The minimum passing mark for the CIE is 50% of the maximum marks. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation).</p> <p>Continuous Internal Evaluation: Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.</p> <p>Semester End Examination: (not applicable)</p>	
<p>Suggested learning resources:</p> <ol style="list-style-type: none"> 1. Batty, M. (2013). The new Science of Cities. The MIT Press. 2. Jensen, R. R., Gatrell, J. D., & McLean, D. (Eds.). (2007). Geo-Spatial Technologies 	

in Urban Environments: Policy, Practice, and Pixels. Springer.

3. Agent-Based Modelling and Geographical Information Systems, A Practical Primer, Andrew Crooks - George Mason University, USA
4. Townsend, A. (2015). Cities of Data: Examining the New Urban Science. *Public Culture*, 27(2 (76)), 201-212.
5. Burrough, P. A., McDonnell, R. A., & Lloyd, C. D. (2015). *Principles of Geographical Information Systems* (3rd Ed.). Oxford University Press.
6. Chun, Y., & Griffith, D. A. (2013). *Spatial statistics and geostatistics: theory and applications for geographic information science and technology*. Sage.
7. Dovey, K., Pafka, E., & Ristic, M. (Eds.) (2018). *Mapping Urbanities*. Taylor & Francis.
8. Fischer, M. M., & Getis, A. (Eds.). (2010). *Handbook of Applied Spatial Analysis*. Springer.
9. Gaetan, C., & Guyon, X. (2010). *Spatial statistics and modeling* (Vol. 81). New York: Springer.
10. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). *Geographic Information Science and Systems* (4th Ed.). Wiley.
12. Spector, Paul E., and Michael T. Brannick. "Methodological Urban Legends: The Misuse of Statistical Control Variables." *Organizational Research Methods*, 2011. <https://doi.org/10.1177/1094428110369842>.
13. Morgan, David L. "Research Design and Research Methods." In *Integrating Qualitative and Quantitative Methods: A Pragmatic Approach*, 2017. <https://doi.org/10.4135/9781544304533.n3>.

Web Links and Video lectures (E-resources):

Skill development suggested:

Course outcome(Course skill set)**At the end of the course the student will be able to:**

Sl.No	Description	Blooms Level
CO1	Understanding 3D Model with Terrain Analysis.	I
CO2	Working with advanced spatial analysis techniques.	II
CO3	Understanding the Future scope of geographic information systems like GIS.	III
CO4	Working with web mapping services other than GIS.	IV
CO5	Working on an Urban project using GIS and outcome through spatial queries.	V

Program outcome of this course

SI No	Description	POs
1	Understand mapping and Spatial analysis as crucial tools in data analysis of the Urban scenario.	1, 2, 4, 10
2	Analyzing urban scenarios project using Geographical information system.	1, 2, 3, 4, 9,10
3	Spatial analysis of various types of data using advanced spatial analysis techniques.	1,2, 3,4, 5,7, 9, 10

COURSE: URBAN DESIGN POLICY AND IMPLEMENTATION

COURSE: URBAN DESIGN POLICY AND IMPLEMENTATION			
Course code:	MAUD206	CIE Marks	50
Teaching hours /Week (L:P:SDA)	1:2:0	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	TW
Course Learning Objectives:			
This course will			
<ul style="list-style-type: none"> - Emphasize the importance of integrating the urban design agenda into the city planning process and highlight the challenges of urban design practice in India. - Focus on illustrating methods and design tools to address and incorporate urban design in city planning, from the policy level to city plan and project implementation. - Understand the significance of the urban design visioning process, preparation of urban design strategies, policies, regulations and guidelines for plan and project implementation. - Discuss the influence of current and new innovative policies and development regulations on city structure, built form and urban space, using case examples. - Highlight the challenges of application of urban design policy and implementation mechanisms for urban design projects using examples from India and abroad. 			
Course Outline:			
1. Role of urban design in the city planning process and process for preparing urban design plans			
<ul style="list-style-type: none"> • Historic overview and case examples of current planning policies influencing urban design at regional and city scales; and • Role of visioning process in urban design plan preparation; analysis of issues and opportunities; and preparation of concept plans with objectives, policies and developmental strategies. 			
2. Impact of land use zonal regulations on urban form and space and other innovative design tools			
<ul style="list-style-type: none"> • Analysis of impact of current land use and development regulations of Master Plans on urban form and space; and • Innovations in development regulations, alternative types of zoning and design tools including form based codes, performance zoning, incentive zoning and design review. 			
3. Practical exercise to prepare an urban design framework and apply policies and design tools			
<ul style="list-style-type: none"> • Preparation of urban design / local level plans with a vision, concepts, and strategies in a given context; and • Role of applicable policies, design regulations, design guidelines and other tools and methods in preparing a framework for implementing a first order design intervention. 			
4. Challenges of preparing an urban design framework			
<ul style="list-style-type: none"> • Impact of informality and temporality on regulating urban form and space; limitations of current planning framework; and • Understanding the role of urban design in the real estate development process. 			
5. Project implementation strategies and modalities			
<ul style="list-style-type: none"> • Role of Government, private sector, CBOs / NGOs and other stakeholders; • Participatory design process and public engagement process; and • Project implementation process including preparation of short term and long term actions, strategies for financing, and operations and maintenance guidelines for design projects 			