

UNIVERSITY OF MUMBAI
No.UG/529 of 2008

CIRCULAR :-

The Principals of the affiliated colleges in Architecture are hereby informed that the recommendation made by the Ad-hoc Board of Studies in Architecture at its meeting held on 21st February, 2008 has been accepted by the Academic Council at its meeting held on 15th April, 2008 vide item No.4.17 and subsequently approved by the Management Council at its meeting held on 24th April, 2008 vide item No.16 and that, in accordance therewith, the Post-graduate degree course in Master of Architecture in Urban and Regional Planning is introduced by the University from the academic year 2008-2009.

Further that in exercise of powers conferred upon the Management Council under Section 54(1) and Section 55(1) of the Maharashtra Universities Act, 1994, it has made the Ordinances 5753, 5754, 5755, 5756 and 5757 and Regulations 5862, 5863, 5864, 5865, 5866, 5867, 5868, 5869, 5870, 5871 and 5872, relating to the scheme of examination including syllabus for the Master of Architecture in Urban and Regional Planning is as per Appendix and that the same has been brought into force with effect from the academic year 2008-2009.

MUMBAI-400 032
10th December, 2008

PRIN. K. VENKATARAMANI
REGISTRAR

To,

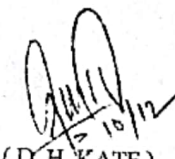
The Principals of the affiliated colleges in Architecture.

A.C/4.17/15.04.2008
M.C/16/24.04.2008

No.UG/529-A of 2008, MUMBAI-400 032 10th December, 2008.

Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Technology,
- 2) The Chairman, Ad-hoc Board of Studies in Architecture,
- 3) The Controller of Examinations,
- 4) The Co-ordinator, University Computerization Center.


(D.H. KATE)
DEPUTY REGISTRAR
(U.G./P.G. Section)



UNIVERSITY OF MUMBAI



Ordinances & Regulations,
Scheme and Syllabus
For the
Master of Architecture
In
Urban and
Regional Planning

(Introduced from the academic year 2008-2009)

MASTER OF ARCHITECTURE IN URBAN AND REGIONAL PLANNING

Preamble

Architecture and planning education in India is faced with the demands of rapidly developing country involving changes in urbanisation and industrialisation. Human, social and environmental issues that have arisen as a result of these processes demand urgent attention of the government, profession and academia. In order to plan, design and manage human settlements and to improve the quality of living environment, there is a need for educating and training of students in arts and sciences of urban & regional planning and urban design.

It is now proposed to offer a regular three semester post-graduate course of studies leading to Master of Architecture in Urban and Regional Planning. A Centre for Urban and Regional Planning Studies would also be set up with a view to conduct research and field study in conservation and development. It shall also conduct intensive and short-term courses for sponsored and non-sponsored candidates. The course shall commence from the academic year 2008-2009.

The Course Structure

The art and science of Urban and Regional Planning is a multi-disciplinary field of studies involving the fields of architecture, engineering, planning, design, geography, statistics, sociology, economics, legislation, landscape, transportation and infrastructure development.

The course as devised covers various theoretical and practical aspects of urban planning and design at local, district, urban and regional levels. The course envisages theoretical studies through lectures and seminars, as well as practical studies through planning and design studios, field-work and practical training. The course includes training in planning and design techniques, surveying, analysis, policy, programming and planning, management and organisation for urban planning and design.

Future Perspective

At present there is no facility for post-graduate studies in urban and regional planning in Mumbai, although the metropolis suffers from numerous problems and lack of adequate number of practicing planners and designers. As a result most of the students desirous of studying these subject go to other metropolitan centres like Delhi and Ahmedabad or go abroad to pursue their post-graduate and doctoral studies in these areas. It is envisaged to develop academic and research collaborations with universities and institutions of repute in India and abroad in the fields of urban and regional planning and urban design.

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The course structure provides for core subjects as well as electives. The core subjects are compulsory for the course and the candidates can opt for required electives in each semester to develop specialisation in a particular field such as environmental planning and design, transportation planning, urban design etc.

UNIVERSITY OF MUMBAI

Ordinances, Regulations and Syllabus for the Master of Architecture in Urban and Regional Planning.

