

SYLLABUS OF MASTER OF ARCHITECTURE

First Semester

Category - Departmental / Specialization Basket

Paper - I

PG / ARCH / T/ 111A Cybernetics of Visual Perception

Concept of cybernetics; Importance of cybernetics of vision; Construction of Brain; Visual path; Concept of black box, Causes of perception; Contribution of external stimulus, memory, electro-chemical processes; Consciousness, Visual aesthetic experience.

PG / ARCH / T/ 111B Application of Research Techniques in Urban Design

Introduction of fundamentals of research and investigation; basic theories and methods. Different research methods and techniques. Application of research methods to Architecture; Urban design and planning including field study.

PG / ARCH / T/ 111C Rural Environment

Basis of Rural Environment. Components of Rural Environment. Organization and Process, Rural Infrastructure, Rural Economics, Rural development, policies and strategies, Legal Framework.

PG / ARCH / T/ 111D Application of Research Techniques in Housing

Design of experiment, Design of Sample survey, Writing questionnaires, for survey, Analysing of data inference for a practical research problem

Paper - II

PG / ARCH / T/ 112A Science of Human Settlement

Ekistics and the principles of Human Settlements - their evolution process, form and structure.

Changing pattern and form of human settlements- Socio-cultural , political, economic, physical and technological determinants.

River Valley civilizations - Nile, Indus, Tigris and Euphrates- Historic cities and city planning principles.

Greeks and Roman Civilization - their city planning principles. City Planning during Renaissance and pre-industrial periods. Impact of industrial revolution on city planning
Study of New Towns, New Delhi, Chandigarh, Islamabad, Brasilia and Canberra, etc.

PG / ARCH / T/ 112B Climatology and Housing

Study of climatic elements. Micro climate, Macro climate and their influence on design layout and development; prevalent wind direction and their influence on planning and design day light, solar and load factor, aspects of day lighting etc. Aims of good lighting and ventilation and their realization in design and layout. Consideration of sound and noise as factors affecting use of suitable building materials, Conventional as well as how over.

PG / ARCH / T/ 112C Solar Energy and Housing

Introduction to potentiality of using solar energy in buildings. Active and Passive heating/cooling of buildings. Solar collectors; their details and installations of the same in buildings. Electricity from solar energy and its use in buildings. Design development of buildings using solar energy directly or indirectly. Implications related to building by law for group solar housing.

Paper – III

PG / ARCH / T/ 113A Introduction to Urban Design

Interactive session on design theory and its application to urban design. Points of departures and convergences in planning, architecture and urban design to establish boundaries and etching out distinctions. Multiple ways of seeing urban design, from Mega-Architecture to co-ordination of all physical inputs. Reading the city Social structure, cognition, experience and urban form. Dimensions of urban design. Grain, texture scale, socio spatial schema etc. Urban design vocabulary. A brief history of development of urban design theory.

PG / ARCH / T/ 113B Architectural Criticism

The building development is an intrinsic work of art and beauty. The building development generates a cognisable frame of architecture in the mind of the people who sees it. The building development adds information to the advancement of technology. The building development sets up an example of economic balance. Effect upon the environmental set-up. The bldg development adds to socio-cultural and historical background of the environment of which it stands.

PG / ARCH / T/ 113C Introduction to Housing

Historical, psychological and sociological aspects of housing. Situation of housing, Issues of sustainability and Housing Development. Housing Policy and Strategic

Planning. Economics of Housing. Housing market indicators, Housing finance and management. Issues in housing Renewal and Community Regeneration. Research and Information for Housing. Housing, Health and Well Being.

Category – Inter - Disciplinary Basket

Paper –IV

PG / ARCH / T/ 114A Urban Research / Revitalization

Historic overview of recycling cities. Conservation area practice, adaptive sense, up gradation programmes in old areas, infill design. Financial and implementation framework for urban conservation and adaptive sense projects. Urban recycling and brown field projects, urban renewal and development strategies for regeneration of inner cities area. Conservation management community participating, economic regeneration, upgrading infrastructure, financing and implementation framework for development and revitalisation projects.

PG / ARCH / T/ 114B Introduction to Research Methods & Techniques

Paper-V

PG / ARCH / T/ 115A Urban Amenities

Amenities defined study of amenities considered as elements offering convenience, satisfaction, development of facilities, physical and mental recreation etc, to the population living in an area – urban or rural, considered as raw materials creating urban/rural environment (indoor and outdoor) their standards etc.
Parks and playground, Paths and pavements, Street furniture, Community centre, Theatre and opera, house, Cinema., Open Air Theatre , Lakes, Stadium etc.

PG / ARCH / T/ 115B Slum & Squatter Settlement

Defining slum in a) India b) Kolkata c) Developing countries d) Developed countries. How designation of an area as slum exercises its influences on Urban development strategy. Study of growth of urban slums: Case studies in cities or/and in urban areas. Study of different measures to restrict slums/Bustees. Slum improvement, Slum modernisation, Slum redevelopment, Squatters colony and its problems particularly in Kolkata.

Paper- VI

PG / ARCH / T/ 116A Project Management

Different types of contract including preparation of tender documents. Problems related to execution of projects through a tender. Site & services management. Different techniques of project management including knowledge of C.P.M. Bar chart and other up-to-date techniques.

