

VISVESVARAYATECHNOLOGICALUNIVERSITY,BELAGAVI Scheme of Teaching and Examinations-2024 <b>M.Arch(UrbanDesign)-SCHEMEB</b> ChoiceBasedCreditSystem(CBCS)and Outcome-BasedEducation(OBE)													
<b>ISEMESTER-(SCHEMEB)</b>													
Sl. No	Course	Course Code	Course Title	Teaching Hours perWeek			Examination					Credits	
				Theory	Studio/Seminar	Tutorial/Skill Development Activities	Durationinhours	CIEMarks	SEE Marks				Total Marks
									L	P/S	T/SD		
1	ISC with PCCand PCCL(IntegratedStudio	MAUD101	Urban Design Studio-IntegratedwithUDPT	01	05	06	00	50		50		100	6
2	PCC	MAUD102	Theory of Urban Form	02	01	00	03	50	50			100	4
3	PCC	MAUD103	City planning process in India	03	00	00	03	50	50			100	3
4	PSC	MAUD104	Social theory and Urban Design	02	01	00	03	50	50			100	3
5	PEC-I	MAUD115x	Professional Elective Course-I	02	01	00	00	100		--		100	3
6	PCCL	MAUD106	Infrastructure &Transportation Planning	02	00	02	00	50			50	100	3
7	NCMC	MRM1107	Research Methodology and IPR(Online)	Online courses(online.vtu.ac.in)								PP	
				12	8	8		350	150	50	50	600	22
Note:ISC-IntegratedStudioCourse,NCMC-NoneCreditMandatoryCourse,PCCL-ProfessionalCore Course,PEC-ProfessionalElectiveCourse AUD/AEC -Audit Course / Ability Enhancement Course,L-Lecture, S-Studio,T/SDA-Tutorial / Skill Development Activities (Hours are forInteractionbetweenfacultyandstudents)													
	Professional Elective coursecode1under24xxx15x	ProfessionalElectivecoursetitle											
1	MAUD15A	IndianUrbanism											
2	MAUD15B	SpatialSoftwareSkillsForUrbanDesignandApplicationinCityReadings											
3	MAUD15C	GIS-I											

**Integrated Studio Course (ISC):** Refers to a Professional Studio Core Course integrated with the theories/software relating to the studio. The theory part of the ISC shall be evaluated by CIE with regular assignment. The studio part shall be evaluated by both CIE & SEE (Viva-Voce with the external examiner).

**Professional Core Course (PCC):** Refer to a Course, which constitutes a major theory part of the particular specialization.

**PSC:** Professional Supportive Course to the Specialisation

**PEC: Professional Elective Course:** Elective courses will provide some of the most valuable and additional knowledge. The students will benefit from electives as they imply additional knowledge. Students may select courses from a large array of subjects that enhance their knowledge.

### 1. Studio:

- (i) Students and studio coordinator to be involved individually in group to interact to enhance learning and applications skills.
- (ii) The students should involve with Industry/Professional bodies/Stakeholders in issue identification followed by research/case studies/testing that results in creative and innovative solutions to the identified problems.
- (iii) The students will gain real-world experience by working with industry professionals
- (iv) Students must work on different software/s (tools) to simulate, analyze, and authenticate the output to interpret and conclude.
- (v) Students must be involved in case studies and field visits/fieldwork.
- (vi) Students must familiarize themselves with codes of standards to narrow the gap between academia and the industry.

2. All activities should enhance student's abilities for employment and/or self-employment opportunities, management skills, Statistical analysis, fiscal expertise, etc.

3. **Skill Development Activities:** They may be in the form of periodic site visits, guest lectures, and webinars and seminars, not a fixed slot in timetable.

**Under Skill development, the activities must orient towards**

1. Interaction with industry (construction/consultancy/product oriented).
2. Involvement in research/testing/project to understand their problems and help creative and innovative methods to solve the problem.
3. Involvement in case studies and field visits/fieldwork.
4. Exposure to the use of standards/codes/byelaws/zoning regulation etc., to narrow the gap between academia and industry.

All activities should enhance student's abilities to employment and/or self-employment opportunities, management skills, statistical analysis, fiscal expertise, etc. Students and the course faculty are to be involved either individually or in groups to interact together to enhance the learning and application skills of the study they have undertaken. The students with the help of the course teacher can take up relevant technical activities that will enhance their skills. The prepared reports shall be evaluated for CIEMarks.

### 4. Viva voce:

The viva voce shall be conducted for a duration of 20 minutes (per student including if any group presentation) for the subjects listed under viva voce for all these semesters with one external examiner and one internal examiner.

**24RMI19-Research Methodology and IPR- Non-Credit Mandatory Course (NMC )** The student has to take this course at <http://online.vtu.ac.in> and qualifying in this course is compulsory before completion of the minimum duration of the program (Two years), however, this course will not be considered for vertical progression.

**Online Course:** These are the MOOC courses that the relevant stream's Board of Studies has recommended; you can access them at [www.online.vtu.ac.in](http://www.online.vtu.ac.in). To qualify for those courses, the students must complete 8-12 weeks duration courses. The courses chosen have not to be the same as that of the courses or subjects covered in the preceding semesters. Depending on the needs of the degree program, the BOS may recommend interdisciplinary courses. It is required to pass the course and qualify

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Scheme ofTeachingandExaminations–2024													
<b>M.Arch(UrbanDesign)SCHEMEB</b>													
ChoiceBasedCreditSystem(CBCS)andOutcome BasedEducation(OBE)													
<b>IISEMESTER-(SCHEMEB)</b>													
Sl. No	Course	CourseCode	CourseTitle	TeachingHours			Examination					Credits	
				Theory	Studio/ Tutorial/Skil IDevelopmen tActivities	Duration inhours	CIE Marks	SEE Marks			TotalMarks		
				L	S			T/SDA	TH	VIVA			TW
1	ISC withPC C andPCC L (Integrated Studio	MAUD201	Urban Design Studio-II Integrated withEcologyandSitePlanning	02	04	06	00	50		50		100	9
2	PCC	MAUD202	UrbanConservation	00	02	02	03	50	50			100	4
3	PCC	MAUD203	Contemporary Theories of Urbanism andArchitecture	03	00	00	03	50	50			100	3
4	PSC	MAUD204	UrbanGovernance &ProjectFinance	02	00	02	03	50	50			100	3
5	PEC-II	MAUD215x	ProfessionalElective Course-2	02	00	02	00	100		-		100	3
6	PSC	MAUD206	UrbanDesignPolicy&Implementation	01	02	00	00	50			50	100	3
<b>TOTAL</b>				<b>10</b>	<b>8</b>	<b>12</b>		<b>350</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>600</b>	<b>25</b>
<b>ProfessionalElective2</b>													
<b>Course Codeunder</b>	<b>Coursetitle</b>												
MAUD215A	PublicPaticipationinGovernance												
MAUD215B	UrbanManagement												
MAUD215C	GIS-II												

MAUD215D	DataAnalytics		
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SchemeofTeachingandExaminations-2024  
**M.Arch(UrbanDesign)SCHEMEB**  
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**III SEMESTER (SCHEMEB)**

Sl. No	Course	Course Code	Course Title	Teaching Hours /Week			Examination				Credits		
				Theory	Practical/Min i- Project/Inter	Tutorial/Skill Development Activities	Duration in hours	CIE Marks	SEE Marks			Total Marks	
									L	P			SDA
1	ISC/IDC (Integrated studio)	MAUD301	UDStudio-III	1	3	8		50		50		100	8
2	PSC	MAUD302	Dissertation Phase I	1	1	2		100				100	3
3	PEC-III	MAUD314x	Professional Elective Course 3	3			--	50	50		--	100	3
4	INT	MAUD385	Industry Internship (3 months, Viva-Vocetobe conducted))							100		100	7
5	PEC	MAUD316	BOS Recommended online course										PP Mandatory
<b>TOTAL</b>				<b>5</b>	<b>4</b>	<b>10</b>		<b>200</b>		<b>150</b>	<b>50</b>	<b>400</b>	<b>21</b>
<b>Professional Elective 3</b>													
MAUD314A		Urban housing											
MAUD314B		Politics of Development											
MAUD314C		Real Estate and Urban Design											

Note: PCC: Professional core courses, PEC: Professional Elective Courses, IPCC-Integrated Professional Core Courses. MPS-Mini Project With Seminar; AUD/AEC; Audit Courses / Ability Enhancement Courses (Mandatory), PCCL-Professional Core Course lab, **L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities** (Hours are for interaction between faculty and students)

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**IVSEMESTER(SCHEME B)**

Sl.No	Course	Course Code	CourseTitle	Teaching Hours /Week			Examination					Credits	
				Theory	Practical /Fieldwork	Tutorial and skill development activities	Duration inhours	CIEMarks	SEE MarksVivo				TotalMarks
									TH	VIVA	TW		
1	Dissertation	MAUD481	Dissertation Phase II	2	6	8		50		50		100	12
				<b>2</b>	<b>6</b>	<b>8</b>		<b>50</b>		<b>50</b>		<b>100</b>	<b>12</b>

**DISSERTATION(MAUD481):**The objective of the Dissertation is

- To encourage independent learning and innovative solutions.
- To develop communication skills, organization, time management, and presentation skills.
- To impart flexibility and adaptability.
- To inspire teamwork.
- To expand intellectual capacity, credibility, judgment, and intuition.
- To adhere to punctuality, goal setting, and meeting deadlines.
- To instill responsibility to oneself and others.
- To train students to present the topic of project work in a seminar confidently, with enhanced communication skills, contribute to and exchange ideas in group discussions, and foster the ability to receive positive criticism

**CIE procedure for Project Work:**

The CIE marks shall be awarded by a committee/panel of guides consisting of the head of the concerned department, internal and external reviewer whoever takes review including mid-review on invitation by the department. The CIE marks awarded for the dissertation work shall be based on the evaluation of the dissertation work process/progress such as research on an issue, title, literature review, dissertation structure, study methodology, issues and strategies, design program and intervention etc. evaluation also need to be based on the presentation skill, defending the dissertation work during the periodic review. Each student must produce/submit dissertation report for the internal evaluation.

**SEE procedure for Dissertation:**



The two examiners appointed by the University will conduct SEE for dissertation work with one internal examiner. The SEE marks awarded for the project work shall be based on the objectives and rubrics set and the final presentation/defending the viva voce/ portfolio/dissertation report/Patent filed/ Copy Rights ,Research Papers Published/documentation which showcases the outcome of a dissertation. The weightage of the above may vary based on the specialization/topic of the dissertation.

