

AC 14/07/2016

Item No: 4.6

# **UNIVERSITY OF MUMBAI**



## **Master of Architecture** **in** **Urban Design**

**First and Second Years (Semesters I - IV), Revised Course  
(REV- 2016) from Academic Year 2061 -17**

(As per Choice Based Credit and Grading System with  
effect from the academic year 2016–2017)

## **From Co-ordinator's Desk:**

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited. In line with this Faculty of Technology of University of Mumbai has taken a lead in incorporating philosophy of outcome based education in the process of curriculum development.

Faculty of Technology, University of Mumbai, in one of its meeting unanimously resolved that, each Board of Studies shall prepare some Program Educational Objectives (PEO's) and give freedom to affiliated Institutes to add few (PEO's) and course objectives and course outcomes to be clearly defined for each course, so that all faculty members in affiliated institutes understand the depth and approach of course to be taught, which will enhance learner's learning process. It was also resolved that, maximum senior faculty from colleges and experts from industry to be involved while revising the curriculum. I am happy to state that, each Board of studies has adhered to the resolutions passed by Faculty of Technology, and developed curriculum accordingly. In addition to outcome based education, **Choice Based Credit and Grading System** is also introduced to ensure quality of engineering education.

Choice Based Credit and Grading System enables a much-required shift in focus from teacher-centric to learner-centric education since the workload estimated is based on the investment of time in learning not in teaching. It also focuses on continuous evaluation which will enhance the quality of education. University of Mumbai has taken a lead in implementing the system through its affiliated Institutes Faculty of Technology has devised a transparent credit assignment policy adopted ten points scale to grade learner's performance. Choice Based Credit and Grading System were implemented for First Year Master of Architecture from the academic year 2016-2017. Subsequently this system will be carried forward for Second Year Master of Architecture in the academic year 2017-2018.

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Faculty of Technology,

Member - Academic Council

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# **Master of Architecture (M. Arch.) in Urban Design Degree Program**

## **PREAMBLE**

It is proposed to offer a regular M. Arch postgraduate course in Urban Design of two-year duration open to students with a B.Arch. qualification. This course is designed to enhance the skills of, young aspiring architects to be involved in the active planning and design of urban settlements which are under rapid transformation in India. This course would prepare a student to work within the planning framework in our context with government institutions, non-governmental institutions and other private agencies.

Objectives of Urban Design Course are as follows:

- 1] to attain a fundamental understanding of the context of the urban.
- 2] to identify, define and analyze current urban design issues.
- 3] to develop urban design principles for the sustainable growth of our cities.
- 4] to develop successful strategies for the implementation of the urban design principles.
- 5] to evaluate the performance of urban design projects, policies and processes.
- 6] to work successfully with communities, public / private planning institutions and other stakeholders in the city.
- 7] to develop research skills and enhance knowledge in the field of Indian urbanism in innovative ways

As stated in the above objectives, the course is structured to achieve knowledge in some of the verticals that it considers important, so that the students are able to address the contemporary challenges that are encountered by the urban practitioner. This is shown below in the following diagram:

	<b>DESIGN STUDIOS</b>	<b>PLANNING STUDIES</b>	<b>URBAN / URBAN DESIGN THEORY</b>	<b>ELECTIVES</b>	<b>RESEARCH and THESIS</b>
SEMESTER 1	Urban Design Studios are proposed in each semester to introduce the students to map, analyse and synthesize in urban contexts.	The Planning Course introduces the student to the legal/institutional planning framework within which she/he would work.	This would help the student to develop theoretical framework to conceptualize and comprehend the nature of the urban, which is about people, place , their cultural practices, etc.	The electives are introduced to give courses to students as per the differing intents and objectives framed by the member intuitions. It can also be as per the strength of the faculty, their body of research work that these institutions have.	
SEMESTER 2					This would help the student develop a critical ability to conduct independent research on contemporary urban issues. It would finally culminate in students proposing their own area of research.
SEMESTER 3					
SEMESTER 4					

The syllabus following the preamble is indicative of the direction each course should take. It should be detailed by each institution depending on the vision they have of the field. The institution should provide for a detailed reading list that they should make available to students.

