



3.COURSE CONTENTS



FIRST-YEAR / SEMESTER ONE

UDD 6501:

URBAN DESIGN & DEVELOPMENT LAB – I (COURSE CREDITS: 9)

COURSE INTENT:

The studio serves as an introduction to the realm of urban design. The objective is to introduce to the complexities of the design process and to create an understanding of the role of various physical, social, economic and infrastructural components and decision-making processes and the contribution of related disciplines associated with the making of the city. The studio will also familiarize the student with urban design terminologies, methods of surveys. The studio will be dovetailed with inputs and learnings from the site planning course.

COURSE CONTENT:

The course aims for students to engage with complex urban design challenges and to achieve stages of design resolution at neighborhood scale, while critically engaging and challenging their own design processes. Students are required to take a clear position on the issues at stake and articulate that position visually and spatially through their own individual project. Individual work will be project-based, with each of the stages building upon one another to produce a final design that demonstrates technical, theoretical, ecological and spatial competencies. Students will appreciate, understand and analyze real site conditions in an urban area, learn survey and documentation techniques, assessing needs and programming for design intervention.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO 1: **Demonstrate** presentation, documentation and analyzing techniques of urban context.

CO 2: **Identify** urban issues and opportunities at precinct level in urban context.



CO 3: **Analyze** and present the findings.

CO 4: **Recommend** methodology for urban design process through the understanding of key concepts and principles of urban design.

CO 5: **Develop** a conceptual design scheme.

REFERENCES:

1. Cho, Im Sik., Heng, Chye-Kiang., Trivic, Zdravko. (2016). Re-Framing Urban Space: Urban Design for Emerging Hybrid and High Density Conditions. Routledge.
2. Bosselmann, Peter,. (2008). Urban Transformation: Understanding City Form and Design. Island Press
3. Gossop, Chris., Nan, Shi. (Eds). (2012). Liveable Cities: Urbanising World. Routledge.
4. Inam, Aseem., (2013). Designing Urban Transformation. Routledge.
5. Jain, A.K., (2017). Urban Transformation: Making Cities Inclusive, Safe, Resilient and Sustainable. Discovery Publishing House Pvt Ltd.
- Couch P. (2011).

UDD 6503:

SITE PLANNING (COURSE CREDITS: 3)

COURSE INTENT:

The course aims to equip urban designers to deal with sites with a holistic outlook respecting their contextual values. The course should be dovetailed with the site selected for urban Design & Development lab -I (UDDL-I)

COURSE CONTENT:

The aim of the course is to enable students to develop comprehensive understanding of planning and development of site in terms of its contextual setting. The students need to understand the process, theories and approaches of site planning and site evaluation with respect the study and analysis of the

resources such as Topography, Landform, Geology, Hydrology, Vegetation, Wildlife, terrestrial, aquatic, Cultural resources, Micro-climate, Site grading, drainage, Infrastructure and Services. Students will evaluate the site to understand the site constraints and available opportunities. The subject will lead students in making appropriate decision in the Urban Design & Development Lab 1.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO 1: **Outline** comprehensively the planning and development of the site in terms of its contextual setting.

CO 2: **Interpret** the theories and approaches of site planning

CO 3: **Assess** and develop resource inventory for the site.

CO 4: **Evaluate** the site constraints and available opportunities.

CO 5: **Develop** land suitability analysis.

REFERENCES:

- 1 McHarg, I. L., (1995). Design with Nature. New York: John Wiley.
- 2 Barry Starke, J. O. S., (2013). Landscape Architecture: A Manual of Environmental Planning and Design. McGraw-Hill.
- 3 Dines, C. H. a. N., (1998). Time-Saver Standards for Landscape Architecture. New York: McGraw-Hill.
- 4 Lynch, K. (1971) Site Planning. Cambridge, MA: The MIT Press
- 5 Russ, Thomas., (2002). Site Planning and Design Handbook. McGraw Hill Professional.
- 6 Hack, Gary., (2018). Site Planning. MIT Press.

UDD 6505:

URBAN DESIGN HISTORY AND TECHNIQUES (COURSE CREDITS: 2)

COURSE INTENT:

The course aims to understand the evolution of cities through time and to develop a critical perspective on the various determinants and forces. The course will also delve into the various urban development theories. It introduces students to methods and

techniques for reading the fabric of the city along with the tangible and intangible elements.

COURSE CONTENT:

The course introduces the students to the historical evolution of urban settlements and related development theories while understanding the morphological dimension of urban spaces and patterns and increasing their awareness about the influence of sociocultural, socio-political and socio-economic processes within which the urban realm exists. The subject also introduces the students to the methods of reading, understanding, and representing the physical fabric of a city. It deliberates on the language, terminology, and context within which most of the urban issues are couched in literature. It will impart basic graphics and representation techniques for urban design.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Define** the discipline of urban design, its scope and objectives and urban terminologies

CO2: **Interpret** the evolution of urbanity globally.

CO3: **Identify** the various forces and determinants of growth and related theories.

CO4: **Analyse** the urban form and urban spaces and explore spatial, functional, and historical transformation in built environments.

CO5: **Examine** the different methods and techniques for empirical studies.

REFERENCES:

1. Spreiregen, Paul D. (Paul David). (1965). *Urban design: the architecture of towns and cities*, written and illustrated by Paul D. Spreiregen. New York, : McGraw-Hill
2. Gosling, D., & Maitland, B. (1984). *Concepts of urban design*. Academy Eds. ; New York : St. Martin's Press.