**Scheme B: TOTAL CREDITS: 22+25+21+12=80 (with 3 months vacation internship after 2<sup>nd</sup> semester).**

VTU- SYLLABUS 2022-23 M ARCH (URBAN DESIGN) CBCS-OBE			
SEMESTER-I			
COURSE: URBAN DESIGN STUDIO-I INTEGRATED WITH UDPT(Urban Design Principle and Techniques)			
Course Code:	MAUD101	CIE Marks	50
Teaching hours /Week (L:P:SDA)	1:5:6	SEE Marks	50
Total Hours of Pedagogy	12	Total Marks	100
Credits	6	Exam Hours	Viva Voce
<p><b>Course Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>1. The goal of the studio-I shall be to understand that urban design at its core is a connective discipline. The objective shall be to understand, organize and synthesize in visual, tactile and measurable ways sustained improvements in the places that make up our urban living environment.</li> <li>2. The objective of the course is to introduce students to the methods of reading and understanding the physical fabric of a city</li> </ol>			
<p><b>Studio Outline</b></p> <p>The studio will incorporate interdisciplinary principles, processes and interactions that are fundamental to Urban Design. The studio tasks will include the following;</p> <ol style="list-style-type: none"> <li>1. Documenting, analyzing and understanding textures and places that make an urban area.</li> <li>2. Understanding the nature of interrelation between in formal and formal issues connected with intervention into urban fabric.</li> <li>3. To identify and learn basic urban design tools.</li> <li>4. To implement the same in a project of single use or multiuse built structure connected with place making and inclusive.</li> </ol> <p>Project I will consist of documenting , analyzing and evolving proposals for urban components like streets, public open spaces, public gathering places, precincts of historically important buildings in the city. The focus will be on understanding the concepts of “Fabric, Texture and Weave”.</p> <p>Project II will focus on the goals and objectives of “intervention to improve”. The project will identify a specific area in an identified city to understand the process of documenting the true picture of the area and creating scenarios which will clearly demonstrate the needs of intervention to improve. The project will end with the design of multi or single use built forms.</p>			
<b>Teaching Learning Process</b>	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. A Place In The Shade: The New Landscape & Other Essays Paperback, Charles Correa , Penguin Books; 2010
2. Cities for People, Jan Gehl, Island Press; 2010
3. Design of Cities, Edmund N Bacon, Penguin Books; 1976
4. Essentials of Urban Design, Mark Sheppard CSIRO Publishing; 2015
5. Fundamentals of Sustainable Urban Design, Avi Friedman, Springer Nature Switzerland AG; 2021
6. Great Streets, Allan B. Jacobs, The MIT Press; 1995
7. Public Places Urban Spaces: The Dimensions of Urban Design, Matthew Carmona, Tim Heath, TanerOc, Steve Tiesdell, Architectural Press; 2010
8. The Kinetic City & Other Essays, Rahul Mehrotra, ArchiTangle GmbH; 2021
9. Urban Design Reader, Matthew Carmona, Steve Tiesdell, Architectural Press;2007
10. Urban Design: The Composition Of Complexity by Ron Kasprisin, Routledge; 2019

### Web links and Video Lectures (e-Resources)

1. Urban Design, Center for Design Excellence, <http://www.urbandesign.org/home.html>
2. Project for Public Spaces <https://www.pps.org/>
3. Urban Design Lab <https://urbandesignlab.in/resources/udl-digital-resources/>
4. Urban Design Group <https://www.udg.org.uk/about/what-is-urban-design>
5. Urban Environment Management <https://www.gdrc.org/uem/planning/urban-planning.html>
6. Planetizen <https://www.planetizen.com/>
7. Space Syntax <https://spacesyntax.com/>
8. <https://semanurcan.wordpress.com/2019/10/27/the-city-image-and-its-elements-by-kevin-lynch/>  
<https://www.writingcities.com/2015/11/10/gordon-cullens-townscape/>

### Skill Development Activities suggested

1. Urban design related place reading and representation techniques
2. Mapping the observation and inferring inferences and conclusion

3. Skills that enable analysis and identify the Urban design issues
4. Ability to come with Urban design strategy and Design project
5. Skills to read and analyze maps and translate through writing.
6. Learning the process of public outreach for data collection.
7. Analytical abilities to evaluate urban design challenges.

**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 components that influence urban area(study commonality)network and systems	IV
CO2	Means of engage with the place, people, method of data collection/documentation of the practices that influences urban environment.	V
CO3	Able to Identify issues/conflicts that influence urban area	V
CO4	Able to generate UD strategies	VI
CO5	Urban Design intervention within the study area	VI

Program outcome of this course

SI No	Description	POs
1	Ability to read the urban components	1,2,9
2	Ability to engage, interact and document the place	2,3,7
3	Able to generate strategies to address the UD issues	2,3,7,8
4	Ability to demonstrate urban design solution	3,5,6

Mapping of CO s and PO s

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	2	-	-	2	2	2	1
CO2	3	3	2	2	-	-	2	2	2	2
CO3	2	3	3	1	-	1	2	2	3	2
CO4	2	2	3	2	3	2	2	2	1	1
CO5	1	2	2	2	3	2	2	2	-	2
<b>Average</b>	<b>2.2</b>	<b>2.6</b>	<b>2.4</b>	<b>1.8</b>	<b>1.2</b>	<b>1</b>	<b>2.0</b>	<b>2.0</b>	<b>1.6</b>	<b>1.6</b>

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	--



<b>COURSE: THEORY OF URBAN FORM</b>			
Course code:	MAUD102	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:1:0	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	4	Exam Hours	3
<b>Course Learning Objectives:</b>			
The course is intended as a comprehensive study of urban form, processes, and urban spaces in historical and theoretical terms.			
<b>Module-1</b>			
<b>INTRODUCTION TO URBAN DESIGN AND URBAN FORM</b>			
Urban design- (ideology/theory) and the various concerns (scope and objectives) of the discipline; components of urban design and their inter-dependencies.			
urban form- morphology (significance of understanding Urban form and Urban Process). Determinants of urban form-natural and human-made determinants			
Teaching Learning Process	Introduction to the topic through lectures, readings, and discussions. Presentation of urban design case studies by faculty/students to understand the various scopes and objectives of urban design		
<b>Module-2</b>			
<b>STUDY OF URBAN FORM</b>			
Comparison between the various perspectives of studying and analyzing urban form- space; conservation, evolution, and the life of urban form.			
Urban space and form through history (overview) Western context: The Early Cities (Neolithic, classical antiquity), Medieval Towns, Renaissance and Baroque Planning, Form of modern city and early cities of capitalism (industrialization and influences City beautiful movement, City and Garden, Camilo Sitte); Modern Movement (Tony Garnier, Corbusier, F L Wright, Arturo Soria Y Mata, Antonio Sant 'Elia), post-World War II (Doxiades and Ekistics), Megastructure; Cities of sweat equity and highway; subsequent directions.			
Indian Context: The Early Cities, Mughal and Medieval Towns, Temple Cities, Colonial influences, post-independence, and modern cities (Chandigarh, Bhubaneshwar, Gandhinagar) and further developments.			
Teaching Learning Process	Introduction to the topic through lectures, readings, and discussions. Documentation and analysis of urban form (evolution, city at different scales, analysis of urban form determinants) through case studies from all or a few of the topics listed above. Writing research paper		
<b>Module-3</b>			
<b>APPROACHES TO READING URBAN FORM AND SPACE</b> (western, Islamic cities and influences)			
City as patterns; diagrams; spaces and ideas (organic; grid; political-functional-secularist-socialist diagrams; grand manner; skyline; city edge; urban division; public spaces- various typologies including street and parks); subsequent direction and further developments.			

Teaching Learning Process	Introduction to the topic through lectures, readings, and discussions. Discussion of various case studies of cities according to patterns
<b>Module-4</b>	
<b>URBAN PROCESS</b> Rise and fall of cities; disaster; destruction and reconstruction; Haussmanization; incremental changes; urban renewal; contemporary issues and phenomenon shaping urban form and space (sprawl, sustainable growth, transportation).	
Teaching Learning Process	Introduction to the topic through lectures, readings, and discussions.
<b>Module-5</b>	
<b>THEORIZING URBAN FORM</b> (Introduction to modern, post-modern perspectives and influences) Utopias; ideas of Gordon Cullen, Jane Jacobs, William Whyte, Mumford, Kevin Lynch (Good City Form; Imageability and Memory), New Urbanism of Krier; Public and Private domains; Suburbs and periphery; Privacy, Territoriality and Proxemic theory; Defensible spaces; ideas of community through design; treatment of urban space; future of the city (contemporary practices and directions). Various theoretical views associated with nature of city form (normative, positive, substantive, and procedural theories); Cosmic, Machine and Organic Models; Descriptive and functional theories; Alternative theoretical postulations.	
Teaching Learning Process	Introduction to the topic through lectures, readings, and discussions. Shared reading from a list of key texts formulated
<b>Assessment Details (CIE and SEE)</b> The weightage 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. <b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on Assignments, Tests and Term Paper submission. <b>Semester End Examination:</b> Theory Examination shall be held for 3-hour duration, students are expected to answer FIVE full questions, one question from each module.	
<b>Suggested learning resources:</b> <b>Books:</b> 1. Spiro Kostof, the City Assembled, Thames and Hudson. 2. Spiro Kostof, The City Shaped, Thames and Hudson. 3. Jon Lang, Urban Design Typology and procedures, Architectural Press 4. A.E.J. Morris, History of Urban Form, Longman Scientific and Technical. 5. Kevin Lynch, Good City Form, MIT Press. 6. Edmund Bacon, Design of Cities. 7. Geoffrey Broadbent, Emerging Concepts of urban Design	
<b>Web links and Video Lectures(e-Resources)</b> <a href="https://ocw.mit.edu/courses/4-241j-theory-of-city-form-spring-2013/video_galleries/video-lectures/">https://ocw.mit.edu/courses/4-241j-theory-of-city-form-spring-2013/video_galleries/video-lectures/</a>	



**Skill development activities suggested**

Group discussions about the form and structure of different cities by picking one example each

Shared reading from a list of key texts formulated

Presenting aspects of urban form of Indian cities through examples

**Course outcome (course skill set)**

Sl. No.	Description	Blooms Level
CO1	Identify scope, objectives of urban design, determinants of urban form	II
CO2	Study evolution of urban form through history with western and Indian contexts	III
CO3	Familiarize with approaches to reading urban form- reading cities as patterns	IV
CO4	Comprehend urban process	II
CO5	Analyze different theories related to urban morphology	IV

**Program outcome of this course**

Sl. No.	Description	POs
1	Understanding the meaning and components of urban form	1, 2
2	Analyzing the urban form of various settlements/cities across time	2, 3
3	Understanding urban processes	1, 2, 3
4	Analyzing the theoretical views on urban form	1, 2, 3

**Mapping of COs and POs**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	-	-	-	-	-	-	-	2
CO2	2	3	2	-	-	-	-	-	2	2
CO3	2	3	3	1	-	-	-	-	-	2
CO4	3	2	1	-	-	-	-	-	-	1
CO5	1	2	2	-	-	-	-	-	1	1
Average	2.2	2.2	1.6	0.2	0.0	0.0	0.0	0.0	0.6	1.6

**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	-

<b>COURSE: CITY PLANNING PROCESS IN INDIA</b>			
Course code:	MAUD103	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	3
<b>Course Learning Objectives:</b>			
<ol style="list-style-type: none"> <li>1. To expose students to the process of city planning and implementation in India.</li> <li>2. To learn about the institutional context of city planning including national, state and local level policies, legislations and regulations used to monitor, aid, manage and design the growth and transformations in cities.</li> <li>3. To understand the issues and the impact of planning policies and regulations on the physical, social, economic and ecological environment of cities, and learn about current planning practices and strategies to address them.</li> <li>4. To undertake a critical review of the planning, development and regulatory processes and practices shaping the Indian city.</li> </ol>			
<b>Module-1</b>			
<b>INTRODUCTION TO THE CITY PLANNING PROCESS</b>			
<ul style="list-style-type: none"> <li>• A historical overview of city planning in the Indian context, the goals of planning and significance for urban design</li> <li>• Planning legislations in India - A review of national, state and local level policies, programmes, Acts and regulations used to monitor, aid, manage and design the growth and transformations in cities through history.</li> <li>• Scope and purpose of various plan types - Perspective plans, regional plans / structure plans, and master plans / comprehensive development plans, local area plans, special purpose plans, annual plans, projects / schemes.</li> </ul>			
Teaching Learning Process	<ul style="list-style-type: none"> <li>- Introduction to City Planning– lectures, videos, readings, class activities and discussion</li> <li>- History of plan-making in India and study of plan types and legislations – readings, presentations and discussion seminar</li> </ul>		
<b>Module-2</b>			
<b>THE PLAN MAKING PROCESS</b>			
<ul style="list-style-type: none"> <li>• Urbanisation challenges and planning process in the regional context, master planning, visioning, and development of planning strategies and policies</li> <li>• Techniques of data collection, mapping, survey, projection of requirements; preparation of base map, developmental plan proposals and delineation of zones</li> <li>• Assessment of developmental issues for sectors such as land use, transportation, ecology and environment, urban poor and urban design among others.</li> </ul>			
Teaching Learning Process	<ul style="list-style-type: none"> <li>- Understanding urbanization challenges and analyzing planning processes across sectors - group work to analyse various Master Plans, presentations, readings and discussion seminar</li> </ul>		
<b>Module-3</b>			
<b>LAND USE AND ZONAL REGULATIONS (Development tools)</b>			
<ul style="list-style-type: none"> <li>• Land use zones: History of zoning, current zoning sub classification, permissible and prohibited activities, types of zoning, drawbacks of zoning, issues and limitations;</li> <li>• Zoning tools: Impacts of FAR, TDR and floating FSI, incentive zoning and other regulatory mechanisms</li> </ul>			
Teaching Learning Process	<ul style="list-style-type: none"> <li>Discussion on implications of land use regulations and zoning tools - Case studies, readings and discussion seminar</li> </ul>		