~~O.5753~~ A candidate for being eligible for admission to the First Semester of Masters in Architecture must be a graduate who has completed the Degree in Architecture of a recognised University or equivalent academic qualifications as approved by the Council of Architecture and Ad Hoc Board of Studies in architecture of the University.

~~O.5754~~ The course leading to the M. Arch in Urban and Regional Planning shall be of four semesters duration and a full time course.

~~R.5862~~ There will be an examination at the end of each semester. The candidate obtaining M. Arch. in Urban and Regional Planning will be required to pass all the examinations held by the Competent Authority at the end of each semester mentioned hereafter.
and

~~R.5863~~ The M. Arch. in Urban and Regional Planning will not be conferred upon a candidate unless the candidate has passed in all the papers and completed the Sessional Work prescribed for each Semester Examination in accordance with the provision relating to each Semester Examination.

~~R.5864~~ The total intake per batch will be a maximum of 30 and a minimum of 5 students or as approved by the Council of Architecture.

~~R.5865~~ Performance of students shall be evaluated by examination, sessional work and final thesis.

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SEMESTER I

5755

O.--- A candidate for being eligible for admission to First Semester in M. Arch in Urban and Regional Planning must have passed the Degree in Architecture of a recognised University or equivalent qualification as approved by Council of Architecture and the Ad Hoc Board of Studies in Architecture of the University.

~~5756~~ 5865-A.

R.--- Given overleaf are the syllabi in various subjects of the First Semester Examination in Urban and Regional Planning.

5866

R.--- The candidate will be examined in the subjects as per the examination scheme for the First Semester Examination in Urban and Regional Planning which will be conducted by the College affiliated to the University.

The Candidates will be examined in the following subjects for Semester I Examination of Master of Architecture Degree in Urban and Regional Planning.

MASTER OF ARCHITECTURE IN URBAN AND REGIONAL PLANNING

SEMESTER I

Scheme of Instruction per week Scheme of Examination

Sr.No.	Subject	Lec.	Lab./ Studio	Internal Assessment	Written Exam	Max Marks
1.	Urban Planning & Design Theory I	3	-	50	50	100
2.	Planning Techniques	3	-	50	50	100
3.	Social Development I	3	-	50	50	100
4.	Economic Development I	3	-	50	50	100
5.	Environmental Planning & Design I	3	-	50	50	100
6.	Urban Transportation And Urban Infrastructure I	3	-	50	50	100
7.	Computer Applications	3	-	50	50	100
8.	Urban Planning Studio I	-	12	400 (200 int +200 extrn.)		400
						1000

The following are the detail syllabi for various subjects of Semester I of Master's Degree in Architecture in Urban and Regional Planning.

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SEMESTER I

1. THEORY OF URBAN PLANNING AND DESIGN I

1.

Marks 100

3 Hrs / Week

A review of the historical evolution of human settlements in India and abroad from ancient times to the contemporary times.

Process of Urban and Regional Planning and Urban Design. A systems view of planning process.

Issues and objectives in Urban and Regional Planning and Urban Design as related to land use planning, preparation of development plans in India and other countries.

Structuring and re-structuring of human settlements in the context of historical growth, socio-economic, functional and environmental considerations.

Focus on multi-level studies for design intervention and feed-back for the growth and development of human settlements.

A review of the new town development, satellite towns, town-within-towns, inner cities redevelopment and development of periphery

Selected case studies of new towns, city centres, district centres, housing areas, Area development projects, urban and regional plans and urban design projects.

Conservation and regeneration of historic towns and urban precincts / areas.

Critical examination of current trends in contemporary urban planning in India and abroad.

2. PLANNING TECHNIQUES

Marks 100

3 Hrs./ Week

Survey research Process:

Primary and Secondary sources of data, techniques of data collection, analysing and presenting physical, socio-economic data, questionnaire design and administration of field surveys.

Aerial photography, basic principles and techniques of photogrammetry, photo-interpretation and remote sensing.

AL



3. SOCIAL DEVELOPMENT I

Marks 100

2 Hrs / Week

Structure of society: individuals, groups and communities.

Social behaviour norms, traditions. Process of social change.