Semester wise scheme of examinations for Master of Architecture (M. Arch) Urban Design

	EXAM CONDUCTED BY COLLEGE	TEACHING SCHEME			
		Lect.	Studio	total	Credits
	<b>Semester I</b>				
<b>MUDC101</b>	Urban Design History	2	--	2	2
<b>MUDC102</b>	Theory and Methods of Urban Design	2		2	2
<b>MUDC103</b>	Planning Techniques and Procedure- I	3		3	3
<b>MUDE101</b>	Compulsory Electives -1	3		3	3
<b>MUDE102</b>	Compulsory Electives-2	2		2	2
<b>MUDS101</b>	Landscape Design and Urban Ecology	2	2	4	4
<b>MUDS102</b>	Design Studio I		12	12	12
		14	14	28	28

**SCHEME OF EXAMINATION SEMESTER I**

		Examination Scheme			
		Theory (paper)	Sessional work		
	<b>SEMESTER I</b>		Internal	External viva	Total
<b>MUDC101</b>	Urban Design History	50	50		100
<b>MUDC102</b>	Theory and Methods of Urban Design		100		100
<b>MUDC103</b>	Planning Techniques and Procedure- I	50	50		100
<b>MUDE101</b>	Compulsory Electives		100		100
<b>MUDE102</b>	Compulsory Electives		50		100
<b>MUDS101</b>	Landscape Design and Urban Ecology		100		50
<b>MUDS102</b>	Design Studio I		450		450
	<b>TOTAL</b>	<b>100</b>	<b>900</b>		1000

## **SEMESTER I**

### **URBAN DESIGN HISTORY**

Marks (100) Hrs/Week –2

The unit explores the evolution of ideas and principles of urban design by focusing on the relationship between societal change and the formal organization of the urban environment. Historical, theoretical and critical lines of arguments will be pursued by examining urban places and spaces in their making, use and change, ranging from early civilizations to the present. The course also reviews the history and heritage of human settlements in India from ancient times to date. It also examines current trends in contemporary architecture planning and urban design practices in India and abroad.

### **THEORY AND METHODS OF URBAN DESIGN**

Marks (100) Hrs/Week –2

The unit helps in introducing concepts, theories and methods of inquiry that are useful for urban design discourse and reflective practice, aiming at better programming and design. It will explore ways of reading, experiencing, comprehending, analysing, and representing, the urban context.

It will do so by introducing students to existing modes of reading cities through the perceptual/cognitive theories framed by Kevin Lynch and Christopher Alexander, behavioural theories by Amos Rapoport, psycho-geographical theories by Guy Debord, and other noted theoreticians. It should equip the students to innovate in reading and analysing urban settlements depending on the urban context they wish to engage.

The course should also help the students to comprehend and appreciate the evolution and formation of morphologies of urban settlements.

### **PLANNING TECHNIQUES AND PROCEDURE -1**

Marks (100) Hrs/Week –3

Students will gain knowledge on the following subjects.

History and principles of planning in the international and national context,  
Present planning and institutional framework available in the country, state and with local governments,  
Introduction to present legal framework for planning,  
Introduction to type of plan prepared by various levels of governments, etc

### **COMPULSORY ELECTIVES -1**

Marks (100) Hrs/Week –3

This Elective course is designed on the vision and the strength of course in each individual institution. This elective will be attended by all the students.

## **COMPULSORY ELECTIVES-2**

Marks (100) Hrs/Week – 2

This Elective course is designed on the vision and the strength of course in each individual institution. This elective will be attended by all the students.

### **LANDSCAPE DESIGN AND URBAN ECOLOGY**

Marks (100) Hrs/Week – 4

This unit helps the student to gain knowledge on urban landscape; theories and practices. Through this the participants will comprehend the relationships between architecture, urban design, landscape design; simultaneously developing a historical perspective on the subject, both internationally and locally. This can be done through the study of case and best practices in the field.

The course also introduces the students to learn methods to analyse sites in relation to topography, vegetation, bio-diversity, etc. and other ecological conditions. The emergent patterns through these exercises should inform the design of the built environment.

This course is supplemented by a studio where the students are taught to implement these methods and respond by framing sensitive design strategies.

### **URBAN DESIGN STUDIOS**

Marks (450) Hrs/Week- 12

The aim of the unit is to encourage, intensive design work on important contemporary urban and development challenges, to develop both practical skills and critical thinking.

The studio engages with a morphological and image structure survey / analysis of a selected part of a traditional urban area with detailed studies of urban landscape and streetscape.

It should help in the formulation of urban intervention and frame urban design proposals for the area.

The presentation of final proposals would be with three-dimensional models and sketches.