<b>Module-4</b>	
<b>EMERGING PLANNING PRACTICES AND CONCEPTS</b>	
<ul style="list-style-type: none"> <li>• A review of land pooling, urban renewal, conservation and redevelopment processes</li> <li>• Understanding concepts of smart growth, transit oriented design, growth management strategies, transit metropolis, new urbanism, advocacy planning, smart city and other current schemes and programs in practice in Indian cities.</li> </ul>	
Teaching Learning Process	Understanding the planning practices and concepts - Case examples, National policy and mission documents, readings and discussion seminar
<b>Module-5</b>	
<b>PLAN IMPLEMENTATION, MONITORING MODALITIES AND CRITICAL REVIEW OF PLANNING PROCESS</b>	
<ul style="list-style-type: none"> <li>• Plan implementation and monitoring - Appeals, appellant authority, and issues related to unauthorized and informal developments.</li> <li>• Public private and people partnerships; resource mobilization; plan monitoring and review; public participation techniques; and zonal / ward level plans.</li> <li>• Critical review – Discussion of alternatives to the master planning process in India.</li> </ul>	
Teaching Learning Process	Discussion on outcomes and impacts of plan implementation and critical review – readings, case examples and discussion seminar
<b>Assessment Details(CIE and SEE)</b>	
<p>The weightage 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.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.</p> <p><b>Semester End Examination:</b> Theory Examination shall be held for 3-hour duration, students are expected to answer FIVE full questions, one question from each module.</p>	
<b>Suggested learning resources:(Includes but not restricted to the following)</b>	
<p>Books:</p> <ol style="list-style-type: none"> <li>1. Taylor, John L and Williams, David G.1982. Urban Planning Practice in Developing Countries, Pergamon Press, ISBN: 978-0080222257</li> <li>2. URDPFI Guidelines Volume I, IIA and IIB, 2014</li> <li>3. Jain, A. K. 2017. Urban Transformation: Making Cities Inclusive, Safe, Resilient and Sustainable</li> <li>4. Jain, A. K. 2018. Town Planning: Principles, Process and Practice</li> <li>5. Kumar, A., Vidyarthi, S., &amp; Prakash, P. 2020. City Planning in India, 1947–2017 (1st ed.). Routledge India.</li> <li>6. Glaeser, Edward. 2012. Triumph of the City. London, England: Pan Books.</li> <li>7. Master Plan documentsof Bangalore, New Delhi, Mumbai, Chennai and other Indian cities</li> <li>8. Selected readings provided in class</li> </ol>	

**Web links and Video Lectures(e-Resources):** (Includes but not restricted to the following)

1. URDPFI Guidelines 2014 (<http://moud.gov.in/URDPFI>).
2. The Constitution (74th Amendment) Act, 1992. (<http://indiacode.nic.in/coiweb/amend/amend74.htm>)
3. Five Year Plans Introduction ([https://mospi.gov.in/documents/213904/369745/Five\\_Year\\_Plan.pdf](https://mospi.gov.in/documents/213904/369745/Five_Year_Plan.pdf))
4. City Planning in India, 1947-2017 ([https://www.researchgate.net/publication/342252824\\_City\\_Planning\\_in\\_India\\_1947-2017](https://www.researchgate.net/publication/342252824_City_Planning_in_India_1947-2017))
5. Understanding India's New Approach to Spatial Planning and Development: A Salient Shift? ([https://www.researchgate.net/publication/331486168\\_Understanding\\_India's\\_New\\_Approach\\_to\\_Spatial\\_Planning\\_and\\_Development\\_A\\_Salient\\_Shift](https://www.researchgate.net/publication/331486168_Understanding_India's_New_Approach_to_Spatial_Planning_and_Development_A_Salient_Shift))
6. The Karnataka Town and Country Planning Act, 1961 ([https://dpal.karnataka.gov.in/storage/pdf-files/11%20of%201963%20\(E\).pdf](https://dpal.karnataka.gov.in/storage/pdf-files/11%20of%201963%20(E).pdf))
7. A. Srivathsan: 60 years of Planning – Lessons from Chennai, Urban Planning in India (<https://soundcloud.com/crdfpodcast/a-srivathsan-60-years-of-planning-lessons-from-chennai>)

**Skill development activities suggested**– Not Applicable**Course outcome (course skill set)**

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

Sl. No.	Description	Blooms Level
CO1	Understand the trajectory of City Planning approaches and analyse the changing policy and legal mandates through time on city development	I, II, IV
CO2	Recognise the role of visioning, regional and master planning processes and cross-sectoral analysis in addressing the consequences of urbanization, and evaluate consequences of planning decisions	I, II, IV, V, VI
CO3	Analyse the implications of land use regulations and zoning tools applied in cities to assess the social, economic and environmental impacts	IV, V
CO4	Be conversant with and analyse the outcome and impacts of schemes, missions and planning tools adopted in current planning practice	I, II, IV
CO5	Understand the challenges of plan implementation and conduct a critical review of planning and development processes in the Indian context.	II, IV, VI

Blooms Levels:

I – Knowledge

II- Comprehension

III – Application

IV – Analysis

V – Synthesis

VI - Evaluation

**Program outcome of this course**

Sl. No.	Description	POs
1	Be conversant with the City Planning process and understand the significance of policies and legal mandates as a framework for urban design practice.	1, 2, 10
2	Understand the challenges of urbanization and social, environmental and economic impact of planning policies, Master Plans and regulatory tools on city form and development and apply learnings as recommendations for future planning and urban design.	1, 2, 3, 6, 7, 8, 9, 10
3	Develop an critical framework to assess the outcomes and impacts of current programs and plans, and their implementation, in shaping city design and development at the local area level; and recommend possible steps for future planning efforts.	1, 2, 3, 4, 6, 7, 8, 10
4	Evaluate and critically review planning processes to assess impact on urban form, social and environmental justice and livability and think of alternative methods to guide urban design practice.	2, 3, 7, 8, 10

**Mapping of COs and POs**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10
<b>CO 1</b>	3	2	-	-	-	-	1	1	-	2
<b>CO 2</b>	2	3	2	-	1	2	3	3	2	3
<b>CO 3</b>	2	3	2	1	1	2	3	3	-	3
<b>CO 4</b>	2	2	2	-	-	2	3	3	-	3
<b>CO 5</b>	1	2	1	-	-	2	2	2	-	2
<b>Average</b>	2.0	2.4	1.4	0.2	0.4	1.6	2.4	2.4	0.4	2.6

**Graduate Attributes**

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
PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10

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

<b>COURSE: SOCIAL THEORY AND URBAN DESIGN</b>			
Course Code:	MAUD104	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:1:0	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	03
<b>Course Learning Objectives:</b>			
The course introduces first semester students to conceptual and theoretical perspectives of urban social theory.			
<b>Module-1</b>			
<b>Classical Theoretical Perspectives:</b>			
Karl Marx; (Capitalism and class); Friedrich Engels (Living conditions of the urban working class in post-industrialized towns); Ferdinand Tonnies (Community and Association), Emile Durkheim (Social solidarity); Georg Simmel (Urban experience, Social distance, Philosophy of money);Max Weber (Social structure of city and urban community).			
Teaching Learning process	Introduction to the course content through lectures		
<b>Module-2</b>			
<b>Contemporary Theoretical Perspectives:</b>			
Robert Park (Human ecology, Symbiotic versus Societal organization, Dynamics and processes of human community: population, material culture (technological development), nonmaterial culture(customs and beliefs), Natural resources of the habitat, Societal pyramid, Differences between ecology and human ecology); Louis Wirth (urban theory on urbanism as a function of population density, size and heterogeneity); Ernest Burgess (Concentric Zone Theory); Homer Hoyt (Sector Theory); Harris and Ullman: Multiple Nuclei Theory).			
Teaching Learning process	Introduction to the course content through lectures		
<b>Module-3</b>			
<b>Political Economy:</b>			
Political and economic forces in a society with reference to works of Henri Lefebvre; Michael Storper and Richard Walker (Theory of location and labour); Manuel Castells; David Harvey; Logan and Molotch(City as Growth Machine);Saskia Sassen (Global City); John Friedmann (World City Hypothesis); Michael Dear (Los Angeles School/ Chicago School).			
Teaching Learning process	Introduction to the course content through lectures		
<b>Module-4</b>			
<b>Social Life inthe Public Realm (Discourses in the West):</b>			
Michel de Certeau (Everyday life in the city); Fredrick Law Olmsted (The civilizing effect of park space in cities); RichardSennet (Fall of the Public Man); Wilson &Kelling (Broken Windows Theory); Carr et al. (The Nature of Public Life); Mike Davis (The Fortress LA: The Militarization of Public Space); William Whyte (Social life in small urban public spaces), Jane Jacobs (eyes on the street; sidewalk ballet).			
Teaching Learning process	Introduction to the course content through lectures		
<b>Module-5</b>			
<b>Social Theory and Urbanism In India</b>			
M N Srinivas (rural sociology); SudiptaKaviraj (public realm in Indian cities); Charles Correa (post-Independence Indian urbanism); Partha Chatterjee (civil society-political society); Rahul Mehrotra (static-kinetic city); Solomon Benjamin (occupancy urbanism); Ananya Roy (Informality in Indian cities).			

Teaching Learning process	Introduction to the course content through lectures
<p>Assessment Details (Both CIE and SEE)</p> <p>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.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, term paper presentation and submission.</p> <p><b>Semester End Examination:</b> Theory examination shall be held for 3-hour duration, students are expected to answer five full questions, one question from each module</p>	
<p><b>Suggested learning Resources</b></p> <ol style="list-style-type: none"> <li>1. Borden, Iain, Tim Hall and Malcolm Miles (Eds.). 2003. <i>The City Cultures Reader</i>. Routledge</li> <li>2. Benjamin, S. 2008. Occupancy Urbanism: Radicalizing Politics and Economy beyond Policy and Programs. <i>International Journal of Urban and Regional Research</i>, 32.3, 719-729.</li> <li>3. Castells, Manuel. 1978. <i>City, Class and Power (Sociology, politics &amp; cities)</i>. Palgrave Macmillan</li> <li>4. Chatterjee, Partha. 2006. <i>Politics of the Governed: Reflections on Popular Politics In Most of the World</i>. Columbia University Press.</li> <li>5. Correa, Charles. 1989. <i>The New Landscape: Urbanisation in the Third World</i>. London. Butterworth Architecture</li> <li>6. Correa, Charles. 2000. Housing and Urbanization. UDRI Mumbai</li> <li>7. Davis, Mike. 1990. <i>City of Quartz: Excavating the Future in Los Angeles</i>. Verso</li> <li>8. Harvey, David. 2001. <i>Spaces of Capital: Towards a Critical Geography</i>. Blackwell/Wiley</li> <li>9. Harvey, David. 2000. <i>Spaces of Hope</i>. University of California Press</li> <li>10. Jacobs, Jane. 1961. <i>The Death and Life of Great American Cities</i>. Vintage</li> <li>11. Kaviraj, Sudipta. 1997. <i>Filth and the Public Sphere: Concepts and Practices about Space in Calcutta</i>. <i>Public Culture</i>, 10 (1), 83-113.</li> <li>12. Lin, Jan and Christopher Mele (eds.). 2012. <i>The Urban Sociology Reader</i>. Routledge</li> <li>13. Mehrotra, R. (2008) <i>Negotiating the Static and Kinetic Cities: The Emergent Urbanism of Mumbai</i>, in Huysen, A. (ed.) <i>Other Cities, Other Worlds: Urban Imaginaries in a Global Age</i>. Duke University Press: Durham and London. pp.205-18.</li> <li>14. Roy, Ananya. 2005. <i>Urban Informality: Towards an Epistemology in Planning</i>, <i>Journal of the American Planning Association</i>, 71 (2), 147-158.</li> </ol>	
Web links and Video Lectures (e-Resources)	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=nBUq21iahpl">https://www.youtube.com/watch?v=nBUq21iahpl</a></li> <li>2. <a href="https://www.youtube.com/watch?v=gaw8iUi-i6E">https://www.youtube.com/watch?v=gaw8iUi-i6E</a></li> </ol>
<p><b>Skill Development Activities suggested</b></p> <ol style="list-style-type: none"> <li>1. Walking around the city for photo-documentation and activity-mapping</li> <li>2. Attending seminars, talks and workshops organized by parent institution and other institutions in the city and outside.</li> </ol>	