Persistence, continuity and change in the nature of society:

Social stratification: class and castes,

Social institutions: community and family

Process of urbanisation and industrialisation and its impact on society.

Migration, push and pull factors in rural, urban and regional context

Tradition and modernity: Aspects of changing society.

Concepts of change: Indigenous change, westernisation, modernisation, industrialisation & urbanization, globalization etc.

Poverty, inequality and social development in rural, urban and national context.

Freedom, democracy and citizen participation. Role of political process in social change. Concern for human rights and human development

Indian experience with reference to national plans, community development programmes, Panchayati Raj, Green Revolution, 73rd and 74th amendments to Indian Constitution for local participation in planning and development.

Social change: Modernism and post-modernism; industrial and post-industrial society. knowledge society and civil society.

4. ECONOMIC DEVELOPMENT I

Marks 100

2 Hrs / Week

Introduction to fundamentals of economics, factors of production, land, labour, capital and enterprise.,

AL



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. Introduction to GIS and its application.

Analysis:

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 dispersal. Social, area analysis and other techniques and other new techniques of analysis and planning.

Quantitative Analytical techniques:

Mathematics:

Principles – Basic maths, Derivatives, Integration, Real numbers, Combinatorics.

Statistics:

Principles of statistics, All statistical Techniques, Probability, Standard Deviation, Monte-Carlo method, Simple statistics Mathematical models, Techniques and methods of population and employment projection, Value Analysis, Basic Variance Analysis, Advance Variance Analysis, Discounted Cash flow, Accounting Ratios, Correlation Theory, Variables & Graphics, Frequency Distributions, The measure of Central Tendency Mean, median, mode, Standard Deviation and measure of Dispersal, Movement, Skewness, Kurtosis, Statistical estimation and decision theory. Sampling Theory. Analysis of Time Series.

Binomial, Normal & Prism Distribution Index numbers. Threshold Analysis, Linear Programming, PERT Critical Path Analysis, Sieve map techniques, Time Series Analysis & Forecasting methods, Models of optimisation and Cybernetics.

Application of planning techniques in preparation of urban and regional development plans. Specific application in traffic, transportation, infrastructure planning, housing, landscape, environmental planning and design. Case studies using planning techniques.

Various approaches for Planning : Comprehensive Planning, structure planning, system approach to planning, strategy planning and spatial planning case studies.

The art of Creative Thinking, Report Writing, How to write planning and technical reports in good English and communicate effectively.

AL



Markets, supply and demand, equilibrium, elasticities, monopoly and allocation of resources.

Production possibilities, opportunity cost and efficiency. Specialisation, division of labour and gains from trade. Money, prices and quantities, marginalism.

Economic causes of urbanization, International experience

Recent trends of urbanization in India

- Census definition of urban Area
- State wide variations
- City size distribution

Theories of city size distribution

- Prime cities.

Theories of city growth – Economic base theory

Spatial structure of city

- Density, land value gradients.
- Impact of Town planning Regulations
- Land use / density / FSI zones

Employment in cities

- Duality of labour market, formal and informal sectors
- Implications for land use planning.

Impact of globalisation on cities.

- Changing economic / employment structure.

Real estate and property market: Heterogeneity and imperfections, principles and practices of property management.

5. ENVIRONMENTAL PLANNING AND DESIGN I

Marks 100

2 Hrs / Week

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

KL

Concepts and theories in landscape architecture, environmental planning and design in the historical perspective, origins of forms, organisation of spaces, relationships of activities with built / open spaces in landscape design.

Environmental issues covering land, water, air, vegetation and habitation.

Environmental pollution & its control.

Concept of sustainability & sustainable development.

Conservation, development and redevelopment in brown fields / areas, coastal wet lands, urban cores, periphery, port and docklands and industrial sites.

Spatial organisation of selected cities, emphasizing landscape assessment.

Urban landscape in relation to topography, climate, geology & water resources.

Concepts of open space and park system in urban areas. Social implications of open space, development and patterns of space utilisation in urban areas. Behavioural factors in urban landscape design.

