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UNIVERSITY OF MUMBAI



Syllabus for the Master of Architecture

Programme : M.Arch.

Course :Urban Design

(As per Credit Based Semester and Grading System with
effect from the academic year 2012–2013)

MASTER'S DEGREE IN URBAN DESIGN

PREAMBLE

It is proposed to offer a regular M. Arch postgraduate course in Urban Design of two-year duration open to students with B.Arch. qualifications or equivalent recognized qualifications.

This course is designed to enhance the skills of town planners, architects, surveyors, historians, geographers and others interested or involved in the urban design projects. The course will commence from the academic year 2001.

Main themes of this course are as follows:

Urban regeneration and community development

Quality in the built environment

Landscape planning and conservation

Heritage and conservation

Objectives of Urban Design Course are as follows:

- 1] to attain a fundamental understanding of large-scale design in a hand-on manner
- 2] to define and analyze current urban design issues.
- 3] to develop vital and sustainable urban design concepts, programs, policies and plans
- 4] to develop successful strategies for the implementation of urban design initiatives
- 5] to judge the performance of urban design projects, policies and processes
- 6] to work successfully with communities and public and private planning institutions
- 7] to develop research skills and enhance knowledge in the field in innovative ways

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

| | EXAM CONDUCTED BY COLLEGE | TEACHING SCHEME | | | |
|--|---|-----------------|--------|-------|---------|
| | | lecture | Studio | total | Credits |
| | Semester I | | | | |
| | Urban Design History , Theory, and Criticism | 2 | -- | 2 | 2 |
| | Methods of Urban Design | 2 | | 2 | 2 |
| | Planning Procedure | 3 | | 3 | 3 |
| | Housing and Urban Sociology | 3 | | 3 | 3 |
| | Computer Programming and Information systems | 2 | | 2 | 2 |
| | Landscape Design and Urban Ecology | 2 | 2 | 4 | 4 |
| | Design Studio I | | 12 | 12 | 12 |
| | | 14 | 14 | 28 | 28 |
| | | | | | |

SCHEME OF EXAMINATION SEMESTER I

| | | Examination Scheme | | | |
|--|--|--------------------|----------------|---------------|-------|
| | | Theory (paper) | Sessional work | | Total |
| | SEMESTER I | | Internal | External viva | |
| | Urban Design History , Theor, and Criticism | 50 | 50 | | 100 |
| | Methods of Urban Design | 50 | 50 | | 100 |

| | | | | | |
|--|--|-----|---------|--|------|
| | Planning Procedure | 50 | 50 | | 100 |
| | Housing and Urban Sociology | 50 | 50 | | 100 |
| | Computer Programming and Information systems | | 100 | | 100 |
| | Landscape Design and Urban Ecology | | 50 | | 50 |
| | Design Studio I | | 300+150 | | 450 |
| | TOTAL | 200 | 800 | | 1000 |

SEMESTER I

URBAN DESIGN HISTORY, THEORY AND CRITICISM

Marks (100) Hrs/Week –2

The unit explores the evolution of ideas and principles of Urban Design by centering 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.

A review of the history and heritage of human settlements in India from ancient times to date. A critical examination of current trends in contemporary architecture and planning in India.

METHODS OF URBAN DESIGN

Marks (100) Hrs/Week –2

The unit conveys concepts and methods of inquiry that are useful for urban design discourse and reflective practice, aiming at better environmental programming and design. It will explore ways of telling, sensing, noting, enquiring, conceiving, briefing and guiding in UrbanDesign.

Planning Practice in India- An overview

Survey Research Process: primary and secondary sources of data, techniques of data collection, analyzing and presenting physical and socio-economic data, questionnaire design, administration of field survey as:-

Methods of identifying urban and regional problems, setting of goals, objectives and priorities. Performance standards, spatial standards and standards for utilities. Classification of regions, regionalization and deliberation technique for various types of regions. Cluster and factor analysis methods.

Analysis for understanding structure of urban areas, land value and density patterns, locational attributes of activity areas and locational dimensions of population groups. Forces of concentration and disposal. Social Area Analysis. Time series analysis.

