

MArch



Metropolitan
Architecture

01

Introduction to the Program

With the knowledge and background of the Sir JJ School, its location in the heart of Mumbai, and its influential legacy on the architectural development of the city, this program is conceived to address Mumbai's architectural fabric in an integrated manner, with the concept of the metropolis as its focus.

In the present age of the Anthropocene, with the inevitable impact of climate change on our urban futures, and its resulting consequences on urban life and processes, this course is introduced to fill a gap in our understanding of the metropolis after two decades into the millennium. Our increasing polarities indicate that last century canons can no longer be relied upon to tackle the increasing polarities in our changing urban lives. That is why this program aims to provide students with the literacy to think about and imagine the metropolis and the architecture that forms the defining armature for its rise. This literacy extends to several levels of scale that drive the formation of the architecture of big cities. Students shall also develop the capacity to design at multiple scales from street furniture to planning insertions in the city.

Any metropolis is layered and forms juxtapositions of dichotomies. There is an acceptance that a metropolitan architecture of the future shall be largely brownfield and be influenced in equal manner by unintegrated legislation as well as common-law practice. The program fundamentally positions the metropolis as messy, as part of the real world and not a location for idealised (or hypothetical) design. Such an approach is necessarily inclusive, keeping on an equal platform the mainstream, the large-scale and the monumental, along with self-help practices and the ephemeral as everyday building processes.

All architecture in the metropolis needs to be seen together, and not in silos, and is to be appreciated as a synthesis of forces that all play at the metropolitan scale.

An ongoing pursuit of this program shall be to chart the habitational and constructional processes related with metropolitan life. The historicity of the metropolis (how it has come to be) shall be a key discussion in the envisioning of new material infusion or design thinking.

The focus shall be on the architecture of the city rather than on urban planning, filling a lacuna to be addressed through research and pedagogy. Thus, the central space to be addressed shall be the middle ground between plotted architecture and urban planning, a transformative space where architecture meets the metropolis.

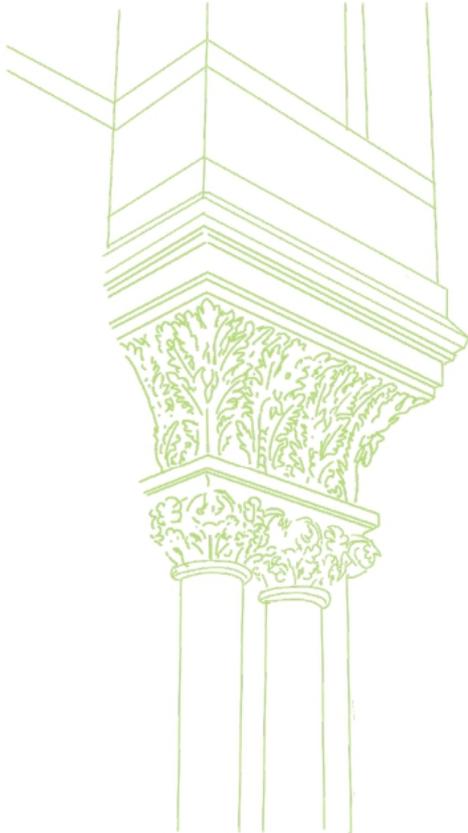
The program integrates within its pedagogy contemporary research practices, with an aim to generate new knowledge about the various scales of architecture in large cities. Every semester, there is a systematic progression of research: Academic Writing and Ethics, Architectural Research Methods and Seminar, culminating in a Dissertation in the fourth semester. Understanding and respecting data is critical, understanding behaviour, both individual and collective, is specifically emphasized in the course. While theory and softer skills are important, so is practice. In the first year, students take a studio every semester that will help them put ideas into practice.

M. Arch (Metropolitan Architecture) is a rigorous program that will produce a well-rounded creative professional. It intends to improve leadership qualities while also upskilling an already skilled graduate.

02

Programme Outcomes

Graduates of this program will develop the capacity frame the scope of metropolitan architecture itself and approach design in a granular and textured manner, with an in-depth knowledge of the processes that make the city function. The architecture they create will be a series of sensitive propositions/interventions rooted in the contemporary functioning of the city. This will make any new architecture transformative in nature. The knowledge and wisdom that graduate shall gain from this course will be useful in architecture and urban practice, designing legislation, preserving the cultural heritage of the city, documenting the new, curating emerging knowledge and keeping a critical stance towards both individual aspirations and collective imperatives.



03

Eligibility for Admission

Students with the following undergraduate degrees are encouraged to apply:

- Bachelor of Architecture (B. Arch)
- Bachelor of Design (B. Des)
- Bachelors of Fine Arts (BFA) [Fine Arts or Applied Arts]
- Bachelor of Engineering (BE)

Admission to this program is subject to the aspirant successfully clearing:

- A Common Entrance Test
- Interview (with Statement of Purpose and portfolio)

It is preferred that the students are familiar with using architectural drawing, rendering, BIM and image processing software.

04

Career Outcomes

Graduates of the Program can now become valuable contributing members in the following ways:

1. Building capacity for setting up or extending mid-range architectural practice to handle integrated projects in the city.
2. Collaborate as useful members of architectural consortiums for projects of a mid to large range, especially those brownfield projects located in the more fragile parts of the city.
3. Become part of the State, to develop transformative legislation, especially in the making of future bye-laws and development plans for the city. There is a particular value for this in Tier II and Tier III City's on the verge of becoming metropolises of the future.
4. Become curators and documenters of the city's processes, both tangible and intangible that contribute to its material and cultural development.
5. Contribute to the discourses of the city through architectural writing, journalism and critique.
6. Use this degree as the jumping ground for more focused doctoral research and the making of new knowledge about the metropolis.
7. Become changemakers for positive transformation, either as teachers, activists or leaders of urban organisations.