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

Contemporary trends in environmental planning and landscape design. Landscape as urban infrastructure and landscape as integral part of urbanism

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

6. URBAN TRANSPORTATION AND URBAN INFRASTRUCTURE

Marks 100

2 Hrs / Week

Evaluation of urban structure: Transport systems, infrastructure and management, transport systems and their types, design and operating characteristics. Mobility issues in transportation planning.

Urban road hierarchy: Planning, engineering, management criteria for road junction improvements and arterial improvement techniques.

Transport surveys and studies: Study area definitions, survey and their types, sampling methods, survey techniques, programming, processing of travel data, analysis and interpretation of traffic studies.

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Analytical techniques: Techniques for urban structure analysis, urban travel characteristics, urban transport planning process, land use transport inter-relationship and models, scenario building and their analysis.

Mass transit systems: Problems and prospects, tramways, trolley buses, Light rail transport, rapid transport system, operation characteristics, planning transit systems.

Management of transport systems: Existing organisational and legal framework, traffic and environmental management techniques. Review of existing traffic management schemes in Indian cities.

Regional transport systems: Importance of accessibility in regional transport planning. Role of Road, rail, air and water transport systems. Regional transport systems planning, road network planning for micro region.

Traffic planning & engineering, revision of parking and parking policies. Review of existing traffic policy & planning.

Transport and Environment: Traffic noise, factors affecting noise, statement, measures, standards, air pollution standards, traffic safety, accident reporting and recording systems, factors affecting road safety, transport planning for target groups, children, adults, handicapped and women. Norms and guidelines for highway landscape, street lighting types, standards and design considerations.

Economic evaluation: Pricing and funding of transport service and systems, economic appraisal of highway and transport projects. Techniques for estimating direct and indirect road user costs and benefits and value of time.

7. COMPUTER APPLICATIONS IN PLANNING

Marks 100 3 Hrs./ Week

Introduction to computer aided design and planning.

Introduction to computer programming. Use of office, Excell, Access for Planning.

Use of Geographical Information Systems (GIS) in urban and regional planning

Integrated use of Remote Sensing techniques and GIS in planning.

Advance computing tools and techniques for urban and regional planning.

The course shall be conducted as a workshop in the computer centre.

AL

URBAN & RURAL PLANNING: STUDIO I

8.

Marks 400

12 Hrs./ Week

Micro level studies in urban and rural areas with the intention of understanding the prevailing situation in terms of human, social, environmental physical and technical aspects of development.

Undertaking surveys to comprehend various aspects of the given situation and setting. Applying planning techniques to identify problems and issues.

Identification of human, social and other resources, which could be mobilised and utilised for development.

Preparation of comprehensive development plans for the given context.

A report outlining the context, data, analysis, concepts, policies and programmes supported by development plans and design proposals.

Standard of Passing

Semester I

Examination of Master of Architecture in Urban and Regional Planning

5867
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To pass the Examination, candidates must obtain 50% of the full marks in Theory and 50% of the full marks in Sessional Work. However, the candidates who has failed either in Theory or Sessional Work but has obtained the passing marks either in Theory or Sessional is, at his own option, to be excused from appearing for Theory or Sessional in which he has passed and the marks obtained in the Theory or Sessional in which he has passed shall be carried over to the Subsequent Examination.

Those successful candidates who have obtained 55% of the total marks obtainable in the examination taken at one sitting only will be placed in the Second Class.

Those successful candidates who have obtained 60% of the total marks obtainable in the examination taken at one sitting only will be placed in the First Class.

AL

SEMESTER II

Q. 5757 A candidate for being eligible for admission to second semester in urban planning and Design of this University shall produce testimonials of having satisfactorily kept attendance in the First Semester and completed the required Sessional Work prescribed for the First Semester, to the satisfaction of the Head of the College in which the candidate has been studying, and has passed the prescribed Authority. In case of failure in the First Semester Examination conducted by the candidate will be permitted to join the Second Semester Examination provided the candidate has obtained a minimum of 50% marks in the subject of Urban and Rural Planning: Studio I of Semester I Examination.

R. 5868 A candidate who has passed the First Semester Examination and has satisfactorily completed the course of Second Semester will be permitted to appear for the Second Semester Examination in Urban and Regional Planning.