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

Sl No	Description	Blooms level
CO1	Gain knowledge about urban sociology and built form	III
CO2	Can analyze scholarly papers on subject matter	IV
CO3	Make presentations based on subject matter	IV
CO4	Interpret social phenomena into drawings of places and space	IV
CO5	Understand contemporary concepts of urbanism in Indian cities	III

**Program outcome of this course**

Sl No	Description	POs
1	Students' single and group presentations based on the course material readings will help them with their overall presentation skills	1, 2, 4, 5, 9, 10
2	Students will gain knowledge about urban sociology and built form in different contexts	1, 2, 3, 7, 9, 10
3	The course will sharpen students' ability to interpret social phenomena into drawings of places and space	1, 2, 3, 4, 6, 7, 9, 10
4	Students will learn contemporary concepts of urbanism in Indian cities that they can apply in their architecture design studios	1, 2, 3, 10

**Mapping of COs and POs**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	3	-	-	-	3	-	3	3
CO2	3	3	3	-	-	-	-	-	-	3
CO3	1	3	-	3	2	-	-	-	3	2
CO4	3	3	3	3	-	1	1	-	1	2
CO5	3	2	3	-	-	-	-	-	-	3
<b>Average</b>	<b>2.6</b>	<b>2.6</b>	<b>3</b>	<b>1.2</b>	<b>0.4</b>	<b>0.2</b>	<b>0.8</b>	<b>0</b>	<b>1.4</b>	<b>2.6</b>

**Graduate attributes**

Knowl edge	Analytic al skills	Applicatio n of research	Application of latest technology and tools	Generate design/sol ution	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	--







<b>COURSE: INDIAN URBANISM</b>			
Course Code:	<b>MAUD15A</b>	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:1:0	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
<b>Course Learning Objectives:</b>			
The course is intended to develop an understanding of key issues of urbanism in India, its dilemmas, ideologies and the new patterns that it has taken with neo-liberalism.			
<b>Course outline</b>			
The course covers on issues of Indian urbanism related to polity and colonial legacy, ideology of tenure and exchange, environment and water, daily life and informal sector, gender, art and media in the city. The course would be conducted through readings, discussions and invited lectures covering case studies and published research works.			
Teaching learning process	Introduce each subsection through case study and generate discussion through article reading		
<b>Assessment Details (Both CIE and SEE)</b>			
<b>Assessment Details (CIE and SEE)</b>			
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).			
<b>Continuous Internal Evaluation:</b>			
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.			
<b>Semester End Examination:</b> (not applicable)			
<b>Suggested learning resources:</b>			
<ol style="list-style-type: none"> <li>1. K. Sivaramakrishnan and Arun Agrawal (Edit), Regional Modernities: The Cultural Politics of Development in India, Stanford University Press, 2003.</li> <li>2. Kenneth R Hall (Edit), Structure and Society in early South India, Oxford University Press, 2004.</li> <li>3. Malcolm Miles and Tim Hall (Eds), The City Cultures Reader, Routledge Taylor &amp; Francis Group, 2004.</li> <li>4. Partha Chatterjee, The Politics of the Governed, New York: Columbia University Press, 2004.</li> <li>5. Reader compiled by course instructor.</li> </ol>			
<b>Web Links and Video lectures (E-resources):</b>			
<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=LCw2LOKqO-Q&amp;t=776s">https://www.youtube.com/watch?v=LCw2LOKqO-Q&amp;t=776s</a></li> <li>2. <a href="https://www.youtube.com/watch?v=qUU5CTICBq4">https://www.youtube.com/watch?v=qUU5CTICBq4</a></li> <li>3. <a href="https://www.youtube.com/watch?v=esPJRnKEyHU">https://www.youtube.com/watch?v=esPJRnKEyHU</a></li> <li>4. <a href="https://www.youtube.com/watch?v=Y40pp8OFubs">https://www.youtube.com/watch?v=Y40pp8OFubs</a></li> </ol>			
<b>Skill development suggested:</b>			
<ol style="list-style-type: none"> <li>1. Compilation of readings available on Indian urbanism through group work</li> <li>2. Familiarization of various patterns of Indian urbanism</li> </ol>			

**Course outcome(Course skill set)**

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

SI No	Description	Blooms level
CO1	Familiarize the key issues of urbanism in India	I
CO2	Understanding of different ideologies and urban pattern	IV
CO3	Familiarization of Various tools and lenses in reading the urban pattern	IV

**Program outcome of this course**

SI No	Description	Pos
1	Comprehend the issues of urbanism in India	1,2,7,8
2	Knowledge of urban pattern reading	2,3,4,9,10
3	Relate and application of tools and technology	4,6

**Mapping of CO s and PO s**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	-	-	-	2	2	1	1
CO2	2	3	2	3	-	-	2	3	3	2
CO3	-	-	2	3	-	2	1	-	-	2
<b>Average</b>	<b>1.6</b>	<b>1.6</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>1.6</b>	<b>1.6</b>	<b>1.3</b>	<b>1.6</b>

**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	--

<b>COURSE: SPATIAL /SOFTWARES SKILLS FOR URBAN DESIGN &amp; APPLICATION IN CITY READING</b>			
Course Code:	<b>MAUD15B</b>	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:1:0	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
<b>Course Learning Objectives:</b> This course aims at study and application of software skills that matters in city reading and visual expression			
<b>Course outline</b>			
<ol style="list-style-type: none"> <li>1. Basic software skill (presentation): introduction and advance study in Photoshop, InDesign, Lumion, Prezi, Sketch up modeling etc.</li> <li>2. Audio visual skill for effective presentation : Basics of Photography, Videography, Editing techniques and its application in city reading and application of such tools in collection of city data(tangible and intangible), illustration through visuals/sound(movie making ), graphical representation, expressing conceptual idea, processing and participatory planning, stake holders meeting etc</li> </ol>			
Teaching learning process	Introduction to the course content through lectures, guest talk, case study, and practical exercises-use of appropriate tools and software		
<b>Assessment Details (Both CIE and SEE)</b>			
<b>Assessment Details (CIE and SEE)</b>			
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).			
<b>Continuous Internal Evaluation:</b>			
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.			
<b>Semester End Examination:</b> (not applicable)			
<b>Suggested learning resources:</b>			
<ol style="list-style-type: none"> <li>1. Edmund N Bacon- Design of cities -A Penguin Book</li> <li>2. Jacobs , Allan B, "Great streets "MIT press 1993</li> </ol>			
<b>Web Links and Video lectures (E-resources):</b>			
<ol style="list-style-type: none"> <li>1. <a href="https://clipchamp.com/en/video-editor/">https://clipchamp.com/en/video-editor/</a></li> <li>2. <a href="https://www.youtube.com/watch?v=k5-8XQ24yjU">https://www.youtube.com/watch?v=k5-8XQ24yjU</a></li> <li>3. <a href="https://www.youtube.com/watch?v=MqwIW76sFCM">https://www.youtube.com/watch?v=MqwIW76sFCM</a></li> <li>4. <a href="https://www.youtube.com/watch?v=gYO1uk7vlcc">https://www.youtube.com/watch?v=gYO1uk7vlcc</a></li> </ol>			
<b>Skill development suggested:</b>			
<ol style="list-style-type: none"> <li>1. Integration of visual techniques for better communication</li> <li>2. Develop tools and techniques for internalization of the subject and interactive presentation</li> </ol>			

**Course outcome(Course skill set)**

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

SI No	Description	Blooms level
CO1	Understand the available techniques and application	IV
CO2	Develop skills for expressing the concern and idea	IV
CO3	Interactive skills and its application	VI

**Program outcome of this course**

SI No	Description	POs
1	Able to develop skills of presentation and visual techniques	4,5,9
2	Application of software skills and integration of visual techniques for effective communication	1,2,4,5

**Mapping of CO s and PO s**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	3	2	3		1	2	2	2	2
CO2	2	2	2	1		1	2	1	1	1
CO3	1	1	2	3	3	1	2	2	2	2
<b>Average</b>	<b>1.3</b>	<b>2</b>	<b>2</b>	<b>2.3</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>

**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	--

<b>COURSE: GEOGRAPHICAL INFORMATION SYSTEMS -I</b>			
<b>Course code:</b>	<b>MAUD15C</b>	CIE Marks	100
Teaching hours /Week (L:P:SDA)	2:1:0	SEE Marks	00
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	---
<p><b>Course Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>1. History and development of GIS. Understand GIS as a decision-support tool in urban scenarios., Practical understanding of GIS concepts, techniques and real-world applications in spatial planning.</li> <li>2. Utilizing free and open-source data and software to make GIS maps for Desktop and the web, GIS is a Bridge between the conceptual realms - Architecture /Site - Terrain Analysis/ Landscape architecture/Urban Design and urban planning.</li> </ol> <p><b>Lecture and hands-on lab exercises:</b> Students will complete lab exercises using any good Geographical; and Spatial information systems software with any DBMS.</p>			
<p><b>HISTORY AND DEVELOPMENT OF GEOGRAPHICAL INFORMATION SYSTEMS, INTRODUCTION TO THE GIS ROOTS IN CARTOGRAPHY</b></p> <p>Maps and their historical development, Advantages of GIS over manual methods, first automatic processing of geographical information, Spatial learning and development, Using and learning maps, defining a map, other representations of the world, Mapping concepts, features and properties. Important milestones in the development of GIS, Recent developments.</p>			
Teaching Learning Process	Introduction to the course through Lectures. Major areas of application through lectures, hands-on and videos		
<p><b>SPATIAL DATA STRUCTURE AND MODELS</b></p> <p>Types of information in a digital map, The shape of the earth, Datum types, General coordinate systems, Earth coordinate geometry, Map projections, World geographic reference system (GEOREF), Concept of the grid on the earth's surface and its required correction. Information organization and data structure, Geographic data and geographic information, The relationship perspective of information organization. Data– Fundamental concepts, Spatial – non-spatial data, database management system, data models.</p> <p>Data collection workflow, Field mapping/collecting data using the Mobile application. Primary &amp; secondary geographic data capture, integrating data from external sources, Geographic data formats, capturing attribute data, Managing a data capture project and Data editing.</p>			
Teaching Learning Process	Introduction to the course content through lectures. Hands-on training on earth coordinate geometry, Map projections, geographic reference system. Data modeling theoretical concept with hands-on training.		
<p><b>GIS MODEL TO REPRESENT REAL-WORLD DATA</b></p> <p>Vector data model, storing points and lines, storing area boundaries, The Topological approach, Storing vector data. Raster data models-realizing the raster model, storing raster data structures, Semi-Automatic conversion between vector and raster models, Geographical representation of objects, Object attributes, and Object relations, from database to GIS to map. Introduction to Google Earth and its connection with GIS. Spatial and Nonspatial queries.</p>			