PLANNING PROCEDURES

Marks (100) Hrs/Week –3

Students will gain.

- a] knowledge of institutional and procedural context, which is essential for planning practice.
- b] skills in the formulation of planning controls and assessment of development proposals.
- c] an understanding of techniques, which are essential for effective community consultation and
- d] competence in the development and communication of planning arguments

The assignments require a demonstration of the student's ability to interpret documents, use case materials to develop reasoned arguments for planned intervention and prepare concise and coherent planning documents.

HOUSING AND URBAN SOCIOLOGY

Marks (100) Hrs/Week –3

Socio-economic base for planning and population studies

Social aspects of urbanization, housing and community development in India. The implications and limitations of neighborhood planning as a sociological concept in the Indian context. Crime, delinquency and contemporary housing concepts. Crime, delinquency and obsolescence in urban areas as studies in urban anthropology.

Housing design and standards in the context of comprehensive socio-economic and physical planning.

Influence of socio-economic, climate, physiological, technological and traditional factors in the design of developing units, clusters and housing layouts.

Design consideration in economic housing for developing countries-site and services and incremental housing programs.

A comparative study of housing design and performance standards in India and Western countries with specific reference to dwelling units' density standards, community facilities, service and open spaces.

Selected case studies for a critical assessment of current housing development in the city.

COMPUTER PROGRAMMING AND INFORMATION SYSTEMS

Marks (100) Hrs/Week – 2

Introduction to computers, concept of data management, flow-chart, introduction of programming languages. Application of computer in planning.

Application software's related to planning.

Following software is required for conducting this course.

[i] SPSS / PCT

[ii] Project management software

[iii] CPM/ PERT & shortest path package

[iv] Software related to landscape architecture

[v] Any other software recommended by HODs of Departments of Studies

LANDSCAPE DESIGN AND URBAN ECOLOGY

Marks (100) Hrs/Week – 4

This unit engages Indian indigenous, recent and international landscape dimensions in tangibles ways. The participants will come to better understand the nexus between urban design, architecture and landscape design in ways that respond to principles of ecologically sustainable development.

Environmental and ecological factor in site planning. Demonstration through texts and case studies. Physical development of land forms.

Concepts and theories in landscape architecture/city planning urban design in the historical perspective, origin of forms, organization of space, relationship of activity with buildings, open space/ built form.

Spatial organization of selected cities, emphasizing landscape assessment.

Urban landscape in relation to topography.

Selected case studies of urban landscape and streetscape in relation to the city fabric

Contemporary landscape and the emergence of the natural system.

Concept for opens space and park system in urban area.

URBAN DESIGN STUDIOS

Marks (450) Hrs/Week- 12

The Central subject of the units, intensive studies design work on important contemporary urban programming and development challenges, to develop both practical skills and critical thinking.

Morphological and image structure survey / analysis of a selected part of a traditional urban area with detailed studies of urban landscape and streetscape.

Formulation of outline land use and design structure proposals for the area. Evolution of a viable design program.

Presentation of final proposals with three-dimensional models and sketches.

SEMESTER II

| | | TEACHING SCHEME | | | |
|--|---|-----------------|--------|-------|----|
| | | lecture | Studio | total | |
| | Semester II | | | | |
| | Physical Planning | 2 | - | 2 | 2 |
| | Transportation and Traffic for Urban Design | 2 | 2 | 4 | 4 |
| | Urban environmental science and services | 2 | | 2 | 2 |
| | Development finances | 2 | | 2 | 2 |
| | Urban and Regional Design in Mumbai | 2 | 2 | 4 | 4 |
| | Design Studio II | | 12 | | |
| | | 10 | 16 | 26 | 26 |

Examination Scheme SEMESTER II

| | | Examination Scheme | | | |
|-------------------------------------|---|--------------------|----------------|---------------|-------|
| EXAM CONDUCTED BY UNIVERSITY | | Theory (paper) | Sessional work | | |
| SEMESTER II | | | Internal | External viva | Total |
| | Physical Planning | 50 | 50 | | 100 |
| | Transportation and Traffic for Urban Design | 50 | 50 | | 100 |
| | Urban environmental science and services | 50 | 50 | | 100 |
| | Development finances | 50 | 50 | | 100 |
| | Urban and Regional Design in Mumbai | 50 | 50 | | 100 |
| | Design Studio II | | 300+150 | | 450 |
| | | | | | 1000 |

SEMESTER II

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

Urban Design

PHYSICAL PLANNING

Marks (100) Hrs/Week –2

The interaction between types and intensities of land use, transportation and broader dynamics of change in the physical environment.

