

Syllabus for Ph.D. Admission Test 2022-2023 onwards

Department of Architecture

Faculty of Engineering & Technology

Section B

Architectural Design and Drawing: Elements and Principles of Design, Colour Theory, Form and Transformations, Order in Architecture, Anthropometric Studies, Elements of Space Making, Context, Sustainability, Perspective Drawing, Shades and Shadows, Basic Technical Drawing, Orthographic Projections, Development of Surfaces, Solid Geometry.

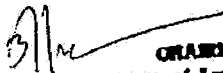
Building Material and Construction: Brickwork, Reinforced Brickwork and their Constituents, Properties and Applications, Stone and its Classification, Glass And Ceramics, Gypsum and Asbestos, Water Proofing Compounds, Plastics and Rubbers Thermoplastics, Metals(Ferrous), Metals(Non Ferrous), Floor and Floor Finishes, Timber, Forms Of Steel For Industrial Construction and Roofing Products, Advanced Structural Concrete, Additives and Admixtures, Properties and Application of Traditional Building Materials, Foundations, Damp-proofing and Waterproofing, Cavity Walls, Shoring, Underpinning and Scaffolding, Stone Masonry, Brick Masonry, Composite Masonry, Partition Walls, Ground Floors, Stairs, Upper Floors, Lintels and Arches, Carpentry Joints, Doors and Windows, Roofs and Roof Coverings, Structural Steel Works, Plastering, Painting and White-washing, Paints, Varnishes and Distempers, Plain Cement Concrete, RCC, Formwork and Laying), Beams, Columns, Slabs, Joints.

Building Services: Water Supply, Sanitation, Electrical, Air Conditioning, Lift Services, Fire Protection, Electronic Security and Surveillance Systems, Perimeter Protection, Access Control Systems, Automated Parking System, Mechanical Ventilation, Waste Treatment and Management, Thermal Treatment, Integrated Building Management Systems, Security Lighting, Illumination and Acoustics- analysis and treatment.

Climatology: Vocabulary of Climate, Importance of Climate In Architecture, Factors Affecting Climate, Elements of Climate, Climate Types, Human Thermal Comfort, Solar Chart, Daylight, Ventilation and Air Movement, Orientation.

Disaster Mitigation and Management: Hazards and Disasters - Indian Scenario, Understanding of Disaster, Hazard and its Classification, Various types of Disasters, Disaster Management Cycle, Disaster Preparedness, Disaster Management Act, Disaster Response Common Disaster Mitigation, Disaster Resistant Construction Techniques, Risk Reduction Measures Through Land Use Control, Site Planning and Land Management, Design and Construction of Structures.

Architectural Conservation: Vocabulary of Conservation, Various Issues and Practices of Conservation, Values and Ethics, Causes of Defects and Decay of a Heritage Structure, Documentation for the Conservation and Restoration of any Heritage Built Form, Status of Conservation in India and the various agencies involved in the field of Conservation worldwide and


GRABMAN
Dept of Architecture
CE College of Engg. & Tech
A.M.U., Aligarh

Landscape Design: Factors Affecting Landscape, Elements of Landscape Design, Principles of Landscape Design, Different Garden Styles, Landscape Engineering, Classification of Plants **Urban Planning:**

Elements and Planning Principle of Cities, Shapes of City Plan In Accordance to Road Networks, Concept Theories and Principles of Urban Planning of Cities, Urban Utopia - Broadacre, Garden City - Letchworth, Radburn Theory - Radburn and Neighbourhood Planning, URDPFI Guidelines, Concepts related to various Traffic Problems, IRC Guidelines, New Concepts in Mass and Rapid Transportation Systems, Modern Approach in Planning- Green City, Compact City, Smart City Etc.

Building Construction Management: Vocabulary of Construction Management, Project Management Concepts, Construction Management Techniques, Management Techniques, PERT and CPM , Resource Allocation and Quality Control, Planning of Temporary Services at the Site, Safety Precautions at Construction Sites, Security of Materials at the Building Stage, Stages of Inspection and Quality Control.

Professional Practice: Laws Related to Land, Building Bye-Laws, The Uttar Pradesh Urban Buildings Act 1972, Urban Development Law, Element Authority, Law of Easement, Mercantile Law, The Law Of Environment, Real Estate Act- 2016


Theory of Architecture: Understanding of the development of architectural form with reference to Technology Style and Character of following styles of architecture - Prehistoric age, Indus valley civilization, early Christian, the Sultanate style, Understanding of various Theories and Concepts Of Design and how Philosophy, Style and Strategies are related to Architecture of the following periods - Pre Modern, Modern, Post Modern, Historicism, Urbanist, Classicists, Revivalists, Vernacular, Philosophy, Critical Regionalism, Materialist etc. Grammar of the Language of Art, Vocabulary of art, Elements of Design, Principles of Design, Development of Art over the Period of time, Art As Form of Social Consciousness, Impact of Culture and Religion on Art, Understanding The Role of Art In Contemporary Society.

Urban design: Urban Space, Urban Design Parameters Basic Principles And Theories of Urban Design, Theories Related to Physical Aspect - Kevin Lynch, Theories Related to Social Aspect - Jane Jacob, Theories Related to Visual or Perception Aspect - Gordon Cullen, Urban Design Details **Housing:** Housing Need and Demand in India, Settlement Patterns Issues affecting Housing Objectives and Role of Government, Urban Local Bodies and other Agencies in Housing Development, HUDCO, NBO, Housing Schemes, Housing Categories - their Advantages and Disadvantages **Vernacular Architecture:** Vocabulary of Vernacular Architecture, Sense of Place, Spontaneity and Variation, Open Ended Form Relationship Issues of Concern in Present Day Architecture, Vernacular and Traditional Architecture of India - Specifically in Varied Climate Zones.

Sustainable Architecture: Attitudes to Architecture - A Historical Perspective, Theoretical Basis for a Sustainable and Eco-Friendly Design, Echo House, Environmental Impact of Building Materials Common Green Construction and Environmental Quality, Sustainable Architecture and Green Building Accreditation and Certification, Renewable Energy, Optimizing Construction.

Ecology And Environment: Vocabulary of Ecology and Environment, Basic Concepts of Ecology, Ecological Factors Ecosystem, Soil, Water Regimes, Air Pollution, Built Environment And Ecology, Into Relationship Between Man Nature and Bid Form Etc.

Computer Applications In Architecture: Basic Concepts of 2D and 3D Modelling in Architecture, Methods and Softwares, Planar Modelling, Mesh Modelling, Design and Drafting Softwares, Rendering Engines, GIS, Analysis using Softwares.


GRABGARR
Dept. of Architecture
U.P. College of Engg. & Tech.
A.N.U. Allahabad