Teaching Learning Process	Introduction to the course content through lectures. Hands-on training on capturing and processing raster, vector data along with attribute data and Google Earth.
<b>USE OF OPEN-SOURCE DATA IN GIS</b>  Using Freely available data sources to generate and process raster and vector data for example Open Street Maps, Google Maps, Bing maps, wiki maps, and census data.  Integrating 3rd dimension of data and processing 3D maps and TerrianDEM analysis	
Teaching Learning Process	Introduction to the course content through lectures. Hands-on training on working with basic raster and vector data models in GIS, and utilization of Open-source vector data
<b>Compose and create a printable map in GIS, build the 3D model in virtual mode, Urban Planning and design exercises.</b>  Map composition with 2D and 3D views as well as a key map with a North arrow, scale bars legend and attribute integration. Create a web map for access to the internet. Visualization and navigation of maps	
Teaching Learning Process	Introduction to the course content through lectures. Hands-on training on printable 2D and 3D maps along with analysis, also porting the map on to the web.
<b>Assessment Details (CIE and SEE)</b> 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).  <b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.  <b>Semester End Examination:</b> (not applicable)	
<b>Suggested learning resources:</b> Books: <ol style="list-style-type: none"> <li>1. Anupama Pai, "An Introduction to Maps", Foundation for Ecological Research, Advocacy and Learning, 2004.</li> <li>2. Peter A. Burrough, Rachael A. McDonnell, and Christopher D. Lloyd, "Principles of Geographical Information Systems", Oxford University Press, 2015</li> <li>3. Frederik Ramm, Jochen Topf, Steve Chilton, "OpenStreetMap: Using and Enhancing the Free Map of the World", UIT Cambridge, 2010.</li> <li>4. Robert Laurini, "Information Systems for Urban Planning: A Hypermedia Cooperative Approach", Taylor Francis Ltd, 2001.</li> <li>5. Michael Zeiler, "Modeling our world: The ESRI Guide to Geodatabase Concepts", ESRI Press, 2010.</li> <li>6. C.J.Date, " An Introduction to Data base Systems", Addison-Wesley Publishing Company, 1995</li> <li>6. RamezElmasri, Shamkant B. Navathe, "Fundamentals of Data base Management System", Pearson, 2016.</li> <li>7. Anita Graser ,quot;LearningQGISquot; PAKT open source, 2016.</li> <li>8. GISP Dr. John Van Hoesen, Dr. Luigi Pirelli, GISP Dr. Richard Smith Jr., GISP Kurt</li> <li>9. Menke, quot; A refreshing look at QGIS: Mastering QGISquot;, PACKT Pub., 2016</li> <li>10. Kurt Menke. Locate press, Discover QGIS 3.x, A Workbook for Classroom or Independent Study</li> </ol>	



**Web links and Video Lectures(e-Resources)**

1. <https://sites.duke.edu/envgis/tutorials/introduction-to-google-earth/>
2. <https://sites.duke.edu/envgis/tutorials/introduction-to-google-earth/>
3. <https://www.google.com/earth/outreach/learn/>
4. <https://learnosm.org/>
5. <https://documentation.qgis.org/>
6. <https://www.qgistutorials.com/>
7. <https://docs.mapbox.com/help/how-mapbox-works/>
8. [https://wiki.openstreetmap.org/wiki/Main\\_Page](https://wiki.openstreetmap.org/wiki/Main_Page)
9. <https://elearning.iirs.gov.in/spaceapplications/>

**Skill development activities suggested**

1. Composing maps for Urban planning using GIS (AutoCAD MAP3D, QGIS, Global mapper)
2. Identifying informal settlements and urban growth patterns
3. Analyzing metro rail accessibility
4. Analyzing street connectivity for walkability
5. Dem creation and analysis for Slope and aspects
6. Water stream analysis in forest areas and Micro watershed delineation using 3D data through Google earth, Stereo pair imagery
7. Creating buffers for transportation corridors and land use/Landcover for impact assessment
8. Lake encroachment and shrinking analysis using google earth imagery and DEM
9. Land suitability and selection for development on a hilly terrain using DEM and land cover data.

**Course outcome (course skill set)**

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

SI. No.	Description	Blooms Level
CO1	Understanding History and basics of mapping and GIS	I
CO2	Field mapping/collecting data using primary and secondary data sources and Mobile application	II
CO3	Visualizing data and making custom maps in 2D & 3D	III
CO4	Using open-source data	IV
CO5	Compose map, Creation of Base maps for site areas in 2D and 3D	V

Program outcome of this course

SI. No.	Description	POs
1	Understand mapping as a crucial tool in data analysis of Urban scenario	1, 2, 4, 10
2	Creating base maps of study areas upon which further research and analysis can be carried out	1, 2, 3, 4, 9,10
3	Spatial representations of various types of data. Vector, Raster, Attributes, pictorial, annotations, 2D & 3D, related to urban context, including land use/Land cover, transportation corridor, Surface hydrology, Inferencing from datasets	1,2, 3,4, 5,7, 9, 10

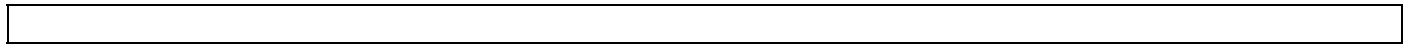
### Mapping of COs and Pos

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	-	1	-	-	-	-	-	3
CO2	2	-	3	3	-	-	-	-	3	3
CO3	1	3	3	3	2	-	2	2	1	3
CO4	2	3	3	2	2	3	-	-	2	2
CO5	2	2	3	3	3	1	2	2	3	3
Average	2	1.8	2.4	2.4	1.4	0.8	0.8	0.8	1.8	2.8

### Graduate Attribute

Knowledge	Analytical Skills	Application of Research	Application of Latest Technology and Tools	Generate Design and Solutions	Ethics	Societal Concern	Environmental Concern	Collaborative Aptitude	Opportunity for continued Learning
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

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



<b>COURSE: INFRASTRUCTURE AND TRANSPORTATION PLANNING</b>			
Course code:	MAUDL106	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	TW
<b>Objective:</b>			
The course is intended as an introduction to the infrastructure needs of an urban environment and fundamental concepts which cater to such needs. It is also intended as an introduction to the issues related to Traffic and Transportation in cities. In addition, it is intended to provide an overview of the Transportation Planning process.			
<b>Module-1</b>			
Urban Form - Elements of urban form-Growth of Urbanization- Impacts –Urban Design-Transportation and Urban form-Functional Classification of Urban Roads.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and case study presentation		
<b>Module-2</b>			
Urban Infrastructures and city – Concepts, Physical and Social Infrastructure, History of infrastructure, Layout of urban area, siting of services and land use and efficiency. Basics of service network. - Water supply, sewerage/drainage and waste management. Urban Social infrastructure; Qualitative and Quantitative techniques of assessing requirements, planning amenities.			
Teaching Learning Process	Introduction to the course content through lectures and discussion.		
<b>Module-3</b>			
Smart Cities – Concepts- Goals- Proposals for Indian Cities.-Safe access and Street Design in Indian Cities Urban Transportation Characteristics- Factors for need of Transportation – Demand- Modes- Urban Transport Scenario in India- Components of urban Transport System-Introduction to general Traffic Engineering.			
Teaching Learning Process	Introduction to the course content through lectures, discussion and debate		
<b>Module-4</b>			
Introduction: Scope of urban transport planning, interdependency of land use and traffic system, system approach to urban transportation Planning- Stages in Transport Planning, Climate change, Transit oriented development. Transport Demand Modeling – Introduction- Transportation surveys- Definition of study area, zoning, types of surveys.			
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.		
<b>Module-5</b>			
Four Step Modeling (FSM)- Trip generation- Trip production- Trip distribution- modal split and Trip assignment.			

Public Transportation modes: Systems in India, problems and prospects, present practices in urban transportation. Metro, mono, and high capacity buses. System selection.	
Teaching Learning Process	Introduction to the course content through lectures, discussion, debate and presentation.
<p><b>Assessment Details (CIE and SEE)</b></p> <p>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.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, presentation and submission..</p> <p><b>Semester End Examination:</b> Semester End Examination shall be Term work , students are expected compile their work for external evaluation .</p>	
<p><b>Suggested learning resources:</b></p> <p><b>Books:</b></p> <ol style="list-style-type: none"> <li>1. Hamada M .,Critical Urban Infrastructure Handbook © 2015 by Taylor &amp; Francis Group, CRC Press New York</li> <li>2. Papacostas and Prevendours, Transportation Engineering and Planning, PHI Publication ,2013</li> <li>3. Kadiyali L.R. Traffic Engineering and Transportation Planning, Khanna Publications.</li> <li>4. S. Ponnuswamy , Johnson Victor ., Urban Transportation: Planning, Operation and Management , Tata McGraw Hill- New Delhi 2014</li> <li>5. Safe access manual:safe access to mass transit stations in Indian cities , Bangalore: EMBARQ India.-shah, sonal,sahanagoswami,lubainarangawala, Robin King, Himadri Das, Akhila Suri (2014)</li> <li>6. ITDP and EPC(2011): Better Streets Better Cities : A Guide to Street Design in Urban India. Institute for Transport and Development Policy</li> <li>7. Peter Calthorpe.(2011). <i>Urbanism in the Age of Climate Change</i>. Island Press. Washington DC</li> <li>8. Hank Dittmar, Gloria Ohland.(2004). <i>The New Transit town: Best practices in Transit Oriented Development</i>. Island Press. Washington DC</li> <li>9. Stephen Graham, S M (2001). <i>Splintering Urbanism, Networked Infrastructure, Technological Mobilities and the urban condition</i>. London. Routledge</li> <li>10. Related reading materials</li> </ol>	
Web links and Video Lectures (e-Resources)	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=-u8Y13MPLng">https://www.youtube.com/watch?v=-u8Y13MPLng</a></li> <li>2. <a href="https://www.youtube.com/watch?v=M-r4DGPeys8&amp;list=PLFGUksPYY9Qp5rLjedeUlwcU13eAeETkh&amp;index=2">https://www.youtube.com/watch?v=M-r4DGPeys8&amp;list=PLFGUksPYY9Qp5rLjedeUlwcU13eAeETkh&amp;index=2</a></li> </ol>
<p><b>Skill development activities suggested</b></p> <p>The following skills with respect to transportation planning:</p> <ul style="list-style-type: none"> <li>- Critical Reading</li> <li>- Identifying other relevant perspectives</li> </ul>	
<p><b>Course outcome (course skill set)</b></p> <ul style="list-style-type: none"> <li>• At the end of the course the student will be able to: Understanding the fundamental concept/prospects of infrastructure, transportation/planning and its practice in India.</li> </ul>	

<b>SI No</b>	<b>Description (refer module outcome)5 module=5outcome</b>	<b>Blooms level</b>
CO1	Understand relation with urbanization and transportation	V
CO2	Development of urban infrastructure	IV
CO3	Concept of smart city and accessibility	IV
CO4	Study of Model- transportation planning and city	III
CO5	Technical aspects of study and practices in urban transportation	V

**Program outcome of this course**

Sl. No.	Description	POs
1	Able to identify various concepts of infrastructure practices in India	1,2,3
2	Able to relate the scope and parallel discipline that engage in urban transportation study	2,3
3	Able to comprehend the technological advance relates to transportation and concepts in managing urban development	5,3,4,7
4	Application of the study in urban design discipline	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	-	2	3	2	-	1	2	2	2	3
CO5	-	-	2	2	-	1	1	1	2	2
<b>Average</b>	<b>1.0</b>	<b>2.0</b>	<b>2.0</b>	<b>1.4</b>		<b>1.2</b>	<b>1.8</b>	<b>1.6</b>	<b>1.4</b>	<b>2.0</b>

**Graduate attributes**

Knowle dge	Analytic al skills	Applicat ion of research	Application of latest technology/t ools	Generate design/so lutions	Ethics	Societal concern	Environmental concern	Collabora tive apitude	Oppor tunity for contin ued learnin g
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