3. Broadbent, Geoffrey. (1996). *Emerging Concepts in Urban Space Design*. Repr. in paperback. London: Spon
4. Morris, Anthony E. J. (1994). *History of Urban Form: Before the Industrial Revolutions*. 3. ed., print. Harlow: Longman Scientific [and] Techn.
5. Kostof, Spiro, and Greg Castillo. (2005). *The City Assembled: The Elements of Urban Form through History*. New York, NY: Thames & Hudson.
6. Kostof, Spiro, and Richard Tobias. (2012). *The City Shaped: Urban Patterns and Meanings through History*. New York; Boston; London: Bulfinch Press.

UDD 6507:

URBAN GOVERNANCE AND POLICY PLANNING (COURSE CREDITS:2)

COURSE INTENT:

The course comprehensively grasps and engages with the purpose, scope, and efficacy of urban design, and policy planning. It interprets the public policy and regulatory processes, to intervene and comprehend the Indian governance framework, and identify and address urban issues through comparative analysis and management techniques.

COURSE CONTENT:

The course intervenes in the design of urban policy and legislation to understand the framework of Indian governance and administrative set-up and learn the hierarchy of powers among centre, state and local governance. It also helps in Identifying urban issues with an emphasis on policy-management frameworks and relating them with urban management methods/techniques to interpret solutions.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:
CO1: **Classify** the tools and methods required for implementing policy management framework.

CO2: **Explain** various concepts of urban planning relating to the Law and Indian Constitution.

CO3: **Interpret** the processes involved in framing the policy and legislation and analyze the best practices in urban India.

CO4: **Assess** the Development Control Rules, Zoning Laws, Form based Codes

CO5: **Evaluate** the concepts of urban governance, legislative provisions and concepts of urban finance of Urban India.

REFERENCES:

- 1 Evelin, H. & Michael Mann 'Urbanization and Governance in India'. French Research Institute in India & South Asia Institute. 2005. (Introduction) (BOOK)
- 2 Timmermans, H., (ed.) 'Decision Support Systems in Urban Planning'. Spon Press. 1997. (Chap 13,14) (Book)
- 3 Fredrick Esko Lange.'Urban Governance'-An essential determinant of city Development. World Vision Institute for Research and Development.2010. 5. United Nations Economic and Social Council. 'Definition of basic terminology in governance and public administration'.2006
- 4 implementation (URDPFI) guidelines.

UDD 6509:

GEOGRAPHIC INFORMATION SYSTEMS (COURSE CREDITS: 2)

COURSE INTENT:

To introduce the concepts of geo-informatics and to familiarize with the associated scientific tools, their relevance and applicability in urban designing. Working knowledge on the relevant image processing and GIS software through hands-on experience will be taught. Project/s will be assigned to enable students to understand and learn the applications in the field of urban design and development. The course requires to be integrated with the design studios in creating base maps and make use of mapping as part of the exercises and assignments.

COURSE CONTENT:

The course gives an insight into Introduction to Geoinformatics where the following topics like Spatial and non-spatial data, and Raster versus vector data. Planning Information Systems (PIS): Components, data needs; PIS in India – NNRMS, NUIS, NSDI, National Urban Observatory, etc. Spatial Data Infrastructure (SDI): Framework of geospatial data, Users and tools, Agreements on geospatial standards, Policies for geospatial data, Institutional arrangements, and use of SDI for urban and regional planning. In addition to this, the course Introduces students to Remote Sensing like Types of RS (active and passive), and electromagnetic spectrum (LiDAR and RADAR). Introduction to software: Coordinate systems, Geo-referencing and projections, geodetic data, Digitization and topology creation. Aspects related to Data Capturing Platforms: Land observation satellites, aerial, ground), image interpretation, resolutions, etc. Satellite data sources – LANDSAT, IRS-LISS, CARTOSAT, IKONOS, QUICKBIRD, DEM are also covered. Lastly Digital Image processing related aspects are taught in further to the mapping with GIS.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Relate** to the concepts of Geo-Informatics and its application in Decision Making.

CO2: **Illustrate** the remote sensing technologies.

CO3: **Choose** various data-capturing platforms.

CO4: **Analyze** with spatial analytical tools and image processing techniques.

CO5: **Recommend** and present the information for decision making.

REFERENCES:

1. Peter M Atkinson. 'Geoinformatics'. Eolss Publishers. Oxford,UK. 2009. (Chap1) (BOOK)

2. Official websites/ data sources: urbanindia.nic.in, www.isro.org, censusindia.gov.in, www.surveyofindia.gov.in, bhuvan.nrsc.gov.in, www.nuis.com, nsdiindia.gov.in, nrsc.gov.in, www.nnrms.gov.in, www.usgs.gov, etc.
3. Ian Masser, Joep Crompvoets, 'Building European Spatial Data Infrastructure', Third Edition, ESRI Press, California, USA. 2015. (Chap 1) (BOOK)
4. George Joseph. 'Fundamentals of Remote Sensing'. Universities Press. 2005.(Chap1) (BOOK)
5. Jan Van Sickle. 'Basic GIS Coordinates'. Second Edition. CRC Press. US. 2010. (Chap 1) (BOOK)
6. Kennedy, Michael. 'Introducing Geographic Information Systems with ArcGIS: A Workbook Approach', Third Edition, Wiley, US. 2013. (Chap1) (BOOK)

UDD 6511:

RESEARCH METHODOLOGY (COURSE CREDITS: 4)

COURSE INTENT:

To introduce rigour of basic research, to understand the significance of the same concerning various attributes of a city and its built form and to develop skills for conducting and communicating research. Students will be introduced to the need for research in Urban Design, and the essentials of research methodologies used in Urban Design along with developing the skill of technical writing.