05

Semester 1 Course Structure

Sr. No.	Type	Course code	Course	Lecture credits	Tutorial credits	Studio credits	Total credits	Total Hours
1.1	Core	ARCH 601	The Metropolitan Scale	2	0	1	3	60
1.2	Core	ARCH 603	Metropolis: Demographic Shifts, Assimilation, Habitation & Cosmopolitanism	3	0	0	3	45
1.3	Core	HUM 603	Academic Writing and Ethics	1	1	0	2	45
1.4	Studio	ARCH 609	Metropolitan Design Studio 1	2	0	4	6	150
			Choose any 2 out of 4					
1.5	Choice based (Within program)	ARCH 613	Evolution of Metropolitan Form in the Global South	2	0	0	2	30
1.6	Choice based (Within program)	ARCH 615	Gender and Space in the Public Realm	2	0	0	2	30
1.7	Choice based (Within program)	ARCH 617	Adaptive Reuse and Redevelopment Perspectives	2	0	0	2	30
1.8	Choice based (Within program)	ARCH 619	Climate Crisis in the Metropolis	2	0	0	2	30
	Choice based (Outside program)		Choose any 1 from pool				2	
			Total Semester 1				20	

1.1

The Metropolitan Scale

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	1	3	Yes	Yes	No
Hours	30	0	30	60			

● Course Objectives:

1. To become aware of various definitions, indicators and urban complexities
2. To place oneself in the real world –ambiguities of borders and jurisdictions
3. To understand the context in which architecture is to be appreciated
4. To understand and be to operate within urban parameters for design

● Course Content:

1. **Defining Metropolis, City, Urban Agglomeration, Territory**
 - a. Metropolis: an organically and dynamically-defined territory that extends beyond the city
 - b. The ambiguity of administrative boundaries
 - c. The built environment and infrastructure enabling socio-economic relationships
 - d. Socio-political institutions, socio-technical systems
 - e. Urbanising in the Global South
 - f. Population growth, changes at the peripheries and the urban hinterland.
 - g. The relationships between cities and their surrounding areas, their influence on of economic activities, growth, environmental performance and quality of life.

2. **Metropolitan Governance and Democracy**
 - a. Where & how people live, work & play
 - b. Taxation, voices and representation

3. **Urban Indicators and Goals**
 - a. An overview of various goals and indicators, amongst others
 - b. Sustainable Development Goals
 - c. Global Urban Indicators Data
 - d. Urban Indicators for Managing Cities
 - e. Making Cities Resilient, UNDRR
 - f. City Resilience Index, Arup

4. **Metropolitan Indicators**
 - a. Context and governance
 - b. Economic development
 - c. Social cohesion
 - d. Gender equality
 - e. Environmental sustainability
 - f. Quality of life (metropolis.org)

5. **Metropolitan Architecture**
 - a. Built form in the metropolis
 - b. Establishing contexts and scale
 - c. Between plot boundaries and urban plans

1.2

Metropolis

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	3	0	0	3	No	Yes	No
Hours	45	0	0	45			

● Course Objectives:

1. To get an overview for changing formations of urbanity in India, particularly since 1990.
2. To appreciate demographic shifts as a complex phenomenon, including both falling.
3. birth rates, and migration as a relationship between the origin and destination.
4. To understand forms of settlements in the metropolis as adaptive behaviour in terms of social cohesion, assimilation, tenure and legal status.
5. To understand the cosmopolitan nature of city-life, both in the public and personal through various forms of expression and representation.
6. To get a holistic picture of migratory practices and imperatives in the world, especially movement within the Global South.

● Course Content:

1. **India Today- Urban agglomerations as a consequence of demographic change**
 - a. The changing face of urban formations within the country's boundaries
 - b. Anticipating and planning for demographic shifts and changing lifestyles in the post-pandemic age such as ride-sharing, online economy, pollution, work-from-home, home delivery, satellite workspaces, etc.
2. **Movement pattern of Migrants**
 - a. We are all migrants, what drives migrant behaviour:
 - b. Forms of Migration: From rural to urban and back
 - c. The cyclic nature of migratory behaviours: The Migrant & their family, lone male members in the city, bringing and settling with a family
 - d. The Female Worker: Alone in the City
 - e. Economic scales: Skilled and Unskilled, Blue-Collar and White-Collar migrants
 - f. The 'Hometown', its continued associations for migrants, understanding 'Zameen'
3. **Forms of habitation of migrants in the Metropolis**
 - a. Stages of assimilation
 - b. Forms of tenure and ownership, legal Status
 - c. Settlements: Permanent and Ephemeral, inequality and access to public services
 - d. The relationship of migrant habitations with the State
4. **Assimilation and Cosmopolitanism**
 - a. Mainstream and the Outsider: Social Cohesion, exclusion and inequality in the city
 - b. Living and working with 'others' in the public and private realms
 - c. Tensions between migrants and 'Mool-niwasis': how they play out in the metropolis
 - d. The public and the personal: various forms of expression and representation through literature, film, media, social media, etc.
5. **International Case-Studies of Demographic Change and Settlement**
 - a. The impact of falling birth rates on city processes
 - b. Migrants and Refugees: the distinctions and their relationship with authority
 - c. Migratory practices and imperatives in the world, especially movement within the Global South, and between the Global South and the Global North

1.3

Academic Writing & Ethics

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	1	1	0	2	Yes	Yes	No
Hours	15	30	0	45			

● Course Objectives:

1. To introduce students to critical skills in reading and writing for effective communication for research.
2. To prepare students for types, conventions and structures of academic writing.
3. To make students aware of ethical practices to be observed in academic writing.
4. To make students aware of plagiarism and the consequences of indulging in plagiaristic practices.