R. 5869 Overleaf are the syllabi in various subjects of the Second Semester Examination in Urban and Regional Planning.

R. 5870 The candidates will be examined in the following subjects as per the Examination scheme for the Second Semester Examination in Urban and Regional Planning, which will be conducted by the College, affiliated to this University.

Candidates will be examined in the following subjects for semester II of Master's Degree in Architecture in Urban and Regional planning.

MASTER OF ARCHITECTURE IN URBAN AND REGIONAL PLANNING

SEMESTER II

Sr.No.	Subject	Lec.	Lab./ Studio	Internal Assessment	Written Exam	Max Marks
9.	Urban & Regional Planning Theory II	3	-	50	50	100
10.	Social Development II	3	-	50	50	100
11.	Economic Development II	3	-	50	50	100
12.	Housing	3	-	50	50	100
13.	Elective :Urban Transportation or	3	-	50	50	100
14.	Elective: Social Service Systems	3	-	50	50	100
15.	Urban Planning & Design: Studio II	-	12	500 (250+250)	-	500
						1000

The following are the detailed syllabi for various subjects of Semester II of Master's Degree of Architecture in Urban and Regional Planning.

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URBAN & REGIONAL PLANNING THEORY II

Marks 100

3 hrs./Week

History of urban planning in Europe, America and India.

Introduction to contemporary planning theories in urban and regional planning and development. Such as strategic planning, Ekistics and development of sustainable humane habitats.

Trends in the dynamics of growth of urban centres in India. Urbanisation, metropolitanisation, Urban primacy, causes and consequences.

Migration patterns, measures to manage and control the rate of growth of metropolitan centres.

Physical structure of large cities and metropolitan complexes in India. Land use, traffic and transportation, housing, utilities, services and community facilities, present deficiencies.

The economic maladies of the Indian metropolis, the industrial, commercial and tax bases, unemployment and urban poverty, growth of the informal sector, measures to increase employment and to strengthen the economic base.

The social contours of the metropolises, challenges in the family size and structure, culture, occupation, income and life-style, urban-rural dichotomy and social pathology of the large city.

The management of the metropolis, metropolitan government and finances, proliferation of local authorities, overlapping jurisdiction; metropolitan planning and development agency, its powers and functions, need for unified urban administration.

SOCIAL DEVELOPMENT II

Marks 100

3 Hrs./Week

Concepts of social change in different societies and culture.

Basic elements of social change, and techniques of deliberate change.

Major theories in the study of social change, analysis of planned social change.

Indian experience with reference to national plans, community development programmes, Panchayati Raj, Green Revolution.

Constitutional amendments for decentralization of decision making, community involvement and citizen participation.

Concepts of social transformation and the United Nations programmes for social development and transformation.

Globalisation and its impact on developing countries.

ECONOMIC DEVELOPMENT II

Marks 100

3 Hrs./ Week

Elements and structure of planning models, static-dynamic, linear / non-linear models,

Micro economic models of consumer behaviour and production,

Macro economic models, econometric models, planning and policy models.
Harrod-Domar model, Exogenous growth model, Surplus labour.

Measuring economic activity, consumption and investment, theory of aggregate demand, multiplier model, financial markets, monetary policies.

Planning in different economic systems: Planned economy, market economy and mixed economy.

Unemployment, inflation and economic policies for sustainable development.

Policies of Economic liberalisation and its fall out.

Growth, development and global economy, challenge of economic development, International financial systems, open economy macro-economics

Globalisation and its impact on national, regional and urban economies.

Protecting the Environment, environmental impact of economic development, Policies for sustainable economic development in rural, urban and regional context.

AL



HOUSING

Marks 100

3 Hrs./ Week

Understanding of housing as process and its relationship to the process of urbanisation, industrialisation and development.

Social aspects of urbanisation, housing and community development in India. Implications and limitations of neighbourhood planning as a sociological concept in Indian context. Comparative analysis of traditional and contemporary housing concepts. Crime, delinquency and obsolescence and its impact on housing situation in the cities.

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

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

Design consideration in economic housing for developing countries –site and services, incremental housing programmes.

A comparative study of housing design and performance standards in India and western countries with specific reference to dwelling units, density standards, community facility, services and open spaces.