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

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**SEMESTER –II**

<b>COURSE: URBAN DESIGN STUDIO-II INTEGRATED WITH ECOLOGY AND SITE PLANNING</b>			
<b>Course Code:</b>	<b>MAUD201</b>	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><b>Course Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>2. To introduce students to the art of site planning and the concerns of environmental variables in the process of urban design.</li> </ol>			
<p><b>Studio Outline</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>			
<b>Teaching Learning Process</b>	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](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
<b>Average</b>	<b>2.2</b>	<b>2.8</b>	<b>2.4</b>	<b>1.4</b>	<b>1.2</b>	<b>1</b>	<b>2.0</b>	<b>2.0</b>	<b>2.2</b>	<b>1.8</b>

**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	--

<b>COURSE: URBAN CONSERVATION</b>			
Course code:	<b>MAUD202</b>	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
<b>Course Learning Objectives:</b>			
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.			
<b>Module-1</b>			
Introduction to conservation of historic and inner city areas. Concepts of conservation in India and Understanding INTEGRATED HERITAGE MANAGEMENT for historic cities.			
<b>Teaching Learning Process</b>	Introduction to the course content through lectures and discussion		
<b>Module-2</b>			
Socio-Economic development, Tourism Infrastructure Development, and role of Urban Design in Understanding of CULTURAL LANDSCAPES, SACRED CITIES.			
<b>Teaching Learning Process</b>	Introduction to the course content through lectures and case study presentation		
<b>Module-3</b>			
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.			
<b>Teaching Learning Process</b>	Introduction to the course content through lectures, discussion, debate and presentation		
<b>Module-4</b>			
Conservation area practice, Adaptive Reuse, up gradation programs in old areas, infill design and regeneration of inner city areas.			
<b>Teaching Learning Process</b>	Introduction to the course content through lectures, discussion, debate and presentation		
<b>Module-5</b>			
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			
<b>Teaching Learning Process</b>	Introduction to the course content through lectures, discussion, debate and presentation.		
<b>Assessment Details (Both CIE and SEE)</b>			
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.			
<b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, group or individual assignment/ presentation and submission.			
<b>Semester End Examination:</b>			
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](https://www.youtube.com/watch?v=_5sTNavbbeQ)
- 4 [https://www.youtube.com/watch?v=Gath5\\_YVh8o](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
<b>Average</b>	<b>1.8</b>	<b>2.2</b>	<b>1.8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.8</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>

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	-

<b>COURSE: CONTEMPORARY THEORIES OF URBANISM AND ARCHITECTURE</b>			
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
<b>Course Learning Objectives:</b>			
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.			
<b>Module-1</b>			
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		
<b>Module-2</b>			
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.		
<b>Module-3</b>			
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		
<b>Module-4</b>			
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.		
<b>Module-5</b>			
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.		
<b>Assessment Details (CIE and SEE)</b>			
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
<b>Average</b>	<b>1.2</b>	<b>2.0</b>	<b>2.0</b>	<b>1.2</b>	<b>-</b>	<b>1.2</b>	<b>1.8</b>	<b>0.8</b>	<b>1.4</b>	<b>2.0</b>

### 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	-



<b>COURSE: URBAN GOVERNANCE AND PROJECT FINANCE</b>			
<b>Course code:</b>	<b>MAUD204</b>	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
<b>Objective:</b> Introduction to the mechanism of urban governance and fiscal foundations of urban development.			
<b>Module-1</b>			
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		
<b>Module-2</b>			
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.		
<b>Module-3</b>			
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		
<b>Module-4</b>			
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.		
<b>Module-5</b>			
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.		
<b>Assessment Details (CIE and SEE)</b> 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.			
<b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, presentation and submission.			
<b>Semester End Examination:</b>			

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, 21<sup>st</sup> 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](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](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](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](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](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](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, &quot;The Origins and Practice of Participatory Rural Appraisal,&quot; 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
<b>Average</b>	<b>1.2</b>	<b>2.0</b>	<b>2.0</b>	<b>1.4</b>		<b>1.2</b>	<b>1.8</b>	<b>1.6</b>	<b>1.6</b>	<b>2.0</b>

**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		-	



<b>COURSE: PUBLIC PARTICIPATION IN GOVERNANCE</b>			
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	----
<b>Course Learning Objectives:</b>			
The course is intended to introduce concept of people's participation in urban design project.			
<b>Course outline</b>			
<ol style="list-style-type: none"> <li>1. Concept and importance of people's participation/planning, types and relevance, existing system and scope.</li> <li>2. Identification of stake holders, issues and interactions, institutionalization of people participation.</li> <li>3. Individual/NGO/CBO efforts in peoples planning with example, national and international.</li> <li>4. Role of urban designer in process of people participation in urban design project, example.</li> </ol>			
<b>Teaching Learning Process</b>	Introduce each subsection through talk/presentation, case study and generate discussion through article reading		
<b>Assessment Details (CIE and SEE)</b>			
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).			
<b>Continuous Internal Evaluation:</b>			
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.			
<b>Semester End Examination:</b> (not applicable)			
<b>Suggested learning resources:</b>			
<ol style="list-style-type: none"> <li>1. Partha Chatterjee, the Politics of the Governed, New York: Columbia University Press, 2004.</li> <li>2. Report-seminar on good urban governance new Delhi 2001-2002, Nagarapalika journal, reports etc.</li> </ol>			
<b>Web links and Video Lectures(e-Resources):</b>			
<a href="https://www.youtube.com/watch?v=-vojtrw9Ys">https://www.youtube.com/watch?v=-vojtrw9Ys</a> <a href="https://www.youtube.com/watch?v=tACf-kiuHwU">https://www.youtube.com/watch?v=tACf-kiuHwU</a> <a href="https://www.youtube.com/watch?v=P8u5YQYv0d8">https://www.youtube.com/watch?v=P8u5YQYv0d8</a> <a href="https://www.youtube.com/watch?v=hFDCCrySV9A">https://www.youtube.com/watch?v=hFDCCrySV9A</a>			
<b>Skill development activities suggested</b>			
<ol style="list-style-type: none"> <li>1. Field visit to enable students to identify conflicts related to governance</li> <li>2. Stakeholders and their roles</li> <li>3. Manage and conduct of public/stakeholders participation meet</li> </ol>			



**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
<b>CO1</b>	3	2	2	-	-	2	2	2	3	3
<b>CO2</b>	1	3	2	-	-	2	3	2	2	2
<b>CO3</b>	1	1	2	-	2	2	3	3	3	2
<b>Avg.</b>	<b>1.6</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>.6</b>	<b>2</b>	<b>2.6</b>	<b>2.3</b>	<b>2.6</b>	<b>2.3</b>

**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	-

<b>COURSE: URBAN MANAGEMENT</b>			
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	---
<b>Course Learning Objectives:</b>			
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.			
<b>Studio outline</b>			
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.		
<b>Assessment Details (CIE and SEE)</b>			
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).			
<b>Continuous Internal Evaluation:</b>			
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](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
<b>Average</b>	<b>1.8</b>	<b>2.4</b>	<b>2.4</b>	<b>2.2</b>	<b>1.2</b>	<b>1.6</b>	<b>1.4</b>	<b>1.4</b>	<b>2.2</b>	<b>1.8</b>

**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	--

<b>COURSE: GIS (GEOGRAPHICAL INFORMATION SYSTEMS) -II</b>			
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	---
<b>Course Learning Objectives:</b>			
<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>			
<b>Course outline</b>			
<b>Advanced-Data Models</b>			
<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>			
<b>Geographic Query and Analysis</b>			
<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>			
<b>The Future of GIS</b>			
<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>			
<b>Creating Reports</b>			
<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>			

<b>Urban Project</b>		
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.	
<b>Assessment Details (CIE and SEE)</b>		
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).		
<b>Continuous Internal Evaluation:</b>		
Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.		
<b>Semester End Examination:</b> (not applicable)		
<b>Suggested learning resources:</b>		
<ol style="list-style-type: none"> <li>1. Anita Graser, "Learning QGIS" PAKT open source, 2016.</li> <li>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.</li> <li>3. <b>Discovering GIS and ArcGIS</b> by Bradley A. Shellito.</li> </ol>		
<b>Web Links and Video lectures (E-resources):</b>		
<a href="https://sites.duke.edu/envgis/tutorials/introduction-to-google-earth/">https://sites.duke.edu/envgis/tutorials/introduction-to-google-earth/</a>		
<b>Skill development suggested:</b>		
Site Visits, hands-on various software like Global Mapper, QGIS, cross domains with emerging architectural trends in Geospatial Industry		
<b>Course outcome(Course skill set)</b>		
<b>At the end of the course the student will be able to:</b>		
<b>Sl.No</b>	<b>Description</b>	<b>Blooms Level</b>
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
<b>Program outcome of this course</b>		
<b>Sl No</b>	<b>Description</b>	<b>POs</b>
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
<b>Average</b>	<b>2.2</b>	<b>2.2</b>	<b>1.8</b>	<b>2.4</b>	<b>1.2</b>	<b>0.6</b>	<b>0.8</b>	<b>1</b>	<b>2.2</b>	<b>2.2</b>

**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	--

<b>COURSE: DATA ANALYTICS</b>			
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	---
<b>Course Learning Objectives:</b>			
<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>			
<b>Course outline</b>			
<ol style="list-style-type: none"> <li>1. Urban systems and management: <ul style="list-style-type: none"> <li>• Understanding urban systems and supporting urban planning and management.</li> <li>• Introduction to basic terms and concepts, the roles of different types of cities in urban networks.</li> <li>• 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</li> </ul> </li>   <li>2. Interdisciplinary methodological skills: <ul style="list-style-type: none"> <li>• 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.</li> </ul> </li>   <li>3. Principles and application of GIS software: <ul style="list-style-type: none"> <li>• 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)</li> </ul> </li>   <li>4. Programming tools for urban analytics: <ul style="list-style-type: none"> <li>• Different analytical tools, Analysis of trends and spatial patterns with indicators, Baseline profiling and making use of neighbourhood statistics.</li> <li>• Monitoring of change: time series and spatial movement.</li> <li>• Model of communication; Visualizations as data and maps,</li> </ul> </li>   <li>5. Quantitative data analysis: <ul style="list-style-type: none"> <li>• 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.</li> </ul> </li> </ol>			



	<p>6. Processing quantitative data:</p> <ul style="list-style-type: none"> <li>• 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)</li> <li>• 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.</li> </ul> <p>7. Sustainable urban features:</p> <ul style="list-style-type: none"> <li>• Understanding Urban features, Area typologies and its classifications, Projections and scenario building.</li> <li>• Sustainable urban futures, knowledge of interdisciplinary urban analytical methods.</li> </ul> <p>8. Urban Policies and evaluation:</p> <ul style="list-style-type: none"> <li>• Policy development and strategic plan-making, present results for policy audiences.</li> <li>• Techniques and methods used to analyse and evaluate spatial issues and planning policy.</li> </ul> <p>9. Urban analytics project:</p> <ul style="list-style-type: none"> <li>• Application of Data Analytics through an URBAN Project taken from previous semester. Development of a urban project using concepts learnt in this course.</li> </ul>
Teaching learning process	<p>Introduction of the course through lectures.</p> <p><b>lecture and hands on lab exercises:</b> 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><b>Assessment Details (Both CIE and SEE)</b></p> <p><b>Assessment Details (CIE and SEE)</b></p> <p>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><b>Continuous Internal Evaluation:</b></p> <p>Continuous Internal Evaluation will be based on weekly assignments, class presentations, participation in seminar discussions and term paper / report submission.</p> <p><b>Semester End Examination:</b> (not applicable)</p>	
<p><b>Suggested learning resources:</b></p> <ol style="list-style-type: none"> <li>1. Batty, M. (2013). The new Science of Cities. The MIT Press.</li> <li>2. Jensen, R. R., Gatrell, J. D., &amp; McLean, D. (Eds.). (2007). Geo-Spatial Technologies</li> </ol>	

inUrban 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:**

<b>Sl.No</b>	<b>Description</b>	<b>Blooms Level</b>
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**