● Course Content:

1. **Writing practices**
 - f. The importance of academic writing for knowledge creation
 - g. Developing critical reading skills and conducting literature review
 - h. Developing abilities to correctly precis long texts
2. **Academic writing basics**
 - i. Developing research questions, research proposals, abstracts for conferences
 - j. Evidence-based arguments and conventions of academic writing
 - k. 'Standing on the shoulders of giants': the necessity, conventions and styles of providing citations and attributions
 - l. Range of academic writing and their structures – essays, research papers, review papers, research proposals, dissertations, books etc.
3. **Attributes of Good Writing**
 - e. Writing to be read
 - f. Writing for popular media and importance of communicating with lay audiences.
4. **Editing**
 - a. First and subsequent drafts
 - b. Editing basics and concision skills
5. **Use of technology for effective writing**
 - a. Open Educational Resources (OERs) for learning & Research
6. **Ethics of academic writing**
 - a. Conventions and styles of providing citations and attributions
 - b. Avoiding plagiarism in various forms
 - c. Consequences of plagiaristic practices

1.4

Metropolitan Design Studio 1

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	4	6	No	Yes	Yes
Hours	30	0	120	150			

● Course Objectives:

1. To understand metropolitan context and scale through architecture
2. To be able to approach the intermediate scale of design with a greater understanding
3. its complexity and purpose
4. To recognise the granularity of design in the real world of the metropolis, keeping the focus on climate and economy
5. To construct a holistic and nuanced picture of stakeholders as ultimate users
6. To immerse oneself as a designer in a collaborative practice

● Course Content:

The Design Studio may be set up to tackle real situations in a metropolis, where the end design may be the result of documentation, data analysis, detailed diagramming of the site and circulation and a holistic understanding of stakeholders' aspirations and habitational practices. It is encouraged that the studio be set up for multidisciplinary collaboration.



1.5

Evolution of Metropolitan Form in the Global South

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To appreciate history and geography as essential drivers of Metropolitan Change
2. To understand the changing forms of Metropolitan Architecture through comparisons and contrast
3. To appreciate the forces behind the Self Similarity of 'Global' cities.

● Course Content:

1. Globalization and Homogeneity
 - a. What drives the Self-similarity of global cities
 - b. What is lost in the process of constant change
2. The Paradigms of the Global South
 - a. What are its defining features
 - b. What are its driving forces
 - c. How does the Global South differ from the developed world
3. Architecture in the cities of the Global South
 - a. The architecture of Port Cities
 - b. The Architectures of Capital Cities
 - c. Mercantilism and the expressions of facades
 - d. The Monumental and the Public Realm
4. The International Style of Architecture - A Critical Reappraisal

1.6

Gender and Space in the Public Realm

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To differentiate between equality, equity and justice for gender issues in the city
2. To understand the contexts that provide safety or cause danger in the metropolis
3. To appreciate space as the enactment of power differentials between genders
4. To create environments that promote the safety and well-being of all genders

● Course Content:

1. Understanding equality, equity and justice
 - a. Gender diversities
 - b. Power differentials in the use of space
 - c. 'Taken for Granted' spaces
 - d. Inclusivity
2. Everyday Spaces in the Metropolis
 - a. The Public Realm
 - b. Mobility
 - c. Conveniences
 - d. Play/Loiter/Flaneur
3. Understanding Gender and Space
 - a. Through Locality studies, Ethnography, Mapping
4. Designing for Safety and Comfort
 - a. Gender violence
 - b. Privacy
 - a. Creating an architecture that promotes safety and well being

1.7

Adaptive Reuse and Redevelopment Perspectives

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To chart the processes of adaptive reuse in metropolitan sites
2. To be able to carry out adaptive reuse as sustainable practice
3. To involve the stakeholders in the design process
4. To make critical readings of development rules and redevelopment paradigms

● Course Content:

1. **Sites for Renewal**
 - a. The dominant presence of brownfield sites in Metropolitan urban futures
 - b. Building on the same footprint
 - c. Critical reading of development rules and redevelopment bye laws
2. **Adaptive Reuse**
 - a. Adaptive Reuse as sustainable practice
 - b. Processes and Techniques to increase the life of buildings:
 - c. Adaptive reuse— spatial, through retrofitting
 - d. Adaptive reuse of materials— deconstruction
3. **Social Dividend**
 - a. The social dividend of using already constructed spaces for contemporary use
4. **Collaborative Practice**
 - a. Stakeholder participation in adaptive reuse
 - b. Using oral histories as a means for generating design brief