COURSE CONTENT:

Basic Concepts and Research Process: Domain of research; Understanding the nature of research in Built Environment- Need & significance; Objectives; Characteristics; Ethics – Responsible conduct of research; Concepts of theory, data and reference management tools. Research methods in Built Environment – Types of Research; Research methods & Research methodology; Review of literature; research gap. Research design – Need for research,

develop the research question, hypothesis, research methodology, scope and limitations. Data collection and analysis – Primary and secondary data collection, survey, observation, case study, post-occupancy evaluation, behavioural mapping, tracking, documentation and interpretation, selection of respondents and sampling procedures, techniques of analysis. Use of software in analysis, presentation and interpretation methods and techniques. Technical writing: Technical writing of research reports, publications, and proposals.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1:**Explain** the basic concepts and understand the characteristics of research.

CO2: **Identify** the research methods in built environment.

CO3: **Evaluate** the procedure for hypothesis

CO4: **Analyse** the data collection and sampling methods and illustrate the method of data collection.

CO5: **Propose** and communicate a feasible research report.

REFERENCES:

1. Dr.Ranjit Kumar, Research Methodology; A Step-by-Step Guide for Beginners, SAGE, 2005.
2. Lucas R., (2016) Research Methods for Architecture, Laurence King Publishing.
3. John W.Creswel, Research Design: Qualitative, Quantitative, and Mixed Methods approaches, SAGE, 2004.
4. C.R.Kothari, Research Methodology; Methods and Techniques, new Age International Publisher, 2008.
5. R.Pannershelvam, Research Methodology, Prentice Hall, India, 2006.
6. Manfred Max Bergman, Mixed Methods Research, SAGE Books, 2006.



FIRST YEAR / SEMESTER TWO

UDD 6502:

URBAN DESIGN DEVELOPMENT LAB-II (COURSE CREDITS: 9)

COURSE INTENT:

The objective of this studio is to study and propose design demonstrations in a city that is growing in contemporary times and embedded in cultural heritage and demonstrate interventions through urban design proposals.

COURSE CONTENT:

With the growing cities and city networks, cities are transforming at an alarming rate. This course engages students with a city which offers dynamic growth with a heritage backdrop. The students will be engaging in understanding the importance of the new city, urban heritage, urban design and the policies that have shaped and transformed the city over time. The students are expected to study and give design demonstrations at an appropriate scale. Students will be able to appreciate the importance of heritage and the need of urban design strategies and proposals in such cities.

COURSE OUTCOME:

On the completion of this course, the students should be able to:

CO1: **Identify** the tangible and intangible resources of the city.

CO2: **Classify** the policies for the upkeep of the city's culture and heritage.

CO3: **Analyze** the importance of cities urban form and its living heritage.

CO4: **Recommend** the relevant design strategies.

CO5: **Propose** urban design interventions to balance the value of heritage and contemporary development.

REFERENCES:

1. Alexander, C (1987), "A New Theory of Urban Design" Oxford University Press, New York.

2. Bacon, E N. (1967), "Design of Cities" Viking Press, New York.
3. Barnett, J (1982), "An Introduction to Urban Design" Harper & Row, New York.
4. Broadbent, G (1990), "Emerging Concepts in Urban Space Design" Van Nostrand Reinhold (International), London.
5. Cullen, G (1961), "Townscape" Reinhold, New York.

UDD 6504:

DIALOGUES IN URBAN DESIGN (COURSE CREDITS: 3)

COURSE INTENT:

The course aims to inculcate a critical perspective in the urban design discipline through deliberations on contemporary matters. The course helps to critically think, understand, and debate on topics/issues/themes relating to the contemporary urban environment.

COURSE CONTENT:

The discourse shall be on the development of urban design as a discipline and theory over the years and the challenges faced in the new globalized and networked world. It includes the critical perspectives on the various dimensions of urban design - social, economic, political, cultural, functional, aesthetic, perceptual and the processes through which urban spaces are formed, designed, and contested. Case studies, research papers and critical readings can be presented by students for further deliberations in the form of seminar. This course can align its topics/issues/themes with the focus of the design studio identified for the semester.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Relate** to the topics, issues or themes relating to the contemporary urban environment.

CO2: **Identify** critical perspectives on the various dimensions of urban design.

CO3: **Examine** appropriate cases for deliberation of the topic, issues, or theme.

CO4: **Appraise** the case critically, associating its role and value in the domain of urban design.

CO5: **Justify** and develop an argument and attitude towards urban design through critical analysis of the case or topic.

REFERENCES:

1. Brenner, N. (2016). Critique of Urbanization: Selected Essays. Berlin, Boston
2. Brenner, N. (Ed.). (2014). Implosions/Explosions: Towards a Study of Planetary Urbanization. JOVIS.
3. Brenner, N. (2019). New Urban Spaces, Urban Theory and the Scale Question. Oxford University Press.
4. Brenner, N., Marcuse, P., & Mayer, M. (Eds.). (2011). Cities for People, Not for Profit: Critical Urban Theory and the Right to the City. Routledge.
5. Jayne, M., & Ward, K. (Eds.). (2016). Urban Theory: New critical perspectives. Routledge.
6. Keil, R. (Ed.). (2006). The Global Cities Reader. Routledge.
7. Urban Reader Series (9 series titles). Routledge
8. LeGates, Richard T., and Frederic Stout, eds. (2016). The City Reader. Sixth edition. The Routledge Urban Reader Series. London ; New York: Routledge, Taylor & Francis Group
9. Carmona, M., Heath, T., Oc, T., & Tiesdell, S. A. (2003). Public Places Urban Space: The Dimensions of Urban Design. (1 ed.) Architectural Press

UDD 6506:

FUNDAMENTALS OF TRANSPORT PLANNING (COURSE CREDITS 2)

COURSE INTENT:

The course is an introduction to understanding the complexity of and importance of urban transportation, in contemporary times. With changing climatic trends and health concerns, urban transportation has become an important subject across the globe. This course brings in perspectives and details related to transportation planning.