Selected case studies for a critical assessment of current housing development in the metropolises, towns and cities.

Public Policy in housing at local, state and national levels.

TRANSPORTATION PLANNING

Marks 100

3 Hrs. / Week

Aims and objectives of advanced transportation planning systems. Approach to transport policies and their implications on planning approach, problems and issues confronting cities and regions in developing countries.

Design of survey, Performa for the study area, traffic zones, defining the network, data requirements, surveys-household interview surveys, roadside interview surveys, commercial vehicle survey, public transport survey, inventory survey, census data etc. Predicting future survey: area, population, forecasting of variables.

AK



Concept of travel demand, factors affecting travel demand, methods of travel demand forecasting aggregate and disaggregate models and their relevance to Indian situation.

Demand forecasting techniques.

Transport planning terminology, sequential and simultaneous models, land use of models.

Trip distribution-growth factors and synthetic models, calibration models for gravity models, field applications.

Modal split, types, data requirements and factors affecting choice.

Network planning concepts- deterministic and probabilistic computer aided techniques- graph theory, traffic assignment techniques, their types, advantages and disadvantages.

Need for long range plan, phasing techniques, economic feasibility of transport project at macro and urban levels.

Rural roads and special features of villages transportation needs, rural and network structures.

Terminals, services and their integration with other transport model.

Regional input and output model, multi-sector consistency and optimising models.

Or

SOCIAL SERVICE SYSTEMS

Mark 100

3 Hrs. / Week

Social policy and social service systems: nature, strategies, objectives,
Study of different types of social development and social welfare programmes

Planning of social services systems including health care, education, social welfare and community development.

Management of social services system: organisational structure, efficiency, accountability, transparency.

Delivery systems, monitoring and evaluation of social services systems.

Project in planning and design of social services shall be taken up.

URBAN PLANNING AND DESIGN: STUDIO II

Mark 400

12 Hrs. / Week

Urban planning studio II shall focus on an urban area. It shall deal with area level studies, including physical, socio-economic, environmental surveys and analysis.

Application of planning parameters and techniques for the given context,

Analysis of issues and problems, identification of resources: human, social, economic, technical and fiscal and preparation of comprehensive structure plans for development.

The studio shall involve surveys, analysis, preparation of comprehensive urban area development plans, report and its presentation at a jury.

Standard of Passing

Semester II

Examination of Master of Architecture in Urban and Regional Planning

5871
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To pass the Examination, candidates must obtain 50% of the full marks in Theory and 50% of the full marks in Sessional Work. However, the candidate who has failed either in Theory or Sessional Work but has obtained the passing marks either in Theory or Sessional is, at his own option, to be excused from appearing for Theory or Sessional in which he has passed and the marks obtained in the Theory or Sessional in which he has passed shall be carried over to the Subsequent Examination.

Those successful candidates who have obtained 55% of the total marks obtainable in the examination taken at one sitting only will be placed in the Second Class.

Those successful candidates who have obtained 60% of the total marks obtainable in the examination taken at one sitting only will be placed in the First Class.

MASTER OF ARCHITECTURE IN URBAN AND REGIONAL PLANNING

SEMESTER III

			Assessment	Exam	Marks
16. Regional Planning Theory	3	-	50	50	100
17. Planning Legislation	3	-	50	50	100
18. Sustainable Development	3	-	50	50	100
19. Elective: Urban Design Or	3	-	50	50	100
20. Urban Infrastructure	3	-	50	50	100
21. Regional Planning: Studio III	20		600 (300 int.+300 extn.)		600
					1000

The following are the detail syllabi for various subjects of semester III for Master's Degree of Architecture in Urban and Regional Planning.

REGIONAL PLANNING THEORY

Marks 100

3 Hrs. / Week

Introduction of concepts, theories and approaches to regional development planning.

Concepts, tools and techniques for integrated regional planning. Concept of region homogeneous, functional regions, delineation of regions, regional analysis, planning regions, regionalism and regional planning.

Regional data base, Inter and intra regional analysis, regional accounts, regional input-output tables,

Intra-regional analysis, location of industries, least cost approach, market area analysis, profit maximizing approach, general factors affecting industrial location.