## SEMESTER II

		TEACHING SCHEME			
<b>Semester II</b>		lecture	Studio	total	
<b>MUDC201</b>	Planning Techniques and Procedure-II	2	-	2	2
<b>MUDC202</b>	Transportation and Traffic for Urban Design	2		2	2
<b>MUDE201</b>	Choice based Elective -1	2		2	2
<b>MUDC203</b>	Research Methodology	2	2	4	4
<b>MUDE202</b>	Choice based Elective -2	2	2	4	4
<b>MUDS201</b>	Design Studio II		12		
		10	16	26	26

## EXAMINATION SCHEME SEMESTER II

		Examination Scheme			
<b>EXAM CONDUCTED BY UNIVERSITY</b>		Theory (paper)	Sessional work		
<b>SEMESTER II</b>			Internal	External viva	Total
<b>MUDC201</b>	Planning Techniques and Procedure-II	50	50		100
<b>MUDC202</b>	Transportation and Traffic for Urban Design	50	50		100
<b>MUDE201</b>	Choice based Elective -1		100		100
<b>MUDC203</b>	Research Method		100		100
<b>MUDS201</b>	Choice based Elective -2		100		100
	Design Studio II		500		500
	<b>TOTAL</b>	100	900		<b>1000</b>



## **SEMESTER II**

The following are detail syllabi for various subjects of Semester II of Master's degree in Urban Design

### **PLANNING TECHNIQUES AND PROCEDURES-2**

Marks (100) Hrs/Week –2

The course should help the student comprehend the interaction between types and intensities of land use, transportation and broader dynamics of transformation in the physical environment.

Introduce students to survey research process: primary and secondary sources of data, techniques of data collection, analysing and presenting physical and socio-economic data, questionnaire design, and administration of field as methods of identifying urban and regional problems, setting of goals, objectives and priorities, performance standards, spatial standards and standards for utilities. The students should also learn about the classification of regions, regionalization and deliberation technique for various types of regions; cluster and factor analysis methods.

Aerial photography: basic principles and techniques of photogrammetry, photo interpretation and remote sensing. Collection of data by photo-interpretation and remote sensing techniques, analysis and interpretation of these data and compilation of interpreted data for the metric maps, specific applications in urban and regional planning, housing, urban design and landscape analysis.

Analysis for understanding the structure of urban areas and demographic analysis, land value and density patterns, locational attributes of activity areas and locational dimensions of population groups. Forces of concentration and disposal, social area analysis, etc.

Preparation of urban and regional development plan various approaches comprehensive planning; systems approach to planning case studies identifying use of techniques.

### **TRANSPORTATION AND TRAFFIC FOR URBAN DESIGN**

Marks (100) Hrs/ Week- 4

The unit presents both fundamental and advanced traffic and personal/public transport strategies for better urban design.

Besides basic engineering and design principles for roads and streets, it explores transport policy and planning choices at the local scale in relation to multi-modal optimization programs and projects.

Emphasis is on the full integration of local transport parameters into urban design, as well as on comprehensive strategies towards environmental innovation.

### **CHOICED BASED ELECTIVES-1**

Marks (100) Hrs/Week –2

The institution would, as per its own strength, design a set of electives on urban/urban design theory from which the student would choose as per their own interest.

### **RESEARCH METHODS**

Marks 100 Hrs 2 per week

The course would expose the students to various structures of knowledge, cultural theory which would equip them into framing methodologies to structure and explore their area of concern.

The course would have a dual purpose of not only assisting the students towards understanding the methods of research in exploring the urban field and articulating their concern but also to structure the synopsis of their thesis.

### **CHOICE BASED ELECTIVES-2**

Marks (100) Hrs/Week –4

The institution would as per its own strength design a set of electives on urban/urban design theory from which the student would choose as per their own interest.

### **URBAN DESIGN STUDIOS II**

Marks (450) Hrs/Week –12

The studio would help students identify broad urban design principles, based on any urban issue that the institution might choose to address. These principles would be generated through an intense process of site mapping, analysing and identify patterns in a chosen urban context.

The studio should simultaneously explore and innovate on techniques of representation for these complex urban conditions.

The principles abstracted through the study should be used to frame urban design programs and projects. The studio should finally assist the students with the technique of place making for the given project.

### SEMESTER III

	<b>SEMESTER III EXAM CONDUCTED BY COLLEGE</b>	Lecture	Studio	Total	Credits
<b>MUDC301</b>	Development Finance	2		2	2
<b>MUDC302</b>	Urban bye laws and planning Legislation	2		2	2
<b>MUDE301</b>	Choice Based Elective-1	2		2	2
<b>MUDE302</b>	Choice Based Elective-2	2		2	2
<b>MUDS301</b>	Urban Design III		12	12	12
<b>MUDC303</b>	Thesis I	2	2	4	4
		10	14	24	24