Category – Sessional Courses

Sessional 1

PG / ARCH / S / 111 Laboratory

For Urban Design

A project on Urban Design will be assigned by the concerned teacher to each student. Drawings and study reports are required to be prepared by the students as a solution to the problem.

For Housing

A project on Housing will be assigned by the concerned teacher to each student. Drawings and study reports are required to be prepared by the students as a solution to the problem.

Sessional 2

PG / ARCH / S / 112 Seminar

Each student will be given a work in the First Semester and to be continued into the Second Semester. The student will be required to give a write up and present a seminar in the 2nd Semester. The appointed teacher or coordinator will guide the students for both First and Second Semester.

Second Semester

Category - Departmental / Specialization Basket

Paper – VII

PG / ARCH / T/ 127A Contemporary Works in Urban Design

Types of indigenous contemporary settlements. Comparison of functional structure of Western and Asian cities. Nature of city form, climate, typologies, public space systems and architectural expression. Cross-cultural influences in the development of city. Historic cores and contemporary urbanism. Issues of growth and value additions in the

context of globalization. Examples and Typology of Contemporary Urban Design works.

PG / ARCH / T/ 127B Information Science For Urban Design

Major information sources for urban design and information they offer a) sources in India b) source abroad. Data and computer for information; data bank on urban design. A) Indian context b) West Bengal. Data related to : urban and rural infrastructure i.e. roads, utilities, recreation (indoor and outdoor), education, health, housing, open spaces etc.

PG / ARCH / T/ 127C Information Science For Housing

Major information sources for housing and information they offer
a) Sources in India, b) Sources abroad
Data and computer for information storing and analysis. Collection and storage of information; data bank on housing a) Indian context b) West Bengal. Data related to Urban and rural infrastructure i.e. roads utilities recreation (indoor and outdoor) education, health, housing open spaces etc.

PG / ARCH / T/ 127D Contemporary Works in Housing

Types of indigenous contemporary settlements. Comparison of functional structure of Western and Asian cities. Nature of city form, climate, typologies, public space systems and architectural expression. Cross-cultural influences in the development of city. Historic cores and contemporary urbanism. Issues of growth and value additions in the context of globalization.

Paper – VIII

PG / ARCH / T/ 128A Advanced Landscape Architecture

Fundamentals of landscape architecture(Natural & man-made elements, landscape styles etc), Urban landscape; Historic landscape; Landscape illumination; Preparation of landscape drawings & details

PG / ARCH / T/ 128B Building Technology

Growth and development of building technology Appropriate technology for i) low rise ii) Medium rise iii) high rise building taking into consideration the requirements of material, structure, illumination, ventilation, orientation etc.
Appropriate technology for efficient realisation of low cost residential buildings. Building technology against cost control and maintenance cost. Precast and prefabrication techniques. Material handling equipment.

Paper – IX

PG / ARCH / T/ 129A Urban Design Theory

Introduction to urban design. Urban communication medium. Urban image. Elements of urban image. Integration of different elements to present an integrated urban image.

PG / ARCH / T/ 129B Urban and Rural Housing

Introduction to housing; Review of existing housing conditions, housing stock and their quality. Land for housing (Urban and Rural). Finance and other resource for housing. Materials: Conventional as well as new materials development by different institutions and organization. Construction techniques conventional as well as those newly development by different organizations.

Category – Inter - Disciplinary Basket

Paper - X

PG /ARCH / T/ 1210A Land Use & Traffic System

Fundamentals of land use and related government policies and legislation on the subject. Methods of effectuating general land use plan, administration and legal aspect. Relationship of land use and traffic. Traffic generation, distribution, assignment and management. Mass rapid transit.

PG /ARCH / T/ 1210B Conservation & Restoration of Heritage Buildings

The signification of cultural property moveable and immovable-Venice charter – conservation and restoration – the problem of choice – preservation of monuments in India and abroad – the conservation of urban sites – legislation for the protection of heritage – local case study for the application above.

Category – Sessional Courses

Sessional 1

PG / ARCH / S / 121 Term Paper Leading to Thesis

Each student will be given a Thesis / Project problem at the beginning of the Second Semester. He/She will work on the literature survey, set scope of work, find stages of completion, study site and constraints which should be satisfied and submit a report / dissertation. Thesis /Project work will, however, be done in the Third Semester.

Sessional 2

PG / ARCH / S / 122 Seminar

Each student will be given a work in the First Semester and to be continued into the Second Semester. The student will be required to give a write up and present a seminar in the 2nd Semester. The appointed teacher or coordinator will guide the students for both First and Second Semester.

Third and Fourth Semester

Sessional 1

PG / PE / TH / 21 Thesis Work

Each Student will devote full time in the Third and Fourth Semester on Thesis / project on an assigned research problem or Design /Development work under the supervision of a Faculty Member. He/ She will present a Thesis / Project Report at the end of the Fourth semester which will be evaluated by a Board of Examiners consisting of the Supervisor and External Examiner. The Evaluation of the Thesis / Project will be followed by a viva-voce in front of faculty members and other post- Graduate students.

Sessional 2

PG / PE / VV/ 22 Viva – Voce