1.8

Climate Crisis in the Metropolis

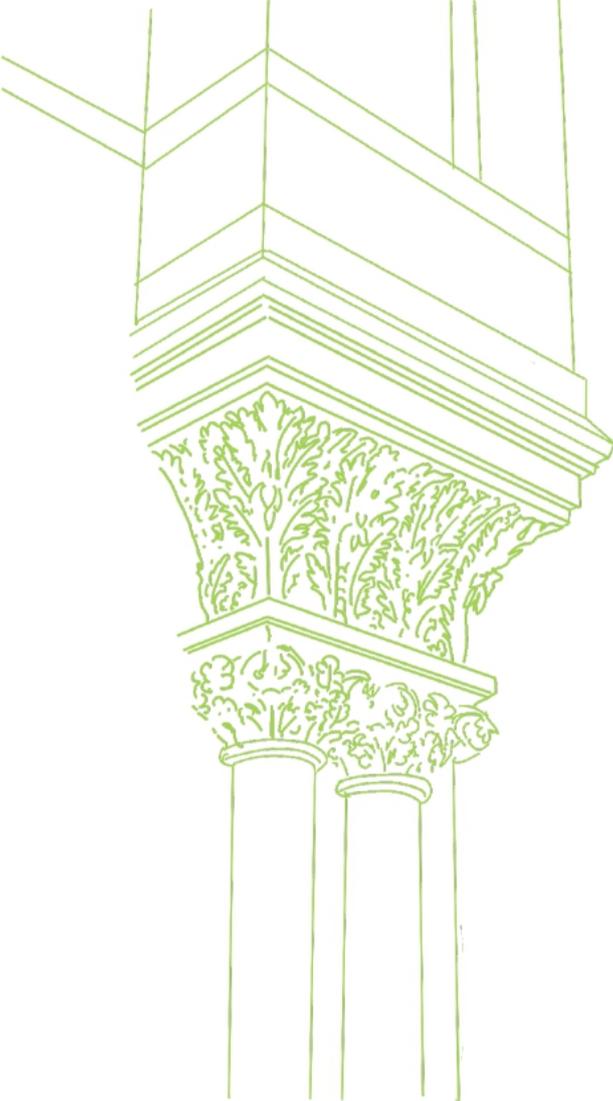
	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To appreciate the immediacy of catastrophic climate change as part of our own lifetimes.
2. To appreciate the consequences of global warming targets of 1.5 degree increase not being met.
3. To be able to chart the vulnerability of contemporary architectural practice due to climate change.
4. To be able to design for climate resilience.

● Course Content:

1. **The inevitability of Climate Change**
 - a. Consequences of not meeting the 1.5-degree target
 - b. The rise in sea levels and the changing lay of the land
 - c. The vulnerability of port cities
2. **Metropolitan heat sinks**
 - h. Architectural responses in an increasingly warming environment
 - i. Sustainable practices
 - j. Passive design
 - k. Carbon footprints in architectural design practice: Learning to calculate different forms of carbon- operational, embodied etc. and make decisions for the future.
3. **Mumbai as a vulnerable example**
 - a. Mumbai as a case study for climate change
 - b. The peninsula and the mainland
 - c. The littoral landscape and the edges of the metropolis
 - d. Designing on Reclaimed land
4. **Architecture after 2030**
 - a. Possibilities and affordances in an ages of catastrophic climate change



Semester 2 Course Structure

Sr. No.	Type	Course code	Course	Lecture credits	Tutorial credits	Studio credits	Total credits	Total Hours
2.1	Core	ARCH 602	Metropolitan Building Typologies	2	0	1	3	60
2.2	Core	ARCH 604	Plug-In: Metropolitan Mobility	3	0	0	3	45
2.3	Core	ARCH 606	Research Methods in Architecture	1	1	0	2	45
2.4	Studio	ARCH 610	Metropolitan Design Studio 2 Global South Studio	2	0	4	6	150
			Choose any 2 out of 4					
2.5	Choice based (Within program)	ARCH 614	Evolution of Housing Typologies in Mumbai	2	0	0	2	30
2.6	Choice based (Within program)	ARCH 616	Self-help Architecture	2	0	0	2	30
2.7	Choice based (Within program)	ARCH 618	Representing the Metropolis	2	0	0	2	30
2.8	Choice based (Within program)	ARCH 620	Built Heritage Conservation	2	0	0	2	30
	Choice based (Outside program)		Choose any 1 from pool				2	
			Total Semester 2				20	

2.1

Metropolitan Building Typologies

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	1	3	Yes	Yes	No
Hours	30	0	30	60			

● Course Objectives:

1. To understand the various typologies of contemporary/historic/vernacular architecture in the metropolis and their relationship with other typologies and infrastructure.
2. To dissolve the distinctions between stand alone or 'iconic' buildings and the buildings that make up the metropolitan fabric.
3. To examine the essential characteristics of specific genres of building typology: e.g., architecture for health, architecture for education, architecture for recreation, etc.
4. To appreciate how residential architecture is interwoven in the metropolis, its spread, variety and driving forces.
5. To be able to integrate the imperatives of self-help architecture in the development of the future of cities.

● Course Content:

1. Developing the Intermediate Scale

Taking the learnings for ARCH 601 further, by establishing the specifics of the intermediate scale of architecture in the metropolis, between buildings on plots and sub-divisions of the urban plan.

2. Genres of building typologies in the contemporary metropolis

Health, Education, Recreation, Retail, IT, and other emerging genres (non-residential) A critical re-examination of the stand-alone building.