<b>SI No</b>	<b>Description</b>	<b>POs</b>
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**

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

## SEMESTER –III

<b>COURSE: URBAN DESIGN STUDIO-III</b>			
Course Code:	MAUD301	CIE Marks	50
Teaching hours /Week (L:P:SDA)	1:3:8	SEE Marks	50
Total Hours of Pedagogy	12	Total Marks	100
Credits	8	Exam Hours	Viva Voce
<p><b>Course Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>1) The primary goal of the Integrated studio shall be to look at “urban design proposal” as a catalytic force in ensuring future growth with “design” content, yet feasible within the existing policy, economic and political frame work.</li> <li>2) The objectives of the studio are; a) To understand and evolve policy level guidelines which ensure an imagined future physical scenario, b) To understand the process of evolving urban design guidelines c) To illustrate such guidelines with a multiuse facility.</li> </ol>			
<p><b>Studio Outline</b></p> <ol style="list-style-type: none"> <li>1. The chosen project shall be in an area of high potential in an identified urban environment. Project proposals shall be divided into two phases in which a policy and guideline evolution shall precede the actual design project. The project would involve a) identification of various stake holders and their role in policy level guidelines, and b) working and illustrating the economic feasibility and infrastructure development needed for implementation of proposal.</li> <li>2. The project shall end in a detailed design of a group of buildings or (depending on the scale) an architectural project which illustrates the process of urban design as a necessary and inevitable need for architectural projects.</li> </ol>			
<b>Teaching Learning Process</b>	Lecture sessions, Site visits, Student presentations, Group discussions and presentation, Periodic Reviews, Workshops are part of the Teaching Learning Process		
<p><b>Assessment Details (Both CIE and SEE)</b></p> <p>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.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on Internal Reviews, External Reviews and Final studio report and individual project Submission/VIVA VOCE</p> <p><b>Semester End Examination:</b> 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</p>			
<p><b>Suggested learning Resources</b></p> <ol style="list-style-type: none"> <li>1. The Kinetic City &amp; Other Essays, Rahul Mehrotra, ArchiTangle GmbH; 2021</li> <li>2. Public Places Urban Spaces: The Dimensions of Urban Design-Matthew Carmona</li> <li>3. The Cultured Landscape: Designing the Environment in the 21st Century- Ken Fieldhouse and Sheila Harvey.</li> </ol>			
<b>Web links and Video Lectures (e-Resources)</b>	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=HBMIQZeXMiA">https://www.youtube.com/watch?v=HBMIQZeXMiA</a></li> <li>2. <a href="https://www.youtube.com/watch?v=sw9zpH717ts">https://www.youtube.com/watch?v=sw9zpH717ts</a></li> <li>3. <a href="https://www.youtube.com/watch?v=ys07tEScaSo">https://www.youtube.com/watch?v=ys07tEScaSo</a></li> </ol>		

**Skill Development Activities suggested**

1. Study, research and place reading and representation techniques and the influence of urban Policy and guidelines on the city morphology.
2. Mapping the observation and inferring at region/city/precinct/built form scale
3. Skills that enable analysis and identify the Urban design issues and identify the stake holders
4. Ability to program urban design strategies, Design project along with economic feasibility and implementation strategies.

**Course outcome (Course skill set)**

1. Ability to study urban environment and its influence by policy and its ability to make positive effect on urban environment
2. Ability to demonstrate design skill and detail at built/space level.

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

Sl No	Description	Blooms level
CO1	Able to identify urban study which may find an opportunity to apply the policy and guidelines to generate better urban condition	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, precinct and typology	V
CO4	Able to generate UD strategies, economic feasibility and implementation strategies	IV
CO5	Urban Design intervention and design demonstration	VI

**Program outcome of this course**

Sl No	Description	POs
1	Ability to read relate to theme and the city	1,2,9
2	Ability to engage, interact and document the place and stakeholders	3,7,10
3	Able to generate strategies to address the UD issues and implementation strategies	4,6,10
4	Ability to demonstrate urban design solution	5,9

**Mapping of CO s and PO s**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	-	-	-	-	-	-	1	-
CO2	2	3	1			1	2	2	2	1
CO3	1	3	3	1	1	1	2	2	2	1
CO4	-	2	3	2	3	-	2	1	1	2
CO5	-	-	1	2	3	1	1	1	2	3
<b>Average</b>	<b>1.2</b>	<b>2.0</b>	<b>1.6</b>	<b>1.0</b>	<b>1.4</b>	<b>0.6</b>	<b>1.4</b>	<b>1.2</b>	<b>1.6</b>	<b>1.4</b>

**Graduate attributes**

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

Mapping correlation	Low	Medium	High	No
	1	2	3	--

<b>COURSE: DISSERTATION PHASE-I</b>			
Course code:	MAUD302	CIE Marks	100
Teaching hours /Week (L:P:SDA)	1:1:2	SEE Marks	---
Total Hours of Pedagogy	4	Total Marks	100
Credits	3	Exam Hours	---
<p><b>Course Learning Objectives:</b> A studio class where third semester students undertake various reading and writing exercises in the process of identifying and refining their dissertation topics.</p>			
<p><b>Outline:</b></p> <ol style="list-style-type: none"> <li>1. This course is intended to help students to arrive at a conceptual framework for their dissertation Phase-II in the IV semester.</li> <li>2. The final product at the end of course shall be a proposal that provides a detailed dissertation proposal that consists of a working title, literature review, objectives, and study methodology.</li> <li>3. The course will be run as a weekly four-hour seminar class with student presentations on issues related to their chosen dissertation topics.</li> </ol>			
<b>Teaching Learning Process</b>	Introduction to the course content through subject introduction, discussion, debate and presentation.		
<p><b>Assessment Details (Both CIE and SEE)</b></p> <p>The weight age of Continuous Internal Evaluation (CIE) is 100%. The minimum passing mark for the CIE is 50% of the maximum marks.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, group or individual assignment/ presentation and submission.</p>			
<p>Suggested learning resources:</p> <ol style="list-style-type: none"> <li>1. Proceedings: 2nd IUDI National Urban Design Thesis Seminar 2010, held at CEPT University, Ahmedabad, 29th-30th October 2010 by compiled and edited by P.V.K. Rameshwar</li> <li>2. Architectural Research Methods- by Linda N. Groat and David Wang</li> <li>3. Writing your doctoral Dissertation –invisible rules for success –Rita S Brause</li> </ol>			
<b>Web links and Video Lectures (e-Resources)</b>	1. <a href="https://www.youtube.com/watch?v=r0MfpzITGrU">https://www.youtube.com/watch?v=r0MfpzITGrU</a>		
<p><b>Skill development activities suggested</b></p> <ol style="list-style-type: none"> <li>1. Systematic approach in cataloguing the readings, references and bibliography.</li> <li>2. Writing the dissertation synopsis</li> </ol>			



**Course outcome (course skill set)**

- able to theorize the urban design issues at different scale
- Able to understand the urban design project from beginning to end as comprehensive process as involving multi professional.

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

SI No	Description	Blooms level
CO1	Able to identify the literature of relevance and formulate broad research interest	IV
CO2	Able to understand various stages of making of Dissertation	IV
CO3	Able to theorize the urban design issues at different scale	IV
CO4	Able to formulate and structure the UD enquiry	V
CO5	Able to apply the understanding of UD issues/conflicts and select demonstration site/area/city	V

**Program outcome of this course**

SI No	Description	POs
1	Familiarization of existing literature and research on selected research direction	1,2,8,9
2	Formulate the study structure	2,7,9
3	Knowledge on existing subject research	3,7,8
4	Exposure to the making of UD enquiry	5,7,8,10

**Mapping of CO's and Po's**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	-	-	-	1	2	2	2
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	3	-	2	2	1	1	2
Average	1.8	2.4	1.8	0.6	-	0.4	1.8	1.8	2.0	2.2

**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	-









<b>COURSE: URBAN HOUSING</b>			
Course code:	MAUD314A	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	TW
<p><b>Course Learning Objectives:</b> The course is an introduction to the policies, market, finance and delivery of housing to various segments of urban population. Basically, however it shall be an exercise in the design of a large-scale housing project either as a Greenfield project or an intervention into an existing fabric of the city.</p>			
<p><b>Course outline</b></p> <ol style="list-style-type: none"> <li>1. Evolution of housing policies in India, introduction to housing need; demand and supply process; estimation of housing need and demand; review of housing policies in various planning periods in India; Basic concepts in understanding housing markets; market price and valuation; policies which affect the housing market; review of existing housing finance and institution of housing finance. Concepts of housing layouts; issues of density, open spaces, community spaces and accessible open areas. House types and their implication on layout. Technology and delivery of housing; private and public role in housing market. Low income and marginal income housing schemes and institutions involved in the production. Design guidelines for marginal housing schemes for varied socio-economic groups.</li> </ol>			
<b>Teaching Learning Process</b>	Introduce each subsection through talk/presentation, case study and generate discussion through article reading		
<p><b>Assessment Details(CIE and SEE)</b> 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.</p> <p><b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on presentation, interaction and submission.</p> <p><b>Semester End Examination:</b> Term Work be conducted</p>			
<p><b>Suggested learning resources:</b></p> <ol style="list-style-type: none"> <li>1. Kavita Datta and G.A.Jones Housing Finance in developing countries, Routledge, London.</li> <li>2. Cedric Pugh Housing and Urbanization, Sage Publications, New Delhi.</li> </ol>			
<p><b>Web links and Video Lectures(e-Resources):</b></p> <ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=M4ioHYkYT6E">https://www.youtube.com/watch?v=M4ioHYkYT6E</a></li> <li>2. <a href="https://www.youtube.com/watch?v=CexZXoIU2w8">https://www.youtube.com/watch?v=CexZXoIU2w8</a></li> <li>3. <a href="https://www.youtube.com/watch?v=7dAckA1Ef-M">https://www.youtube.com/watch?v=7dAckA1Ef-M</a></li> <li>4. <a href="https://www.youtube.com/watch?v=0U05_UiRALU">https://www.youtube.com/watch?v=0U05_UiRALU</a></li> </ol>			

**Skill development activities suggested**

1. To document the various housing and policies that influenced
2. Socio-cultural data for a specific settlement within the city to identify the spatial relation with housing and future need.