COURSE CONTENT:

The course deals with introducing students to the basic concepts of land use and transport interactions. Different attributes of traffic and transport planning like traffic characteristics, volume and capacity, traffic calming, Intersection design, parking management, different traffic surveys, geometric design of roads, Public transport and mass transport systems are discussed. Data collection through surveys are designed, which are used to perform both qualitative as well as quantitative assessments. Strategies for traffic management, Concepts of TOD, Pedestrianization, street design, and intelligent transport systems are also discussed.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Explain** different attributes of urban transport systems.

CO2: **Interpret** different concepts and approaches to create sustainable transportation in an urban area.

CO3: **Make use** of appropriate data collection and interpretation techniques to understand travel behaviour.

CO4: **Evaluate** different factors to derive contextual and sustainable transport solution

CO5: **Recommend** designs and strategies to make effective transport solutions for all.

REFERENCES:

1. Burton, E., & Mitchell, L. (2006). Inclusive urban design: Streets for life. Routledge.
2. Bruton, M. J. (2021). Introduction to transportation planning (Vol. 5). Routledge.
3. Dimitriou, H. (2013). Urban Transport Planning (Routledge Revivals): A developmental approach. Routledge.
4. O'Flaherty, C. A. (Ed.). (2018). Transport planning and traffic engineering. CRC Press.
5. Richardson, A. J., Ampt, E. S., & Meyburg, A. H. (1995). Survey methods for transport planning (pp. 75-145). Melbourne: Eucalyptus Press.
6. Tiwari, G., & Mohan, D. (Eds.). (2016). Transport planning and traffic safety: making cities, roads, and vehicles safer. CRC Press.
7. Verma, A., & Ramanayya, T. V. (2015). Public transport planning and management in developing countries. Florida: CRC press.
8. White, P. (2016). Public transport: its planning, management and operation. Routledge.

UDD 6508:

URBAN LAND ECONOMICS (COURSE CREDITS 02)

COURSE INTENT:

To develop a basic understanding of economic ideas related to land use, land use policy and its economic significance. To identify issues related to the Real estate market, demand and supply analysis, and profitability with emphasis on Policies.

COURSE CONTENT:

This subject intends to provide an overview of the concept of real estate and associated financial processes. The key focus areas of this subject are Definition and trend in the real estate market; Physical, financial and social perspectives; type of property development and its impact on supply and demand, method of

development, environmental considerations; and methods of technical and financial viability analysis of different projects. Upon the completion of this course, the students would be able to understand the scope of work and current trends in real estate markets; conduct real estate feasibility studies; and choose appropriate technical and financial mechanisms for different projects.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Explain** the concepts of urban Economics, Land value capture, Cash flow, Cost-benefit analysis, profitability.

CO2: **Identify** the determinants of Demand for land.

CO3: **Evaluate** the importance of Government intervention in the Land market with housing policy.

CO4: **Justify** the measures to regulate the real estate market, budgeting and financing policy of the government

CO5: **Recommend** suitable Urban Design guidelines in coherence with real estate in the city.

REFERENCES:

1. Kothari, R. (2010). Financial Services in India: Concept and Application. India: SAGE PUBLICATIONS PVT Limited.
2. Sharma, D., Das, P. (2013). Real Estate Finance in India. India: SAGE Publications.
3. Real Estate Laws: Compendium of Indian Real Estate Laws. (2021). India: Notion Press.
4. Disruptive Technology, Legal Innovation, and the Future of Real Estate. (2020). Germany: Springer International Publishing.
5. Real Estate in South Asia. (2019). United Kingdom: CRC Press.

UDD 6510:

URBAN PROJECT MANAGEMENT (MLC) (COURSE CREDITS 02)

COURSE INTENT:

The subject tutors the students to orient themselves to the real-life scenario of managing projects at an urban scale and develop capacity and confidence in tackling complex urban projects. The subject is based on academic and workshop modules bringing the domain experts from the field and organizing sessions on the same.

COURSE CONTENT:

The subject emphasis is on bridging the gap to know the field work better. The subject is tailored to know the dynamics of largescale urban projects and their management through suitable case studies and know the processes involved in project implementation. Students are required to formulate an urban-scale project with the necessary documents to be prepared which includes the understanding of estimates and financial feasibility.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Outline** the importance of project management in urban scale.

CO2: **Identify** the key aspects of stakeholders and their roles in project management.

CO3: **Examine** the documents needed for the project to be implemented through management perspectives.

CO4: **Appraise** techniques and methods of preparation of documents for a large-scale project.

CO5: **Formulate** a project with all necessary documents

REFERENCES:

1. Grabher, G. (2004). Learning in projects, remembering in networks Communality, sociality, and connectivity in project ecologies. *European urban and regional studies*, 11(2), 103-123.



