

UNIVERSITY OF MUMBAI
No. UG//SS of 2016-2017

CIRCULAR:-

A reference is invited to the Regulation relating to the Master of Architecture (M.Arch.) programme vide this office Circular No. UG/403 of 2004, dated 13th September, 2004 and the Principals of the affiliated Colleges in Architecture are hereby informed that approved by the Academic Council at its meeting held on 14th July, 2016 vide item No. 4.3 and in accordance therewith, the revised syllabus as per the Choice Based Credit System for M. Arch.in Architectural & Urban Conservation (Sem. I to IV), which is available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2016-2017.

MUMBAI – 400 032
/ 6 November, 2016


(Dr.M.A.Khan)
REGISTRAR

To,
The Principals of affiliated Colleges in Architecture.

A.C/4.3/14/07/2016


No. UG//SS-A of 2016-17

MUMBAI-400 032

/ 6 November, 2016

Copy forwarded with compliments for information to:-

- 3) The Co-ordinator, Faculty of Technology,
- 4) The Chairperson, Ad-hoc Board of Studies in Architecture.
- 3) The Director, Board of College and University Development,
- 4) The Controller of Examinations,
- 5) The Co-Ordinator, University Computerization Centre.


(Dr.M.A.Khan)
REGISTRAR

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UNIVERSITY OF MUMBAI



**Scheme of Teaching and examination and course
content for the Master of Architecture**

Programme : M. Arch.

**Course: Architectural & Urban
Conservation**

**(As per Choice Based Credit System with effect from the
academic year 2016-17)**

Semesterwise scheme of examinations for Master of Architecture (M.Arch) Architectural & Urban Conservation

PREAMBLE:

Mumbai University offers a regular M. Arch postgraduate course in Architectural and Urban Conservation of two-year duration open to students with B.Arch. qualifications or equivalent recognized qualifications.

This course is designed to enhance the skills of Architects, Town Planners, and Urban Designers involved or seeking to involve in the Conservation of Cultural as well as Natural heritage in an Urban Context. The course commences around July- August every year.

The course is aimed at training the students for the practice of conservation in Urban space as well as develop research skills.

The objectives of this course are as follows:

1. To develop ability to identify and document Heritage assets
2. To develop sensitivity as well as objectivity for conserving heritage assets- Cultural and Natural
3. Attain a fundamental understanding of conservation principles for a small Architectural to a large-scale Urban Precinct; Urban Ecological/ Cultural Assets and testing them on site in a hands-on manner.
4. To define and analyze current urban conservation issues.
5. To develop vital and sustainable urban design & Conservation concepts, programs, policies and plans which are sensitive to Heritage Assets
6. To impart skills relevant to the practice of conservation in Urban context.
7. develop strategies for successful implementation of urban conservation initiatives
8. To judge the performance and sensitivity of urban proposals, projects, policies and processes towards Urban heritage.
9. To work successfully with communities and public and private planning institutions
10. To develop research (Question, enquiry, writing & referencing) and presentation skills.

The course is divided into 4 semesters:

Semester 1: This is the orientation and skill building semester. Topics and studio work introduces the students to the field of Urban and architectural conservation and planning techniques and includes developing the skills of engaging with the city, its reading & mapping.

Semester 2: The focus will be on architectural, precinct conservation &. The student will also be introduced to methods of conducting research.

Semester 3: The focus will be on Urban Conservation & Heritage Management.

Semester 4: Thesis, Research and Seminar

Semester1: (examination conducted by College)

	SemesterI	TEACHING SCHEME			
		lecture	Studio	total	credits
C1	Conservation Theory	3		3	3
C2	Planning Techniques & Procedure	3		3	3
C3	Archaeology	2		2	2
E1	Theory & Methods of Urban Design	3		3	3
E2	Conservation techniques & procedures(Traditional built form)	2		2	2
S1	Studio 1A: Articulating Statement of Heritage Significance; Inventory Technique and documentation		6	6	6
S2	Studio 1B: Urban Ecology & Natural Heritage		6	6	6
		13	12	25	25

	SEMESTER I	Examination Scheme			
		Theory (paper)	Sessional work		
			Internal	External viva	Total
C1	Conservation Theory	50	50		100
C2	Planning Techniques & Procedure	50	50		100
C3	Archaeology	50	50		100
E1	Conservation techniques & procedures (Traditional built form)		50		50
E2	Theory & Methods of Urban Design		50		50
S1	Studio 1A: Built Heritage		200		200
S2	Studio 1B: Urban Ecology & Natural Heritage		200		200
		150	650		800

C1. CONSERVATION THEORY

Marks (100) Hrs/Week –3

Course contents:

- What and Why to conserve
- Conservation Approaches
- History of Conservation Movement Internationally and in India,
- Philosophy & Discourses; Differing schools of thought;
- Scope of Conservation in Indian Context
- International Bodies, Charters & Trends: ICOMOS/ICCROM / INTACH; Charters and changing trends.