**Program outcome of this course**

Sl. No.	Description	POs
1	Able to illustrate evolution of housing in India	1,3,9,10
2	able to relate to the existing finance system related to housing	2,6,7
3	Socio economic influenced housing scheme and existing policies in India	4,8,10

**Mapping of COs and Pos**

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

**Graduate Attributes**

Knowledge	Analytical skills	Application of research	Application of latest technology and tools	Generate design/solution	Ethics	Social 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	-

<b>COURSE: POLITICS OF DEVELOPMENT</b>			
Course code:	MAUD314B	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:0:0	SEE Marks	50
Total Hours of Pedagogy	3	Total Marks	100
Credits	3	Exam Hours	TW
<b>Course Learning Objectives:</b> To critically discuss the motives and actions of different actors of state and society in driving urban development and distribution of resources in the city.			
<b>Course outline</b> The course explores the impact of the intentions, conflicting interests, pressures and policies on the social and morphological dimensions of the city. Various issues pertaining to the role of different actors in shaping urban developmental projects are discussed, using papers and literature on those topics. Topics discussed in this weekly four hour class include public and private developmental project, design commissions, social planning and spatial planning and planning processes in Indian cities.			
<b>Teaching Learning Process</b>	Introduce each subsection through talk/presentation, case study and generate discussion through article reading		
<b>Assessment Details(CIE and SEE)</b> 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.			
<b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on presentation, interaction and submission.			
<b>Semester End Examination:</b> Term Work will be conducted			
<b>Suggested learning resources:</b> <ol style="list-style-type: none"> <li>1. Elizabeth Strom and John Mollenkopf (Eds), The Urban Politics Reader, Routledge Taylor &amp; Francis Group,2004</li> <li>2. Partha Chatterjee, The Politics of the Governed, New York: Columbia University Press, 2004.</li> <li>3. Nandan Nilekeni: Imagining India, Penguin Press, 2009.</li> <li>4. Champakalakshmi R ,Trade Ideology and Urbanisation in India, Oxford University Press, New Delhi, 1999</li> </ol>			
<b>Web links and Video Lectures(e-Resources):</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=mo3Gghkh49U">https://www.youtube.com/watch?v=mo3Gghkh49U</a></li> <li>2. <a href="https://www.youtube.com/watch?v=tkXlu34naUE">https://www.youtube.com/watch?v=tkXlu34naUE</a></li> </ol>			
<b>Skill development activities suggested:</b> <ol style="list-style-type: none"> <li>1. mapping of stake holders and their interest</li> <li>2. project framework and stake holders interest mapping chronologically</li> <li>3. project interest at larger scale and stake holders</li> </ol>			
<ul style="list-style-type: none"> <li>• <b>Program outcome of this course</b> To critically analyze/understand the complexity of development/projects which involves not only stakeholders but also the conflicting interest</li> </ul>			



## Mapping of COs and Pos

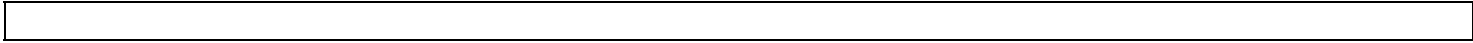
Sl. No.	Description	POs
1	Able to illustrate evolution of housing in India	1,3,9,10
2	able to relate to the existing finance system related to housing	2,6,7
3	Socio economic influenced housing scheme and existing policies in India	4,8,10

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

## Graduate Attributes

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



<b>COURSE: REAL ESTATE AND URBAN DESIGN</b>			
Course code:	MAUD314C	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	TW
<b>Objective:</b> Introduction to the various aspects of Real estate development and its influence on city and development.			
<b>Urban Design and real estate-An Introduction</b> -Introduction to the Role of Real Estate, real estate forces and its influence in making of region, city, neighborhood, block and street. Impact on built form and social, cultural and environmental nature of cities, Case studies .			
<b>Real estate, society and urban development</b> - land use and housing policies , development regulations and building codes, affordable housing, government regulations , ESG (Environmental, Social and Governance)criteria, case studies			
<b>Real estate and finance and Law</b> - Land law, Contract law – formation and terms, Leases – commercial, agricultural and residential, Easements, Tort (public nuisance, trespass and negligence) online consumerism,& <i>Property Rights and Ownership</i> &global flow of capital, land value, financing model, case studies.			
<b>Real estate development and marketing:</b> public private partnership, mortgage, bank loan and joint ventures, case studies .			
<b>Real estate and entrepreneurship:</b> new towns, new technology, smart building, case studies Case studies in Real estate development, development project			
<b>Assessment Details (CIE and SEE)</b> 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.			
<b>Continuous Internal Evaluation:</b> Continuous Internal Evaluation will be based on assignments, presentation and submission.			
<b>Semester End Examination:</b> Term work			

**Suggested learning resources:Books:**

1. **Urban Design in the Real Estate Development Process: 46 (Real Estate Issues) by Steve Tiesdell and David Adams**
2. **Public and private spaces in the city-Ali madanipour**
3. **Real estate development and investment: A comprehensive approach –SP Peco**
4. **Land and the city: Patterns and process of urban change –Philip kivel**
5. **Land, development and design –Paul syms**
6. **Real estate principles-charles J Jacobus**
7. **Real estate modeling and forecasting –chris brooks, sotiristsolacos**

Web links and Video Lectures (e-Resources)	<ol style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=xi6r3hZe5Tg">https://www.youtube.com/watch?v=xi6r3hZe5Tg</a></li> <li><a href="https://www.youtube.com/watch?v=SB2SmlAVt8U">https://www.youtube.com/watch?v=SB2SmlAVt8U</a></li> <li><a href="https://www.youtube.com/watch?v=pyC9BqrEXso">https://www.youtube.com/watch?v=pyC9BqrEXso</a></li> </ol>
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### Skill development activities suggested

The following skills with respect to urban governance and project finance

- Critical Reading
- Cross discipline study
- 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	Introductory to real estate and city	V
CO2	Real estate and social relevance in access to housing	IV
CO3	Land related laws and its relevance in real estate	IV
CO4	Finance aspect of real estate	IV
CO5	New technology and future city	V

### Program outcome of this course

Sl. No.	Description	POs
1	Able to identify various concepts of real estate and city	1,2,3
2	Able to understand the social concern related to housing	2,3
3	Able to apply the scope of Specific law related to land and built while design	3,4,7
4	Futuristic side of urban design and real estate and concerns to address	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	-	2	3	3	-	1	2	2	3	3
CO5	-	-	2	2	-	1	1	1	2	2
<b>Average</b>	<b>1.0</b>	<b>2.0</b>	<b>2.0</b>	<b>1.6</b>		<b>1.2</b>	<b>1.8</b>	<b>1.6</b>	<b>1.6</b>	<b>2.0</b>

### Graduate attributes

Knowledge	Analytical skills	Application of research	Application of latest technology/tools	Generate design/solutions	Ethics	Social concern	Environmental concern	Collaborative 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: INDUSTRY INTERNSHIP**

Course code:	MAUD385	CIE Marks	---
Teaching hours /Week (L:P:SDA)		SEE Marks	100
Total Hours of Pedagogy		Total Marks	100
Credits	7	Exam Hours	VIVA

**Course Learning Objectives:**

To serve as an introduction to the various dimensions of professional practice in an Architectural and Urban Design firm.

**Outline:**

1. The student is expected to work in an architectural and urban design firm handling the following types of projects; a) large scale architectural projects like college/university campus, industrial units, commercial complexes, housing complexes, entertainment complexes etc. involving a number of related buildings, site planning and landscaping, b) architectural projects with focus on heritage conservation in an urban area, c) urban infill projects and d) revitalization projects of decaying parts of the city.
2. The student is expected to familiarize himself/herself with the following; a) administration of office, b) soliciting and obtaining projects, c) client meetings, d) site visits, e) drawings and detailing and f) design process and presentation. For the viva examination, the following items need to be presented a) statement indicating the various types of works done by the student, b) drawings related to projects with which the student was associated c) photographs of project sites and d) any other material in support of student's involvement in the work.
3. The eight weeks (56 days) should immediately precede the commencement of regular course work of third semester.

**Assessment Details(CIE and SEE)**

The weight age for Semester End Exam (SEE) is 100%. The minimum passing mark for the SEE is 50% of the maximum marks. Minimum .

**Continuous Internal Evaluation:**

**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

<b>SEMESTER-IV</b>			
<b>COURSE: DISSERTATION PHASE-II</b>			
Course Code:	MAUD481	CIE Marks	50
Teaching hours /Week (L:P:SDA)	2:6:8	SEE Marks	50
Total Hours of Pedagogy	16	Total Marks	100
Credits	12	Exam Hours	Viva Voce
<p><b>Course Learning Objectives:</b> Students should be proficient in</p> <ul style="list-style-type: none"> <li>• Process that involves in urban design professional practice.</li> </ul> <ol style="list-style-type: none"> <li>1. To demonstrate the ability to comprehend the nature of urban design problem and create a brief which sets the framework for design.</li> <li>2. To demonstrate an advanced level of design ability to convert the brief set forth into a speculative proposition of design.</li> <li>3. To articulate and delineate the proposition of design into an urban design solution addressing all the dimensions.</li> <li>4. Alternatively, the dissertation could be a research topic based on the accepted norms of scientific research methods</li> </ol>			
<p><b>Studio Outline</b></p> <ol style="list-style-type: none"> <li>1. . The dissertation can either be a scholarly research on an issue (or set of issues) which has a bearing on urban development or a project with a clearly demonstrated design development process. The project shall demonstrate competence in integrating various issues of social, formal and urbanistic concerns into the design. An ideal project shall be one in which there is an informed critique on the conventional or prevalent models of creating urban design, leading to a simple question and an answer which shall be through the demonstration of an alternative proposition.</li> <li>2. In the case of purely written dissertation which ends with policy or design guidelines, research design shall be as per the accepted norms of scientific research methods. Documentation or merely describing existing situation shall not be considered as dissertation.</li> </ol>			
<b>Teaching Learning Process</b>	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 the duration of 20 minutes (per student) for the subjects listed under viva voce for all the semesters. Dissertation report (Hard copy) will be submitted during the viva voce.

## Suggested learning Resources

1. A Place In The Shade: The New Landscape & Other Essays Paperback, Charles Correa , Penguin Books; 2010
2. Cities for People, Jan Gehl, Island Press; 2010
3. Design of Cities, Edmund N Bacon, Penguin Books; 1976
4. Essentials of Urban Design, Mark Sheppard CSIRO Publishing; 2015
5. Fundamentals of Sustainable Urban Design, Avi Friedman, Springer Nature Switzerland AG; 2021
6. Great Streets, Allan B. Jacobs, The MIT Press; 1995
7. Public Places Urban Spaces: The Dimensions of Urban Design, Matthew Carmona, Tim Heath, Taner Oc, Steve Tiesdell, Architectural Press; 2010
8. The Kinetic City & Other Essays, Rahul Mehrotra, ArchiTangle GmbH; 2021
9. Urban Design Reader, Matthew Carmona, Steve Tiesdell, Architectural Press; 2007
10. Urban Design: The Composition Of Complexity by Ron Kasprisin, Routledge; 2019

## Web links and Video Lectures (e-Resources)

1. Urban Design, Center for Design Excellence  
<http://www.urbandesign.org/home.html>
2. Project for Public Spaces  
<https://www.pps.org/>
3. Urban Design Lab  
<https://urbandesignlab.in/resources/udl-digital-resources/>
4. Urban Design Group  
<https://www.udg.org.uk/about/what-is-urban-design>
5. Urban Environment Management  
<https://www.gdrc.org/uem/planning/urban-planning.html>
6. Planetizen  
<https://www.planetizen.com/>
7. Space Syntax  
<https://spacesyntax.com/>

## Skill Development Activities suggested

1. Urban design related place reading and representation techniques
2. Mapping the observation and inferring inferences and conclusion
3. Skills that enable analysis and identify the Urban design issues
4. Ability to come with Urban design strategy and Design project

## Course outcome(Course skill set)



- Understanding and comprehend the urban environment and define the urban design issues
- Demonstrate the study/research methodology that involves defining urban design tools and proposed design aspects.
- Able to demonstrate urban design project at different scale

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

SI No	Description	Blooms level
CO1	Able to identify urban components that influence urban area(study commonality) network and systems	IV
CO2	Means of engage with the place, people, method of data collection/documentation of the practices that influences urban environment.	V
CO3	Able to Identify issues/conflicts that influence urban area	V
CO4	Able to generate UD strategies	VI
CO5	Urban Design intervention within the study area	VI

Program outcome of this course

SI No	Description	POs
1	Ability to read the urban components	1,2,9
2	Ability to engage, interact and document the place	2,3,7
3	Able to generate strategies to address the UD issues	2,3,7,8
4	Ability to demonstrate urban design solution	3,5,6

Mapping of CO s and PO s

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	2	-	-	2	2	2	1
CO2	3	3	2	2	-	-	2	2	3	3
CO3	2	3	3	1	-	1	2	2	3	3
CO4	2	2	3	2	3	2	2	3	3	2
CO5	1	2	2	2	3	2	2	3	-	2
<b>Average</b>	<b>2.2</b>	<b>2.6</b>	<b>2.4</b>	<b>1.8</b>	<b>1.2</b>	<b>1</b>	<b>2.0</b>	<b>2.4</b>	<b>2.2</b>	<b>2.2</b>

Graduate attributes

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

Mapping correlation	Low	Medium	High	No
	1	2	3	--