2. Achterkamp, M. C., & Vos, J. F. (2008). Investigating the use of the stakeholder notion in project management literature, a meta-analysis. *International Journal of Project Management*, 26(7), 749-757.
3. Berg, S. V., & Mugisha, S. (2010). Pro-poor water service strategies in developing countries: promoting justice in Uganda's urban project. *Water policy*, 12(4), 589-601.
4. Durand-Lasserve, A., & Royston, L. (Eds.). (2002). *Holding their ground: Secure land tenure for the urban poor in developing countries*. Earthscan.
5. Lloyd-Jones, T., & Rakodi, C. (2014). *Urban livelihoods: A people-centred approach to reducing poverty*. Routledge
6. Awomeso, J. A., Taiwo, A. M., Gbadebo, A. M., & Arimoro, A. O. (2010). Waste disposal and pollution management in urban areas: a workable remedy for the
7. environment in developing countries. *American Journal of Environmental Sciences*, 6(1), 26-32.

PROFESSIONAL ELECTIVES/ SEMESTER 02

UDD 6512.1:

INDIAN CITIES AND URBANISM (COURSE CREDITS 02)

COURSE INTENT:

Indian cities of late have been developing at a pace to keep up with times. With a varied lifestyle and culture, the cities in India offer an arena to explore its vibrant urban fabric, beyond the idea of formality and its governance. This subject encourages the student to absorb the city's life and its intangible aspects and represent the same.

COURSE CONTENT:

Students will explore the life of a city, from a new perspective, which enables them to explore the daily life of the city and its people. This course offers an arena to explore various walks of life in the city. Students are expected to pick up any one activity that has an intangible aspect associated in any city and understand its relation to the city's life. The city's pulse in the form of its intangible life is to be documented and understood by the student on how such activities make a city more diverse in its existence.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Identify** any focused area of the city for study.

CO2: **Outline** the key indicators of the chosen area/topic.

CO3: **Analyze** the key aspects of the study area in the city building.

CO4: **Evaluate** the impact of the study on the city's urbanity.

CO5: **Imagine** what the future holds.

REFERENCES:

1. Gupta, S., & Shastri, S. (Eds.). (2018). *Urban Utopias: Excess and Expulsion in Neoliberal South Asia*. Springer.
2. Sengupta, R. (2019). *Urbanism in India: Challenges and Opportunities*. *Journal of Planning Literature*, 34(2), 167-182.

3. Patel, S. (2020). Informal Urbanism in India: A Critical Review. *Urban Studies*, 47(3), 301-315.
4. Banerjee, T., & Bhaduri, S. (2017). Reimagining Indian Urbanism: Colonial Legacies, Globalization, and Everyday Life. *International Journal of Urban and Regional Research*, 41(5), 839-854.

UDD 6512.2:

VISUALIZING THE CITY (CREDITS 02)

COURSE INTENT:

The city is a collaborative platform of various expressions, that bring life and identity to any place. The course helps to bring out such expressions and critically think, understand, and analyze such imagery and its manifestations in various mediums of art.

COURSE CONTENT:

The discourse on visual and digital representations can include art forms, paintings, sculpture, literature, movies, documentaries, games, photography, cartoons, animation graffiti, etc. It also relates to the time and place-specific details of the city, conceptualizing the urban environment that existed in past, and that exists in the present or future. The students can take up appropriate case studies after choosing a medium that can be presented further deliberations in the form of a seminar. This course can align with the topics/dimensions/issues related to contemporary urban design.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Define** the various mediums through which cities are represented time to time.

CO2: **Interpret** the various ways in which the chosen medium represents the city.

CO3: **Identify** an appropriate case for deliberation and study the background of the city/storyline/narrative with respect to the plural layers of urbanism.

CO4: **Analyze** the case to bring out the critical and salient features of the city and how it has revealed through the medium.

CO5: **Construct** an urban imagery of the city and its argument relating to the contemporary era.

REFERENCES:

1. Marcus, Alan., Neumann, Dietrich., (eds)., (2008). Visualizing the City. Routledge
2. Wagner, Christiane., (2023). Visualizations of Urban Space: Digital Age, Aesthetics, and Politics. Routledge
3. Avramidis, Konstantinos., Tsilimpounidi, Myrto.,(2016) Graffiti and Street Art: Reading, Writing and Representing the City. Routledge

UDD 6512.3: INCLUSIVE CITIES (CREDITS 02)

COURSE INTENT:

The objective of the course is to provide an understanding of the idea of inclusivity in cities, different stakeholders and their involvement in the city as a system. The course introduces the concepts and principles of Inclusive cities.

COURSE CONTENT:

The course imparts key concepts and the importance of Inclusive Development in our cities. It inculcates the need to integrate the views and perspectives of stakeholders in the development process of urbanizing cities. The students are made aware of the importance of inclusiveness in its totality from the planning to the design execution.

COURSE OUTCOMES:

On successful completion of this course, students will be able to –

CO1: **Interpret** the Important concepts of Inclusive Development.

CO2: **Experiment with** the concept of Stakeholders in Inclusive Urban Development.

CO3: **List** the principles of Inclusive city planning.

CO4: **Explain** the Participatory Planning for Inclusive Development.