Spatial structure of region, central place theory, information flows and spatial structure,

Growth pole theory, leading industries and propulsive firms, polarization effects and agglomeration economics, spread effects; transport factors in regional development, models in spatial interaction.

Grass roots approach to regional planning, planning for full employment, growth centre approach, district and area planning in India. Regional planning legislation in India.

Practice in regional planning in India and abroad. Goals and objectives of regional development, case for intervention, choice of regional strategy, regional policies and programmes

PLANNING LEGISLATION

Marks 100

3 Hrs. / Week

Concepts of law, sources of law (i.e. custom, legislation and precedent)
Meaning of terms of law, legislation, ordinance, bill, at, regulations and bye-laws.

Significance of law and its relationship to urban planning and design. Benefits of statutory backing for schemes – eminent domain and policing powers.

Indian Constitution: concept and contents. Provisions regarding property rights. Legislative competence of State and Central Governments to enact Urban and Regional Planning legislation.

National Environmental Policy Act.

Evolution of planning legislation. An overview of legal tools connected with urban planning and development. Town & Country Planning Act, Urban Planning and Development Authorities Act.

Objectives, contents, procedures for preparation and implementation of regional plans, structure plans, area and urban development plans, action plans under the Acts in advanced countries.

Land Acquisition Act 1894: Basic concept, procedure for compulsory acquisition of property and determination of compensation.

Urban Land Ceiling and Regulation Act 1976: Objectives, contents and planning implications.

Significance of land development control: Objectives and legal tools, critical evaluation of zoning, sub-division regulations, building regulations, and bye-laws.

Development Control, zoning law and laws related to periphery control.

Introduction to law relating to slum clearance, rehabilitation and redevelopment, housing, landscape and traffic. Legislation relating to urban conservation and restoration, historical monuments and archaeological sites.

Aims and objectives of professional institutes, sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charge.

Formulation of project proposal and outlines: Consultancy agreements and contracts, managerial aspects.

Role in inter-disciplinary groups. Appreciation of the decision-making process and the process in relation to varied consultancy assignments of planning.

SUSTAINABLE DEVELOPMENT

Marks 100

3 Hrs / Week

Components of natural and built environment. Resource identification and its implications for human settlements: human, cultural, physical and technical.

Environmental criteria for location of human settlements. Recycling and resource conservation. Priorities and strategies for development at various spatial levels.

Environmental planning: programme co-ordination and protection. Energy and human settlements. Innovation in technology application and energy use.

Design for living environment: integration of environmental assessment and planning options. Quality of life, concepts, indicators, measurements and applications. Environmental standards.

Environmental impact assessment: Methodologies, techniques, data requirements and costs. Applicability of EIA to rural, urban and regional development programmes

Environmental conservation and protection, legislative aspects, co-ordination and enforcement. An overview of environmental management.

ELECTIVE : URBAN DESIGN

Marks 100

3 Hrs. / Week

The concept of urban design. Process of urban design. Elements and components of urban design.

AL

Urban identity and Image of the city: structure, nodes, paths, districts, edges and landmarks.

Urban form, figure ground study, hierarchy of open spaces, activity centres,

Urban Centres, shopping centres, central business districts, district centres,

Urbanity: urban culture and life style and its reflection in urban form, structure and patterns.

Urban streets: character, activity, economy and variety

Integration of various components of urban fabric into a coherent whole.

A project of study of urban design shall be taken up in urban context.

ELECTIVE : URBAN INFRASTRUCTURE

Marks 100

3 Hrs. / Week

Concepts and theories of design and operation of urban services and network systems including water supply, sewage disposal, drainage, refuse collection, recycling and disposal, electricity network and telephone network, health care and education, police protection and fire fighting, general welfare.

Operational planning for emergency evacuation in urban areas, basic needs, formulation of objectives, norms and standards for space allocation and quality control.

Sustainable Infrastructure network and services systems: components, inter-relationship requirements and need for appropriate technology.

Effects of density, land-use and urban structure on design of network and services systems for sustainable infrastructure development.

Cost recovery, economics of urban service systems and networks.

A project / study of existing urban infrastructure shall be undertaken.