3. Hybrid Architecture

Charting emerging models of hybrid buildings that integrate multiple typologies

4. Neighbourhoods in the metropolis

- a. Charting residential neighbourhoods and measuring their relevance
- b. The subversion of zoning in the development of the metropolis
- c. How live/work/play intermesh in dense cities
- d. Downtown and Suburbia: integration or isolation?
A critical look at urban sprawl
- e. The perimeters and peri-urban edges of the metropolis and their futures

5. The Unplanned Metropolis

How historical imperatives guide change in the metropolis. Beyond the shining city. The presence and increasing impact of self-help neighbourhoods, their interstitial existence and relevance, developing a comprehensive knowledge of the architectures of self-help, and their uneasy relation with the State.

2.2

Plug-In: Metropolitan Mobility

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	3	0	0	3	Yes	Yes	No
Hours	45	0	0	45			

● Course Objectives:

1. To understand the relationship between habitation and mobility
2. To understand how the metropolis made through various networks of mobility
3. To be able to articulate architecture in terms of movements systems in and around its site.
4. To develop pedestrian friendly and barrier free environments

● Course Content:

1. Systems of Mobility in a Metropolis

The networks of transportation systems that make a metropolis

2. Location, Movement and Speed

Mass movement connectors between downtowns and far-flung edges

3. Architecture and systems of mobility

How does a building fit into the larger mobile networks that connects the city, The building, the site and the connectors- braiding the city

4. The Pedestrian City

a. Design to encourage pedestrianization

b. Design for barrier free environments

c. How design can change in a pedestrian friendly siting.

d. New neighbourhoods using principles of New Urbanism
(Jan Gehl, David Sim, etc.)

2.3

Research Methods in Architecture

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	1	1	0	2	Yes	Yes	No
Hours	15	30	0	45			

● Course Objectives:

1. To understand basic research issues and concepts
2. To familiarize oneself with the various forms of architectural research
3. To be able to make informed choices about research methods – qualitative or quantitative
4. To be able to document architectural situations holistically through drawings and writing

● Course Content:

1. The Research Process
 - a. Objectives of Research
 - b. Concepts and Issues
 - c. Taking forward learnings from HUM 601 in terms of Research Writing
2. Types of Architectural Research
 - a. Historical
 - b. Qualitative
 - c. Experimental
 - d. Correlational
 - e. Simulation
 - f. Logical Inference
 - g. Case Study Observations
3. Methods of Data Collection and Analysis
 - a. Qualitative and Quantitative methods
 - b. Observation and Recording
 - c. Interviews, surveys, oral histories
 - d. Structured and Unstructured
 - e. Open ended and Close ended questioning
 - f. Sampling
 - g. New applications for research data management— Zotero, Notion etc.
4. Documentation
 - a. Mapping and diagramming as research
 - b. Presenting Research through drawings and maps
5. Evaluating Sources
 - a. Putting together the research for publication

2.4

Metropolitan Design Studio 2 (Global South Studio)

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	4	6	Yes	Yes	No
Hours	30	0	120	150			

● Course Objectives:

1. To appreciate changing trends in metropolitan architecture beyond India, specifically in the developing world/ Global South through parallel practices
2. To extend design as a collaborative practice internationally
3. To be able to compare and contrast metropolitan architecture in cities outside India, develop useful learnings and new knowledge.
4. To be able to use such knowledge to create architectural designs in a country/location other than one's own in the real world.

● Course Content:

The Design Studio may be set up to tackle spatial environments in a Global South metropolis, where the end design may be the result of documentation, data analysis, detailed diagramming of the site and circulation and a holistic understanding of stakeholders' aspirations and habitational practices. The host college offers a grounded perspective to changing architecture in their city while the visiting college can contribute with out-of-the-box thinking.

The Institute shall set up MoU's with universities imparting architectural education abroad (especially in the Global South), and set up joint design studios with students at an equivalent level.

The studio be set up for multidisciplinary collaboration. Studios in both countries can run parallelly, offering the same area of investigation and design, but in their respective countries, e.g., a favela in Ghana with a self-help urban agglomeration in Mumbai, or examining water edges as social spaces, and so on. While this studio can be conducted virtually, travel between collaborating cities is encouraged and should be planned for in the program scheduling.

The Global South Studio shall explore the material fabric in a metropolis outside India, charting the habitational and constructional processes related with metropolitan life.

The focus is on designing new architecture through the use of contemporary research practices, generation of new knowledge about the architecture in large cities.

2.5

Evolution of Housing Typologies in Mumbai

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To map out the various forms of residential habitation in the metropolis of Mumbai
2. To appreciate the changing forces of history: sociocultural, demographic, and economic in the development of various typologies
3. To understand the reshaping of the city due to various projects of reclamation and their influence on housing and housing stock
4. To understand Mumbai's housing across various scales and their integration in the public realm

● Course Content:

1. **Mumbai's Housing Typologies**
 - a. 19th, 20th and 21st century evolutions
 - b. Sociocultural, demographic, and economic influences
2. **Reclamations and Reshaping the City**
 - a. Creating building stock out of the sea
 - b. Changes in housing design with reclamation
 - c. Influence of demographic changes on housing design
 - d. Housing and precincts
3. **Tenure and Occupation**
 - a. Legality and appropriation in the creation of housing stock
 - b. The monetization of land, housing as a unit for exchange rather than habitation
4. **Scales of Housing**

The context of each scale of housing possibilities in the city Shanty, Self Help, Pucca House, Chawls, State Provided Housing, Cooperative Societies, Builder/ Developer Housing, Gated Communities, Luxury Segments, Bungalows, Private single-family Housing

2.6

Self-Help Architecture

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To understand the imperatives that cause self-help housing in the metropolis
2. To be able to differentiate between legal holdings, tenure and occupation
3. To chart the scaling of self-help efforts with economic change
4. To understand the construction processes and design choices in self-help architecture.