CO5: **Recommend** Management and Best practices for Inclusive Cities

REFERENCES:

1. Whitzman, C., Legacy, C., Andrew, C., Klodawsky, F., Shaw, M., & Viswanath, K. (2013). Building inclusive cities. Women's Safety and the Right to the City.
2. Iaione, F. C., De Nictolis, E., & Foster, S. (2019). The Co-Cities Open Book for Just and Inclusive Cities.
3. Espino, N. A. (2015). Building the inclusive city: theory and practice for confronting urban segregation. Routledge.
4. Gleeson, B., & Sipe, N. (2006). Creating child friendly cities. London: Routledge.
5. Anttiroiko, A. V., & de Jong, M. (2020). The inclusive city: The theory and practice of creating shared urban prosperity. Springer Nature.

SECOND YEAR / SEMESTER THREE

UDD 7001: URBAN DESIGN AND DEVELOPMENT LAB III (CREDITS 10)

COURSE INTENT:

The course deals with the complexities of Metropolitan cities, addressing the importance of its existing and future engagement concerning stakeholders, globalization, and the environment. The interventions need to address the context of social fabric, formal and informal networks, urban equity (infrastructure) and spatial justice. The studio theme may relate to but is not restricted to green field development, urban transformation, Urban regeneration, Urban Revitalization, Heritage Management, Urban extensions etc.

COURSE CONTENT:

With the majority of the population residing in the cities in the near future, it becomes important to address the issues faced in metropolitan cities in the globalised era. The course focuses on the study and representation of urban form, networks, governance, policy and strategic trajectory for the city with new initiatives for a better living. Students are expected to address the climate change and sustainability aspects as an integral part of the city's comprehensive understanding. A larger vision for the city is to be established and design proposals should be dovetailed accordingly.

COURSE OUTCOMES:

On successful completion of this course, students will be able to –
CO1: **Outline** and interpret the city through the networks of allied disciplines.

CO2: **Identify** the complex urban systems and city life.

CO3: **Analyse** the data collected for appropriate analysis.

CO4: **Appraise** the complex data layered in various categories to visualise a futuristic and sustainable city.

CO5: **Develop** the knowledge and understanding of skills learnt in the form of proposals.



REFERENCES:

1. Cho, Im Sik., Heng, Chye-Kiang., Trivic, Zdravko. (2016). Re-Framing Urban Space: Urban Design for Emerging Hybrid and High Density Conditions. Routledge.
2. Bosselmann, Peter., (2008). Urban Transformation: Understanding City Form and Design. Island Press
3. Gossop, Chris., Nan, Shi. (Eds). (2012). Liveable Cities: Urbanising World. Routledge.
4. Inam, Aseem., (2013). Designing Urban Transformation. Routledge.
5. Jain, A.K., (2017). Urban Transformation: Making Cities Inclusive, Safe, Resilient and Sustainable. Discovery Publishing House Pvt Ltd.

UDD 7003:

PRE THESIS (CREDITS 3)

COURSE INTENT:

To develop a potential design topic for the upcoming thesis semester through literature review, data collection, and analysis. Understand the various facts and scope of research in urban design by selecting an appropriate analytical tool for data analysis and conclusion. Develop a proposal for the urban design thesis for the fourth semester.

COURSE CONTENT:

This course is intended to help students to arrive at a conceptual framework for their thesis and is expected to present the topic at the beginning of the semester, which will have to be approved and reviewed periodically by a jury at the end of the semester. Pre-thesis aims to develop a theoretical framework that enables the students to develop their thesis to be demonstrated in the upcoming semester, through rigorous literature study, data collection and its analysis. The extensive analysis of the project should be conducted either by observation based on data or through extensive secondary literature. The final report at the end

of the course shall be an urban design proposal that provides a detailed aspect of the thesis to be carried out in the fourth semester.

COURSE OUTCOMES:

On successful completion of this course, students will be able to

CO1: **Choose** a topic of interest or an issue in the urban realm.

CO2: **Outline** extensive literature study on the topic selected

CO3: **Develop** a suitable research question or hypothesis or develop the potential scope of the design

CO4: **Assess** the outcomes of the research and develop a proposal with suitable theoretical frameworks.

CO5: **Formulate** an Urban design thesis proposal.

REFERENCES:

1. Iain Borden and Kaaterina Ruedi; The Dissertation: An Architecture Student's Handbook; Architectural Press; 2000.
2. Linda Grant and David Wang, Architectural Research Methods, John Wiley Sons 2001.

UDD 7005:

INFRASTRUCTURE PLANNING (CREDITS 2)

COURSE INTENT:

Infrastructure development is the lifeline of any city's overall development. This course looks at various aspects of infrastructure planning and its importance in the city's growth process.

COURSE CONTENT:

This course discusses the different urban-level physical infrastructures required for the sustainable growth of cities/neighbourhoods. During this course, the students are introduced to different standards, codes, guidelines, benchmarks etc. dealing with the design of different physical infrastructures. Different water management systems, specifically dealing with water supply, stormwater and wastewater are explained on site,

neighbourhood and urban area levels. Different solid waste strategies for the management of solid waste in a municipal area, detailing different methods of handling, storing, collection, transportation, processing and treatment of solid wastes based on the context are discussed.

COURSE OUTCOMES:

On successful completion of this course, students will be able to –

CO1: **Explain** the role of infrastructure in the process of sustainable development.

CO2: **Identify** various approaches and strategies for the design of the physical infrastructure of an urban area.

CO3: **Make use of** appropriate mapping techniques to understand the performance of infrastructure in a given context.

CO4: **Evaluate** the infrastructure requirements to understand the demand and supply.

CO5: **Recommend** interventions/ strategies to improve the access and effectiveness of infrastructure in the urban area.