AC

REGIONAL PLANNING: STUDIO III

Mark 500

20 Hrs. / Week

Urban planning studio II shall focus on urban area. It shall deal with area level studies, including physical, socio-economic, environmental surveys and analysis.

Application of planning parameters and techniques for the given regional context.

Analysis of issues and problems, identification of resources: human, social, economic, technical and fiscal and preparation of comprehensive structure plans for development.

The studio shall involve surveys, analysis, preparation of comprehensive urban area development plans, report and its presentation at a jury.

Standard of Passing

Semester III

Examination of Master of Architecture in Urban and Regional Planning

5872
R--- To pass the Examination, candidates must obtain 50% of the full marks in Theory and 50% of the full marks in Sessional Work. However, the candidate who has failed either in Theory or Sessional Work but has obtained the passing marks either in Theory or Sessional is 'at his own option, to be excused from appearing for Theory or Sessional in which he has passed and the marks obtained in the Theory or Sessional in which he has passed shall be carried over to the Subsequent Examination.

Those successful candidates who have obtained 55% of the total marks obtainable in the examination taken at one sitting only will be placed in the Second Class.

Those successful candidates who have obtained 60% of the total marks obtainable in the examination taken at one sitting only will be placed in the First Class.

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MASTER OF ARCHITECTURE IN URBAN AND REGIONAL PLANNING

SEMESTER IV

Sr.No.	Subject	Scheme of Instruction per week			Scheme of Examination		
		Lec.	Lab.	Studio	Internal Assessment	Written Exam	Max Marks
22.	Professional Training	(during vacations : a minimum period of 2 months)					100
23.	Regional Planning Seminar	2	-		50	50	100
24.	Urban / Regional Planning Thesis	-	28		800 (400+400)	-	800

Note: The mark system may be changed to a credit system if and when the University of Mumbai adopts the same.

The following are the detailed syllabi for various subjects of Semester III of Master's Degree of Architecture in Urban Planning and Design.

PROFESSIONAL TRAINING

Marks 100 During vacations - 2 months.

Report on Professional Training (50)

The candidates shall be required to undertake professional training in the office of any urban planner or designer or government planning department or any planning authority in India or abroad for a minimum period of 2 months.

Viva-voce (50)

URBAN & REGIONAL PLANNING SEMINAR

Marks 100 2 Hrs./ Week

Regional imbalance in India and its consequences in national development planning.

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Regional resource mapping, mobilisation, allocation and utilisation for regional development.

Role of regional planning in a multi-level planning process.

Planning models in consistency and optimizing frame, input-output models, inter-regional models, Linear programming techniques, transportation problems. Theory of locational planning – comprehensive cost approaches, industrial complex analysis, land uses and policy instruments.

Case studies of regional development in India and abroad.

The findings of their studies shall be presented through seminar paper along with supporting information, maps and documents.

URBAN & REGIONAL PLANNING THESIS

Marks 800

28 Hrs./ Week

The objective of Urban / Regional Planning Thesis is to provide an opportunity to each candidate to undertake an in depth and original study / research in the field of his/her interest.

It provides an opportunity to collect relevant data, to undertake detailed analysis and to synthesize the knowledge and skills acquired through the learning of various theories and practices during previous two semesters.

The subject of thesis may be conceptual, historical, analytical, comparative, or in any other areas related to urban or regional planning / urban and regional development which is approved by the Head of the College in which the student is studying.

Each candidate will prepare the thesis under the guidance of a thesis guide as approved by the College.

Each candidate is required to defend the thesis at a viva-voce examination. The weightage of the internal guide shall be 300 marks whereas the weightage for the external guide shall be 500 marks.

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Standard of Passing

Semester IV

Examination of Master of Architecture in Urban and Regional Planning

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To pass the Examination, candidates must obtain 50% of the full marks in Theory and 50% of the full marks in Sessional Work. However, the candidates who has failed either in Theory or Sessional Work but has obtained the passing marks either in Theory or Sessional is, at his own option, to be excused from appearing for Theory or Sessional in which he has passed and the marks obtained in the Theory or Sessional in which he has passed shall be carried over to the Subsequent Examination.

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