### SEMESTER III EXAMINATION

			Examination Scheme		
	<b>SEMESTER III EXAM CONDUCTED BY COLLEGE</b>	Theory (paper)	Sessional work		
	<b>Semester III</b>		Internal	External viva	Total
<b>MUDC301</b>	Development Finance	50	50		100
<b>MUDC302</b>	Urban bye laws and planning Legislation	50	50		100
<b>MUDE301</b>	Choice Based Elective-1		100		100
<b>MUDE302</b>	Choice Based Elective -2		100		100
<b>MUDS301</b>	Urban Design III		450		450
<b>MUDC303</b>	Thesis I		150		150
	<b>TOTAL</b>	100	900		1000

## **SEMESTER III**

### **DEVELOPMENT FINANCE**

Marks (100) Hrs/Week –2

The course would introduce the students to the economic, financial frameworks, and the attendant institutional frameworks of project and property development in both the public and private sectors.

It should inform the students of the present mode of financing projects and discuss their strengths and weakness through the relevant case studies.

It should also introduce the students to the fundamental concepts and principles of investing and financing of real estate projects. They would understand the macro-economic fundamental that assist in the creation of an apt environment for real estate investments environment while also appreciate the micro level details of a real estate project.

The students should be encouraged to create financial mechanisms for their own projects being parallel conceived in the Design Studio.

### **URBAN BYLAWS AND PLANNING LEGISLATION**

Marks 100 Hrs 2 per week

This course engages the student with the awareness of govt. policies, regulations, rules and laws related to land, property and urban development.

The course include the study of the Constitution of India and subsequently the study of Urban Land Ceiling Act, Rent Control Act, Land Acquisition Act, , Environment Protection Act, Co-operative Society Act, Apartment Ownership Act, Maharashtra Town and Regional Planning Act and the National building Code and any other important/relevant act.

It also includes the study of Development Control Rules and Regulation, including special regulations for TDR, protection to heritage and conservation, etc.

### **CHOICE BASED ELECTIVES -1**

Marks 100 Hrs 2 per week

The institution would as per its own strength design a set of electives from which the student would choose as per their own interest.

### **CHOICE BASED ELECTIVES-2**

Marks (100) Hrs 2 per week

The institution would as per its own strength design a set of electives from which the student would choose as per their own interest.

### **URBAN DESIGN III**

Marks (450) Hrs 12 per week

In this semester the studio should allow the students to engage with various actors and agencies, learn to communicate with them, and devise pragmatic and localized programmatic strategies on

complex urban issues. The aim would be to provide a practice orientation to the studio. It is in this studio that the students can learn to formulate urban design possibilities through a process of continuous interaction with these actors and agencies.

### **THESIS**

Marks (150) Hrs 2 per week

The Thesis is divided into two parts one that is initiated in semester III and the second demonstrated in semester IV. In the first part students are required to put forth theoretical arguments and raise critical issue, which would help them create a method to observe, map, analyse and frame possibilities of interventions or initiate transformation in a particular urban condition. The first part of the thesis would assist the students to simultaneously be able to create the structure of the argument of the thesis that would culminate in the form a written report.

**SEMESTER IV**

	SEM IV EXAM CONDUCTED BY UNIVERSITY	TEACHING SCHEME			
		lecture	Studio	total	
<b>MUDE401</b>	Choice Based Electives-1		4	4	4
<b>MUDE402</b>	Choice based Electives-2		4	4	4
<b>MUDS401</b>	Thesis		16	16	16
				24	24

**SCHEME OF EXAMINATION  
SEMESTER IV**

	SEM IV EXAM CONDUCTED UNIVERSITY	BY	Examination Scheme		
			Theory (paper)	Sessional work	
			Internal	External viva	Total
<b>MUDE401</b>	Choice Based Electives-1		50		50
<b>MUDE402</b>	Choice based Electives-2		100		100
<b>MUDS401</b>	Thesis		300	550	850
	<b>TOTAL</b>		450	550	1000

## **SEMESTER IV**

The following are detail syllabi for various subjects of Semester IV of M. Arch in Urban Design

### **ELECTIVES-1**

Marks (50) Hrs/ Week-2

The elective should assist the students in formulating and strengthening the research methods adopted by the students for their thesis work.

### **ELECTIVES-2**

Marks (100) Hrs/ Week –2

These elective which should be as per the students requirement and should help the students in articulating the theoretical framework of their thesis

### **THESIS**

Marks (850) Hrs/Week- 15

In this semester the students are required to demonstrate their urban design proposal based on principles and methods that have been framed in the earlier semester. The students should be assisted in evolving a representational system for communicating the proposal that would be done through periodic reviews with their guide/guides. This would be additional to the written report that is a part of the submission of the earlier semester.