REFERENCES:

1. CPHEEO, G. (2013). Manual on sewerage and sewage treatment systems.
2. Goodman, A. S., & Hastak, M. (2006, August). Infrastructure planning handbook: planning, engineering, and economics. ASCE.
3. Manual, C. P. H. E. E. O. (1999). Manual on water supply and treatment. *Central Public Health and Environmental Engineering Organization CPHEEO, Ministry of Urban Development, New Delhi.*
4. Massoud, M. A., Tarhini, A., & Nasr, J. A. (2009). Decentralized approaches to wastewater treatment and management: applicability in developing countries. *Journal of environmental management, 90(1), 652-659.*



5. Peavy, H. S., Rowe, D. R., & Tchobanoglous, G. (1985). *Environmental engineering* (Vol. 2985). New York: McGraw-Hill.
6. Savic, D. A., & Savic, D. (Eds.). (2005). *Sustainable water management solutions for large cities* (No. 293). International Assn of Hydrological Sciences.
7. Tchobanoglous, G. (1993). *Integrated solid waste management engineering principles and management issues* (No. 628 T3).
8. Ujang, Z., & Henze, M. (Eds.). (2006). *Municipal wastewater management in developing countries*. IWA Publishing.

UDD 7007:

SUMMER INTERNSHIP (CREDITS 03)

COURSE INTENT:

The students are required to work in vacation between the 2nd and 3rd semesters or as per the academic calendar. Students are expected to work in a Private Urban design firm or work on an Urban research project in reputed organisations/ Centers formed under MAHE/Government bodies offering projects at Urban Scale or large urban architecture projects having a bearing on urban issues. Students are expected to present a one-time jury at the beginning of 3rd semester and graded as S/NS.



PROFESSIONAL ELECTIVES/ SEMESTER THREE

UDD 7009.1:

FOOD AND URBANISM (CREDITS 02)

COURSE INTENT:

The course explores the dynamics of urbanization and looks at food as an accelerator for creating public places. Contemporary lifestyles have helped the food industry to flourish to cater for the needs of the working class as well as cater the leisure spaces. The course looks at studying the ephemeral dynamics of the activity in the complex urban structure of our cities.

COURSE CONTENT:

The course explores how food as an activity has structured our cities in contemporary times. With globalisation and the digital revolution, food has become an integral part of cityscapes catering for its citizens and becoming an economic avenue to various strata of our society. The students are expected to explore contemporary cities to understand the design considerations concerning typologies of streets, built form and their contribution to the resultant spaces which have a bearing on the urban form and citizen's health.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Outline** the importance of public places for food in cities.

CO2: **Make use of** eateries and food hawking areas as a placemaking prospect.

CO3: **Classify** various ephemeral aspects related to foodscapes in the city.

CO4: **Perceive** the experience generated by activities related to the food in an urban area.

CO 5: **Evaluate** the importance of health and hygiene in public places where food-based activities are dominant.

REFERENCES:

1. Cabannes, Y., & Marocchino, C. (Eds.). (2018). Integrating Food into Urban Planning. UCL Press. <https://doi.org/10.2307/j.ctv513dv1>
2. Verzone, Craig and Woods, Cristina. Food Urbanism: Typologies, Strategies, Case Studies, Berlin, Boston: Birkhäuser, 2021. <https://doi.org/10.1515/9783035615678>
3. Parham, Susan. (2015). Food and Urbanism: The Convivial City and a Sustainable Future. 10.5040/9781474229050.

UDD 7009.2:

CITIES AND SUSTAINABILITY (CREDITS 2)

COURSE INTENT:

In contemporary times, climate change and sustainability are two major issues that need to be addressed. With growing population and urbanization, energy dependence has increased manifold. In this scenario, it becomes important to mobilise institutional investment for sustainable energy infrastructure and understand the past performance and future needs for low carbon climate resilient infrastructure. This course looks at understanding the importance of global accords, national policies and other key aspects related to climate change and sustainable cities.

COURSE CONTENT:

The students are made aware of the city's vulnerability to climate change. They are also acclimatized to the importance of investments in climate-resilient urban infrastructure and national policies that mitigate climate change in cities such as the investments for financing low-carbon infrastructure; Local policy and instruments; Sustainable urban transport; Smart urban design and planning; Energy efficient cities; Financing Green Urban Infrastructure. The students are introduced to the challenges of local government finance in mitigating climate change; and economics in adaptation of climate change.

COURSE OUTCOMES:

On the completion of this course, the students should be able to:

CO1: **Relate** to sustainability concepts and real-time urban development challenges faced.

CO2: **Identify** critical dimensions of sustainable development and the key spatial and temporal connections.

CO3: **Compare** the urban development cases based on knowledge of climate change and resilience.

CO4: **Appraise** the knowledge of urban disaster risk reduction and climate resilience through vulnerability and risk assessment tools and techniques.

CO5: **Assess** cases of urban development in terms of sustainability, footprint, environmental impact, and policies.

REFERENCES:

Ang and Marchal (2013), "Mobilising Private Investment in Sustainable Transport: The Case of Land-based Passenger Transport Infrastructure," Environmental Working Paper, No. 56, OECD Publishing, Paris.

1. Carmin, J., N. Nadkarni, and C. Rhie, 2012, "Progress and Challenges in Urban Climate Adaptation Planning: Results of a Global Survey", Massachusetts Institute of Technology (MIT), Cambridge, MA.

2. Corfee-Morlot, J., et al. (2012), "Towards a Green Investment Policy Framework: The Case of Low-Carbon, Climate Resilient Infrastructure", OECD Environment Working Papers, No. 48, OECD Publishing, Paris.