● Course Content:

1. **Holdings, Tenure and Occupation**
 - a. Legality and illegality in land acquisition and urban appropriation
 - b. The effects of time on tenure
 - c. The 'Tolerant' State
2. **The Semiotic of the 'Slum'**
 - a. Why 'Slum' is a pejorative, and a nomenclature of power differentials in the urban context
 - b. 'Slum-free' City: Possibilities and consequences
3. **The Socio-cultural value of Self-help Housing**
 - a. Iterative change based on economic upgradation
 - b. The creation of housing stock at the base level in cities
 - c. Increase in rental possibilities
 - d. Locational advantages of self-help precincts to ways of mobility in the metropolis
 - e. Public utilities/facilities for health and education, for recreation and Faith in the self-help precinct
4. **Turnkey Contracting and Construction Processes**
 - a. The use of RCC as a self-help building medium
 - b. The provision of services: electricity, water supply, sewage
 - c. Turnkey Contracting and the role of the Mistry
 - d. Financing home building outside the processes of the State
 - e. Representing homeowner aspiration in the design of the self-help home

2.7

Representing the Metropolis

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To appreciate the metropolis as a cultural object
2. To chart out its various representations in media and literature
3. To glean fresh meanings, inferences and interpretations into metropolitan life and metropolitan form
4. To chart changing metropolitan mores, specifically in the space and place making

● Course Content:

1. **The Metropolis as a cultural object**
 - a. How the inhabitants perceive, visualise and talk about the city
 - b. Its location in aspirations, belief systems and expressions of its inhabitants
 - c. What is the value of the city to its citizens beyond functional/economic/social games
2. **The representations of the metropolis**
 - a. How is the metropolis presented in
 - i. Art
 - ii. Literature and poetry
 - iii. Cinema and mass media
 - b. What inferences can be derived about the city.
3. **The changing city**
 - a. What is urban behaviour?
 - b. What changes in the surroundings cause urban behaviour to transform?
 - c. Charting change in urban inclusivity, access, power differentials and imagery
 - d. Based on examples from the representations above.
4. **The Flaneur**
 - a. Walking through the city
 - b. Observations and ethnography

2.8

Built Heritage Conservation

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To understand conservation as the need for extending lives of buildings and implementing sustainable cities.
2. To value historic buildings in urban areas for their historical, architectural, cultural, aesthetic or ecological values.
3. To identify and document immovable property having value to be conserved.
4. To take appropriate decisions of when and how to engage in a built heritage intervention.
5. To offer guidelines (visual and otherwise) for the conservation of precincts.

● Course Content:

1. **An introduction to conservation philosophies**
 - a. Retrofit principles and methods- of minimal intervention, like for like material etc.
2. **Conservation and restoration of immovable cultural property**
 - a. Extending the useful life of material, historical, and design integrity of any immovable cultural property through carefully planned interventions.
 - b. How- documentation, condition mapping, preparing detailed project reports that include phasing, budgeting, sourcing material and skilled craftspeople etc.
3. **The role of the architectural conservator-restorer**
 - a. Going beyond the monumental and the tourist-traps
 - b. Beyond the listed or unlisted— every existing building matters
 - c. Value based choice- making
 - d. Artistic
 - e. Contextual
 - f. Informational values
4. **Interventions in identified precincts**
 - a. Identification of form, style and constituent materials
 - b. Carbon in the historic environment
 - c. Challenges to conservation at an urban level
5. **Material conservation basics**
 - a. Brick and stone
 - b. Timber
 - c. Glass
 - d. RCC
 - e. Cast Iron, wrought iron and steel
 - f. Flooring and walling systems



Semester 3 Course Structure

Sr. No.		Course code	Course	Lecture credits	Tutorial credits	Studio credits	Total credits	Total Hours
3.1	Core	ARCH 701	Sustainable Brownfield Development	2	0	2	4	90
3.2	Core	ARCH 703	Plans and Policymaking	4	0	0	4	60
3.3	Seminar	ARCH 709	Minor Research Project in Metropolitan Architecture	0	0	6	6	180
			Choose any 2 out of 4					
3.4	Choice based (Within program)	ARCH 713	Semiotics of the Metropolitan Facade	2	0	0	2	30
3.5	Choice based (Within program)	ARCH 715	Ecology of Place	2	0	0	2	30
3.6	Choice based (Within program)	ARCH 717	The Ephemeral in the City	2	0	0	2	30
3.7	Choice based (Within program)	ARCH 719	Disaster Management	2	0	0	2	30
	Choice based (Outside program)		Choose any 1 from pool				2	
			Total Semester 3				20	

3.1

Sustainable Brownfield Development

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	2	4	No	Yes	No
Hours	30	0	60	90			

● Course Objectives:

1. To reimagine architecture in the metropolis as primarily brownfield development
2. To critically re-examine the concept of 'redevelopment' as mandated by the State
3. To appreciate and value of 'presence' in conceptualising redevelopment
4. To make critical readings of development rules and redevelopment paradigms

● Course Content:

1. **Brownfield Sites**
 - a. The existing footprint, its relationship to its immediacies
 - b. The neighbourhood as a sustainable entity
2. **'Redevelopment'**
 - a. Change for change's sake: critical readings of current development rules and bylaws
 - b. Monetization of land and impatient capital
 - c. Precincts VS Clustering
3. **The Value of presence**
 - a. Charting the existing in the creation of the new
 - b. Diagramming the context for developing a design brief
 - c. Architecture as urban insert not plot appropriation
 - d. Removing all barriers
 - e. The consequences of creating gated spaces
4. **New Architecture for Old**
 - a. Brownfield development as transformative
 - b. Using concepts of New Urbanism in the development of new architecture
 - c. Reimagining architecture in a pedestrianised precinct

3.2

Plans and Policymaking

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	4	0	0	4	Yes	Yes	No
Hours	60	0	0	60			

● Course Objectives:

1. To understand the policies, objectives, imperatives, stakeholders and pressures that go into the making of a development plan
2. To appreciate the importance of time— immediacies, overlaps, implementation lags in the implementation of development plan
3. To be able to chart out the absences in development plans and their political impact on the citizens of a metropolis
4. To be able to read and analyse, development plans and building bye laws,
5. particularly to their impact on metropolitan architecture
6. To develop composing skills to convert metropolitan policies into plans for the future, particularly through the creation of visual bye laws/ make and defend petitions, etc..

● Course Content:

1. **The Development Plan**
 - a. What drives the policies, the objectives and imperatives that go into the making of a Development Plan?
 - b. The stakeholders and consultations in the making of DPs
 - c. Pressures into development plan making
2. **A critical analysis of Development Plans of various metropolises**
 - a. Development in metropolises of the Global South
 - b. Legality and tenure in the creation of the DP
3. **The Role of Time: gaps between Policymaking and Implementation**
 - a. Immediacies and overlaps
4. **Reading and Writing Development Plans for Metropolitan Architecture**
 - a. Converting metropolitan policies into plans for the future, particularly through the creation of visual bye laws as related to architecture
 - b. A Critical Reading of the National Building Code with relevance to contemporary architectural design in large cities.
 - c. Making and defending petitions based on interpretations of DPs and bylaws
5. **The Architecture of Absence**
 - a. What gets left out of the Development Plan
 - b. The impact on citizens
 - c. The impact on architecture
 - d. The legal and the tolerated

3.3

Minor Research Project in Metropolitan Architecture

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	0	0	6	6	No	Yes	Yes
Hours	0	0	180	180			

● Course Objectives:

1. To be able to write and present an academic paper
2. To aim to produce new knowledge that can help in the understanding of the changing Metropolis.
3. To explore possibilities of Major Project Research
4. To participate in seminar/conference/symposium environments
5. To adhere to the highest standards of academic integrity.

● Course Content:

Students are expected to convert their learnings into academic research, in the form of a paper that stays within the present domain of metropolitan Architecture.

The work carried out here could represent the current interests and pursuits of the institution in terms of research. At the same time, the Seminar as a Minor Project can be used by the student to explore their own research interests, that will culminate as a major project in Sem IV.

This paper may be a stand-alone research paper, or an exploration of themes that may form the major project, or be a chapter in the major project.

All the papers so published may be presented at an annual conference and compiled as a conference document.



3.4

Semiotics of the Metropolitan Façade

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To understand the deep structures that meanings have and play in our appreciation of the built environment
2. To be able to read buildings as text and discern semiotic meanings
3. To read one's own design semiotically, especially to identify inadvertent signification that can lead to misunderstanding
4. To understand semiotics as a useful tool of wayfinding in the metropolis.

● Course Content:

1. **Semiotics as a Study of Signs**
 - a. Signs, signifier and signified, and their relationship
 - b. Making meaning through difference
 - c. Syntagms and Paradigms
2. **Icon, Index and Symbol**
 - a. Identifying signs through their characteristics
3. **Structuralism and Post-structuralism**
 - a. The life of signifiers
 - b. Différance
4. **The Semiosphere**
 - a. Semiotic systems as products of interactivity
 - b. The inseparable role of people in sign systems
 - c. Symbols, signs, tongues
5. **Buildings as Text**
 - a. Reading a building for semiotic significance
 - b. Making meaning out of building facades in the metropolis
 - c. Architecture and ornament

3.5

Ecology of Place

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● **Course Objectives:**

1. To develop a holistic perspective towards the ecology of place
2. To understand the role of inhabitants and opinion making on biodiversity
3. To understand how ecological interactions are contingent on context
4. To integrate notions of environmental justice with the development of the metropolis

● Course Content:

1. Ecology of Place
 - a. The value of conservation and preservation that people place on their relationship to the earth, its features and its inhabitants.
 - b. Responsibilities and the meanings of its interdependencies. (Ana Zalyubovskiy)
 - c. How critical discussions can impact the evolution of society
 - d. From outside observer to aware partner
2. Genius Loci: The particularity and uniqueness of place
 - a. Places intertwined with life stories
 - b. A place as part of our voice
 - c. Does the way we form opinions impact biodiversity? (Zalyubovskiy)
3. Environmental Justice
 - a. What is environmental justice?
 - b. Role economies play in ecological disruptions
 - c. Urban ecological thinking
 - d. How does connecting or disconnecting with nature influence us?
 - e. Integrating environmental justice with the development of the metropolis
 - f. Sustainable Development Goals
4. Issues related with the ecology of place:

a. climate change		
b. deforestation	e. environmental justice	i. land use and regulations
c. ecological attitudes	f. animals	j. the rights of nature
d. economics	g. indigenous peoples	
	h. knowledge	

3.6

The Ephemeral in the City

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To appreciate Ephemeral Architecture as a significant layer that makes up the palimpsest that is the Metropolis
2. To understand that temporary Architecture fills up a necessary space in the idea of a city, particularly as an urban presence
3. To appreciate how Ephemeral interventions communicate user values, tell a story or stir emotions, shared urban experience.