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

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.

Social applications of open space, development and pattern of space utilization in urban areas. Behavioral factors in urban landscape design.

Design vocabulary and its application to improve the physical settings for the development process.

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-model 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.

URBAN ENVIRONMENTAL SCIENCE AND SERVICES

Marks (100) Hrs/Week –2

The technical systems and dynamics those are critical to urban design, such as city microclimates, air flows, sound, lighting and utilities

DEVELOPMENT FINANCE

Marks (100) Hrs/Week –2

The economics of property development in both the public and private sectors

URBAN AND REGIONAL DESIGN IN MUMBAI

Marks (100) Hrs/Week –4

This in-depth, hands-on unit combines lectures, workshops and fieldwork, exploring the history, current practice and visions and the future outlooks of urban and regional design in Mumbai.

Among other themes to be explored policies, programs and activities of various public institutions as they drive urban forms changes on a large and very large scale, current urban and regional design issues as seen by key professional groups and private practitioners, as well as give a detailed exposure to the ideas, methods and projects pursued by non governmental organizations active in the region.

The professor of Urban Design will teach this subject with the assistance of a number of outstanding government executives and area experts.

URBAN DESIGN STUDIOS II

Marks (450) Hrs/Week –12

The Central subject of the units, intensive studies design work on important contemporary urban programming and development challenges, to develop both practical skills and critical thinking.

Morphological and image structure survey/ analysis of a selected part of a traditional urban area with detailed studies of urban landscape and streetscape.

Formulation of outline land use and design structure proposals for the area. Evolution

SEMESTER III

| | SEMESTER III EXAM CONDUCTED BY COLLEGE | TEACHING SCHEME | | | |
|--|---|-----------------|--------|-------|---------|
| | | lecture | Studio | total | Credits |
| | Research Methods | 2 | | 2 | 2 |
| | Urban bye laws and planning Legislation | 2 | | 2 | 2 |
| | Real Estate and land management in Urban Design | 2 | | 2 | 2 |
| | Seminar | 2 | 2 | 4 | 4 |
| | Urban Design III | | 12 | 12 | 12 |
| | Thesis I | 2 | | 2 | 2 |
| | Total | 10 | 14 | 24 | 24 |

SEMESTER III EXAMINATION

CONDUCTED BY COLLEGE

| | SEMESTER III EXAM CONDUCTED BY COLLEGE | Examination Scheme | | | |
|--|---|--------------------|----------------|---------------|-------|
| | | Theory (paper) | Sessional work | | |
| | Semester III | | Internal | External viva | Total |
| | Research Methods | 50 | 50 | | 100 |
| | Urban bye laws and planning Legislation | 50 | 50 | | 100 |
| | Real Estate and land management in Urban Design | 50 | 50 | | 100 |
| | Seminar | | 100 | | 100 |
| | Urban Design III | | 300+150 | | 450 |
| | Thesis I | | 150 | | 150 |
| | | | | | 1000 |

SEMESTER III

RESEARCH METHODS

Marks 100 Hrs 2 per week

The course would have a dual purpose assisting the students towards articulating their area of concern, structure theory synopsis which has been chosen as their thesis. Towards exposing the students to various structures of knowledge, cultural theory which would equip them into methodologies to structure their area of concern.

URBAN BYLAWS AND PLANNING LEGISLATION

Marks 100 Hrs 2 per week

This is to deal with the awareness of Govt. policies, regulations, rules and laws related to land property, urban development in general and their impact on ordinal development.

Housing, slums and town planning in general and their impact on urban Form and Net works and actual development.