3. Fuller, B. and P. Romer (2014), "Urbanisation as Opportunity" in OECD Regional Outlook 2014, OECD Publishing, Paris.

4. Hallegatte, S., C. Green, R.J. Nicholls and J. Corfee-Morlot (2013), "Future flood losses in major coastal cities", Nature Climate Change, 3, pp. 802–806.

5. HSBC and Climate Bonds Initiative (2014), "Bonds and climate change: The state of the market in 2014", <http://www.climatebonds.net/files/files/-CB-HSBC-15July2014-A4-final.pdf>.
6. Revi, A. et al., 2014, "Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change", <http://www.ipcc.ch/report/ar5/wg2/>.

UDD 7009.3:

URBAN HERITAGE MANAGEMENT (CREDITS 02)

COURSE INTENT:

The course focuses on the basic theories in the practice of conservation, an understanding of which is vital for responsible conservation of heritage. It includes an introduction to the evolution of theories in conservation practice and planning theories. It introduces the students to personalities, ideologies and philosophies that helped formulate the evolving principles and theories of conservation. It acquaints the students with national and international normative frameworks for conservation.

COURSE CONTENT:

The objective of the course is to prepare the students to read and understand historic settlements as heritage, with a focus on the Indian context. The emphasis is on holistic comprehension, using the integrated systems approach, of the relationship of the physical, social, economic, infrastructural and administrative aspects influencing the formation and transformation of historic habitats. Students are prepared to address the complex realities and dynamic nature of Indian historic towns and cities.

COURSE OUTCOME:

On the completion of this course, the students should be able to:

CO 1: **Relate** to basic theories in the practice of heritage conservation



CO 2: **Interpret** different National and International policies used for the conservation of historic precincts, sites and buildings.

CO 3: **Examine** the physical, social, economic, infrastructural and administrative aspects influencing the formation and transformation of historic habitats.

CO 4: **Assess** the complex realities and dynamic nature of Indian historic towns and cities.

CO 5: **Recommend** context-based guidelines for conserving the heritage.

REFERENCES:

1. Material and Skills for Historic building Conservation, Blackwell Publishing, 2008. Forsyth, Michael
2. Measurement and Recording of Historic Buildings – Donhead, 1993 Swallow, Peter
3. Surveying Historic Buildings, Donhead, 1996 Watt, D & Swallow P
4. Guide to recording Historic Buildings, Butterworth, 1990. ICOMOS
5. Architectural Heritage: Inventory and Documentation, Methods in Europe, Council of Europe, 1992 Proceedings, French Ministry for education and culture
6. Manual on Systems of Inventorying Immovable Cultural Property, UNESCO, 1984 Meredith H. Sykes

UDD 7009.4:

URBAN SOCIOLOGY (COURSE CREDITS 02)

COURSE INTENT:

The students will be able to understand and apply knowledge of socio-spatial, socio-cultural and socio-economic aspects to comprehend urban development.

COURSE CONTENT:

The course emphasizes to discuss various social aspects of the society and the city. The students are exposed to major theories in

sociology to understand society better. It deals with the key issues of people and the city with various determinants of politics, commerce, finance, environment etc.

COURSE OUTCOME:

On the completion of this course, the students should be able to:

CO1: **Explain** theories of urban social formations to analyse the social production of space.

CO2: **Apply** theories to comprehend space and urban social structure.

CO3: **Analyze** theories of migration and urban informality to understand their relationship with the urban pattern and politics.

CO4: **Value** the theories of urban citizenship, the terrain of law and concepts such as right to the city.

CO5: **Discuss** the key aspects of global finances and right to city.

REFERENCES:

1. Lefebvre, H., & Nicholson-Smith, D. (1991). The production of space (Vol.142). Blackwell: Oxford.
2. Roy, A. (2011). Slumdog cities: Rethinking subaltern urbanism. *International journal of urban and regional research*, 35(2), 223-238.
3. Bhan, G. (2019). Notes on a Southern urban practice. *Environment and Urbanization*, 0956247818815792
4. Aylett, A. (2010). Conflict, collaboration and climate change: participatory democracy and urban environmental struggles in Durban, South Africa. *International Journal of Urban and Regional Research*, 34(3), 478-495.
5. Harvey, D. (2003). The right to the city. *International journal of urban and regional research*, 27(4), 939-941.
6. Harvey, D. (2008). The right to the city.

SECOND YEAR/ FOURTH SEMESTER

UDD 7002:

THESIS (CREDITS 18)

COURSE INTENT:

The thesis is a culmination of learnings and skill sets developed through the last three semesters. Pre-Thesis forms a prelude to the demonstration of the design thesis.

COURSE CONTENT:

The course converges the learning outcomes of preceding Courses, enabling the students to formulate, customize and demonstrate their forte in urban design paradigm through design or research and suggests discussion through their acquired skills of representation and techniques. The process of comprehending various urban challenges and demonstrating of required skill sets would lead to design demonstrations under the constant guidance allotted mentors/ professionals and periodic juries for feedback.

COURSE OUTCOMES:

On successful completion of course, student will be able to,
CO1: **Demonstrate** fundamentals and conceptual framework of focused study.

CO2: **Examine** the site context and collect required data (literature in case of research) for the focused study in case of design.

CO3: **Analyze** the data collected on all parameters studied.
(Develop suitable research question/hypothesis)

CO4: **Appraise** the data leading to rationale inferences leading to design output.

CO5: **Propose** urban design interventions.