● Course Content:

1. Characteristics of Ephemeral architecture
 - a. Low cost/ jugaad
 - b. Transportation, erect-ability, removal
 - c. Striking presence or fleeting need
 - d. Innovation due to low risk
2. History of Ephemeral Architecture
 - a. Enclosures
 - b. Baldachins
 - c. Monuments
3. Contemporary socio-cultural traditions in the Metropolis using ephemerality as expression
 - a. Cultural relevance
 - b. Popular Architecture
 - c. Sensory experience
 - d. Ephemeral to permanent

3.7

Disaster Management

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	2	0	0	2	No	Yes	No
Hours	30	0	0	30			

● Course Objectives:

1. To understand the protocols of managing unforeseen events
2. To get a holistic perspective of different forms of urban disasters and their impact on citizens and habitable space
3. To determine the architect's role in each of the five stages of disaster management: Prevention, mitigation, preparedness, response and recovery
4. To design architecture for disaster resilience

● Course Content:

1. Processes and protocols of urban disaster management
 - a. Control Rooms and their functions
 - b. Understanding scale
2. Disasters and their urban consequences
 - a. Seismic Events
 - b. Urban flooding
 - c. Fire
 - d. Pandemics/Contagion
 - e. Cyber Attacks
 - f. Urban Unrest
3. Disaster Management Strategies
 - a. Prevention
 - b. Mitigation
 - c. Preparedness
 - d. Response
 - e. Recovery
6. Modes of coping
 - a. Prominence of government presence
 - b. Pool of funds/resources (Government/ insurance/ private)
 - c. Planning, especially long-term, of rehabilitation and development
 - d. Policies for institutional support Preparedness for countermeasures.
7. Short- and Long-term responses
 - a. Dealing with permanent change
 - b. Resilient approaches to metropolitan architectural design



Semester 4 Course Structure

Sr. No.	Type	Course code	Course	Lecture credits	Tutorial credits	Studio credits	Total credits	Total Hours
4.1	Core	ARCH 704	Natural Systems in the Metropolis	3	0	0	3	45
4.2	Dissertation	ARCH 710	Dissertation in Metropolitan Architecture	0	0	15	15	450
	Choice based (Outside program)		Choose any 1 from pool				2	30
			Total Semester 4				20	

4.1

Natural Systems in the Metropolis

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	3	0	0	3	No	Yes	No
Hours	45	0	0	45			

● Course Objectives:

1. To appreciate the metropolis as an interconnected ecological field, rather than a collection of objects and buildings
2. To understand landscape as a generator of form, and natural systems as structuring devices in the metropolis
3. To appreciate that biodiversity in the Metropolis can bring about human health and well-being, sustainable development and alleviate climate change
4. To create sustainable models of land use and natural systems
5. To re-imagine metropolitan architecture using nature-based solutions

● Course Content:

1. **Landscape Urbanism**
 - a. The Metropolis as an interconnected and ecologically rich horizontal field The emphasis on performance over form, through systems thinking and design strategies A movement away from shift away from comprehensive visions to environment specificity.
2. **The shape of the Metropolis**
 - a. Understanding the lay of the land:
 - ii. Contours and slopes
 - iii. Water runoffs and natural drainage lines
 - iv. Water edges and wetlands
 - v. Urban forests
 - vi. Urban densities and peripheries
 - vii. Species— native, non-native
3. **Biodiversity in the Metropolis**
 - a. City Biodiversity Index
 - b. Habitat loss
 - c. Fragmentation
 - d. Introduction of New Species
 - e. Climate, soil hydrology and chemical conditions
4. **Constraints on the city to conserve nature**
 - a. Infrastructure and land use decisions effect on sustainable systems
 - b. The effect of sprawl on natural systems
5. **Co-benefits of natural systems in the Metropolis**
 - a. The presence of urban nature
 - b. Climate resilience
 - c. Disaster risk reduction
 - d. Economic/ Equity benefits
 - e. Improving land value
 - f. Nature Based Solutions and Urban Governance

4.2 Dissertation

	Course				Assessment		
	Theory	Tutorial	Practical	Total	Exam	Internal	External
Credits	0	0	15	15	No	Yes	No
Hours	0	0	450	450			

● Course Objectives:

1. To carry to fruition in-depth research into a theme of the students' choice from within the objectives and range of the program
2. To demonstrate the ability to bring together available information on a topic, summarise, review and derive inferences for the state of knowledge, and identify gaps, and compose research questions
3. To be able to design research methods to answer the research questions posed and to carry out the said research with diligence and integrity
4. To be able to analyse findings, and write derive conclusions that can be contributed as new knowledge in the field

● Course Content:

The student shall write a dissertation in the final term of the program, based on research carried out on a theme of their choice from within the objectives and range of the program.

The research shall begin as part of the Seminar Course in Sem III and the student shall spend adequate time outside the institute to carryout field work and accumulate findings.

The areas of research shall be chosen to derive new knowledge into the history and evolution of metropolitan architecture, processes of building, post occupancy studies, stakeholder feedback, metropolitan ecologies and bio-diversities, representations of the metropolis and other such themes that lead to greater understanding of the functioning of large cities.