C2. PLANNING TECHNIQUES AND PROCEDURE

Marks (100) Hrs/Week –3

Course contents:

- 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.

- Provisions for conservation in planning processes.

C3. ARCHAEOLOGY:

Marks(100) Hrs/Week–3

Course contents:

- Introduction to Archaeology
- Research & Investigation methods to establish archaeological/ historical significance;
- Legislation (Acts);
- Site Visit
- Archaeological report

E1. CONSERVATION TECHNIQUES & PROCEDURES (TRADITIONAL BUILT FORM):

Marks (50) Hrs/Week –2

- Significance of Traditions & Traditional Built form & Constructions Materials, techniques & practices.
- Repairs and Maintenance using traditional methods. Issues & Neglect
- Ancient wisdom of traditional techniques – time testedness
- Traditional Materials, Crafts and craftsmen for built environment: Challenges of Conservation
- Case studies

E2. THEORY AND METHODS OF URBAN DESIGN

Marks (100) Hrs/Week –2

- Introduction to concepts, theories and methods of inquiry that are useful for urban design discourse and reflective practice, aiming at better programming and design.
- Exploration of 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, behavioral theories by Amos Rapoport, psycho-geographical theories by Guy Debord, and other noted theoreticians.
- Equipping 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 morphology of urban settlements.

CONSERVATION STUDIO 1: Built Heritage

Marks (200) Hrs/Week –6

Course contents:

- Morphological and image structure survey/analysis of a selected part of a traditional urban area with detailed studies of urban landscape and streetscape.
- Articulating Statement of Heritage Significance;
- Inventory Technique and documentation of a Built form

CONSERVATION STUDIO 2: Urban Ecology & Natural Heritage

Marks (200) Hrs/Week – 6

Course contents:

- Topographical & Hydrological survey/ Analysis of selected Urban Ecology/ Natural Heritage Site.
- Research & Investigation methods for establishing ecological significance;
- GIS/ Satellite data analysis to be encouraged.

SEMESTER II (examination conducted by university)

	Semester II	Teaching scheme			
		lecture	Studio	Total	credits
C1	Conservation Science (Materials & Techniques)	3		3	3
C2	Conservation Legislation	3		3	3
C3	Research Methods	3		3	3
E1	Structural Conservation	2		2	2
E2	Cultural Landscape & Intangible Heritage Conservation	2		2	2
S1	Studio 2A		8	8	8
S2	Studio 2B		4	4	4
		13	12	25	25

	SEMESTER II	Examination Scheme			
		Theory (paper)	Sessional work		
			Internal	External	Total
C1	Conservation Science (Systems, Materials & Techniques)	50	50		100
C2	Conservation Legislation	50	50		100
C3	Research Methods		100		100
E1	Structural Conservation		50		50
E2	Cultural Landscape & Intangible Heritage Conservation		50		50
S1	Studio 2A		400		400
S2	Studio 2B		200		200
					1000

CONSERVATION SCIENCE

Marks(50) Hrs./Week-3

- Relationship of design, construction process & detailing with the ageing or decaying process.
- Characteristics of systems & materials in Heritage Structures for the use of repairs, restoration and consolidation works of historical and architectural archaeological structures.
- Materials—Historic plaster/mortar, Stone, Decorative finishes, Cast iron/Steel, Stained glass, Wood
- Evaluation techniques and procedures of condition analysis of built heritage- Traditional & Monumental.

Conservation Legislation

Marks(100) Hrs/Weeks—3

- International Charters.
- National policy for conservation
- Review of existing bylaws and conservation laws in the city & country
- Case studies of bylaws across the world.
- Incentives in conservation planning
- Sensitized development guidelines
- Review of existing laws of ASI.
- Various Agencies and their role in conservation

- Issues related to conservation like less properties rent control act, D.C. rules, CRA. Etc
- Encounters with present practices internationally in urban and Architectural research
- Architectural conservation in practice
- Urban conservation in practice

Research Methods

Marks(100) Hrs/Weeks–3

- Research Question & Enquiry
- Research Writing- Structure, Citations & Referencing.