The legislation to include Income Tax Act, transfer of Property Act and Revenue code, Urban land ceiling and regulation Act.

Acquisition Act and Environment Protection Act and Constitution of India.

The legislation to include Rent Control Act. CO-operative Society Act.

Apartment Ownership Act. National building code. Town Planning act, Development Control Rules including TDR, Heritage, conservation and environment Protection Act.

Topics related to Urban Design will have to be identified and explained in from of lectures and discussed for understanding then impact on urban development activities. Urban infrastructure Institutions in India their role and

participation in development process and support from International Finance Institutions Methods and Project Financing appraisal, monitoring and recovery systems, role of property taxes, stamp duty and development and in project implementation.

REAL ESTATE AND LAND MANAGEMENT IN URBAN DESIGN

Marks 100 Hrs 2 per week

The emphasis on the integration of planning, marketing, site analysis, Threshold analysis for development of new schemes, modes of real estate Development, Built-operate-transfer (BOT), housing co-operatives, financing - 13 - mechanisms and real estate credit systems, fluctuations in property values and Study of land use changes in real-estate trends, investment priorities in real estate.

SEMINAR

Marks (100) Hrs 2 per week

The seminar will evolve interaction with practicing urbanist with discussions on cases of urban intervention about the success and failures of the project. Case studies of major urban design projects both national international should be taken by the students. Preferences can be given to regional cases within the international context and their national one can be much more elaborated. The course shall come wide ranging issues in urban design including all the four streams that is housing, landscaping, transportation and conservative socio-economic aspects of urban phenomena will be thoroughly within this course thus covering the requirement of urban sociology and urban economics. Especially in the seminar specific emphasis will be given to topics of urban sociology and urban economics.

URBAN DESIGN III

Marks (450) Hrs 12 per week

Based on similar methodological approach as outlined in urban design I and II, this studio will basically address the area of urban conservation of both architecture and the urban areas.

Thus with the background knowledge and expertise gained through the previous studio works on urban housing, urban landscaping and urban transportation comprehensive approach shall develop specifically with respect to urban area conservation.

THESIS

Marks (150) Hrs 2 per week

With the necessary background on theory and practical aspects of four major streams of urban design i.e. housing, landscaping, conservation and transportation, students shall undertake Independent research project on a micro level topic in any of the major or related minor disciplines. Research work shall provide opportunity in dealing with chosen topic, through original contribution and input after sorting out available data and material essentially it shall have theoretical study as well as application of the issue to a driven situation.

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, which would help them to work on the basis in

SEMESTER IV

| | SEM IV EXAM CONDUCTED BY UNIVERSITY | TEACHING SCHEME | | | |
|--|-------------------------------------|-----------------|--------|-------|----|
| | | lecture | Studio | total | |
| | Semester IV | | | | |
| | Urban Design Research | | 4 | 4 | 4 |
| | Urban Design Seminar | | 4 | 4 | 4 |
| | Thesis | | 16 | 16 | 16 |
| | | | | 24 | 24 |

SCHEME OF EXAMINATION SEMESTER IV

| | SEM IV EXAM CONDUCTED BY UNIVERSITY | Examination Scheme | | | |
|--|-------------------------------------|--------------------|----------------|---------------|-------|
| | | Theory (paper) | Sessional work | | |
| | | | Internal | External viva | Total |
| | Urban Design Research | | 50 | | 50 |
| | Urban Design Seminar | | 100 | | 100 |
| | Thesis | | 300 | 550 | 850 |
| | | | | | 1000 |
| | | | | | |

SEMESTER IV

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

Urban Design

URBAN DESIGN RESEARCH

Marks (50) Hrs/ Week-2

Independent research studies

URBAN DESIGN SEMINAR

Marks (100) Hrs/ Week –2

Based on the existing urban design project detailed investigations are conducted by the students on selected subjects of studies. The findings of their studies are Presented through a class seminar along with a documented report

THESIS

Marks (850) Hrs/Week- 15

Townscape plans and future prospect

Renewal and rehabilitation programme in the core-inner city areas

Town's retrieval and regulatory control

Zoning studies and procedures for implementation