Structural Conservation

Marks(50) Hrs/Weeks–2

- Overview of Structural Conservation in Heritage structures
- Structural Behavior of Heritage Structures: Mechanics of Masonry, Timber Floors & Roof
- An Introduction to Diagnostic Tools: Field, Laboratory & Numerical Investigations.
- Geotechnical Distresses in Heritage Structures & Geotechnical Investigations
- Repair and Retrofit of Foundations of Heritage Structures
- Conventional and Non-Conventional Strategies for Repair and Strengthening
- Earthquake Behavior and Retrofit of Heritage Structures

Cultural Landscape & Intangible Heritage Conservation

Marks(50) Hrs/Weeks–2

Studio1: Structural & Condition Analysis, Adaptability to the altered urban context

Marks(400) Hrs./Week-12

- Documentation, Investigation and Condition Analysis of selected Built Heritage
- Analysis of urban functions
- Structural survey methods & Tools, listing of faults,
- Critical analysis of the structures and its adaptation for appropriate usages.
- Repair, Addition/ Alterations, Retrofits
- Summary of methodological procedure for urban and architectural realization.
- Case Studies of Urban & Architectural revitalization.

Studio2: Specifications & Bill of Quantities

Marks(200) Hrs./Week-12

- Detailed investigation is undertaken followed by inspection report
- Conservation Tenders– Specifications & Quantities for the selected Heritage Site

SEMESTERIII (examination conducted by College)

	SemesterIII	lecture	Studio	total	credits
C1	Conservation Approaches	2	1	3	3
C2	Conservation Economics	2	1	3	3
C3	Heritage Management	2	1	3	3
E1	Urban bye laws and planning Legislation	2		2	2
E2	Thermohygrics& Energy footprint of heritage structures	2		2	2
S1	Studio 3A		6	6	6
S2	Studio 3B		6	6	6
		10	15	25	25

	SemesterIII	ExaminationScheme			
		Theory (paper)	Sessionalwork		
			Internal	External	Total
C1	Approaches in Conservation & Urban Renewal		100		100
C2	Conservation Economics	50	50		100
C3	Heritage Management	50	50		100
E1	Urban bye laws and planning Legislation		50		50
E2	Thermohygrics& Energy footprint of heritage structures		50		50
S1	Studio 3A		300		300
S2	Studio 3B		300		300
		100	900		1000

Approaches in Conservation & Urban Renewal

Marks(100) Hrs./Week-3

- Preservation, Restoration, Rehabilitation, Reuse (Adaptive), Reconstruction– To observe various approaches in conservation and understand the undertaken processes
- Case studies and Site visits
- Application to the studio

Conservation Economics

Marks(100) Hrs/Weeks–2

- Value of Heritage Site- (Tangible & Intangible)-Cultural, Ecological, Historic, Archaeological Architectural, Significances
- Socioeconomic development and conservation.
- Real Estate Development and Economic tools for conservation.
- Fund Sourcing & Raising
- Capital and Operational Costs of Heritage Conservation.
- Feasibility Studies & Report

Heritage management

Marks(100) Hrs/Weeks–2

- Overview and introduction to basic concepts of Heritage Management
- Heritage Tourism and Pilgrimage Tourism & the Management.
- World Heritage Sites and its Management.
- Urban Heritage and its Management
- Architectural Heritage & the Management
- Case Studies

Urban Byelaws & Planning Legislation

Marks(50) Hrs./Week–2

Thermohygrics & Energy Footprint of Heritage Structures

Marks(50) Hrs./Week–2

Studio 1&2: Urban Conservation / Management Plan

Marks(300) Hrs./Week-6

- Studio projects are based on selection of a site or an area which have been earmarked for conservation or has the potential to be termed as historic zone and will be within the context of Urban/ Peri urban areas.

- Detail Investigations, surveys, Analysis at Regional and precinct/ heritage zone level.
- Evaluation and transformation of such area through different phases of development and
- Conservation Proposal for revitalizing/ enriching the site.
- Developing a Management plan for the site.

SEMESTER IV (examination conducted by university)

	Semester IV	lecture	Studio	total	Credits
E1	Choice Based Electives-1		4	4	4
E2	Choice Based Electives-2		6	6	6
S1	Thesis		15	15	15
			25	25	25

SCHEME OF EXAMINATION SEMESTER IV

	Semester IV	Examination Scheme			
		Theory (paper)	Sessional work		
			Internal	External viva	Total
E1	Choice Based Electives-1		50		50
E2	Choice Based Electives-2		100		100
S1	Thesis		300	550	850
					1000

Elective-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.

Elective- 2

Marks(100) Hrs/Week–2

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

Thesis(conservationstudies)

Marks(850) Hrs/Week–15

In this semester the students are required to demonstrate their architectural/ urban conservation proposal based on research questions 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.