

RAJIV GANDHI PROUDYOGIKI VISHWA VIDYALAYA, BHOPAL (M.P.)

MASTER OF ARCHITECTURE

SEMESTER – I

MAR-111; CONTEMPORARY ARCHITECTURE: THEORIES AND TRENDS

OBJECTIVE:

- To impart knowledge of contemporary theories and trends in architecture through the examples of emerging building typologies.

CONTENTS:

- Overview of world architecture since 1970 with the study of Late Modernism, Post Modernism and Deconstructivism.
- Theories governing contemporary architecture through case studies, evolving architectural trends and their impact on urban built environment.
- Emerging building typologies with emphasis on residential developments, offices, skyscrapers, institutional and public buildings.
- Evolving building materials and technologies, contemporary approach towards disaster mitigation in the built environment.
- Influencing factor in the shaping of contemporary architecture-study of examples of modern structures in this period and analyze the influences with respect to –
- Awareness and application of sustainability and impact on environment.
- Architectural expression influenced by vernacular and regional architecture.
- Architectural expression influenced by world as a global village

SUGGESTED BOOKS:

- Ballard B. And Rank, V. P., “Materials for Architectural Design”, Laurance King. 2006
- Frampton, K., “Modern Architecture-A Critical History”, 3rd ed. Thames and Hudson.2002
- Gossel, P. And Leuthauser, G., “Architecture in the 20th Century”, Vol. 1, Taschen.2005
- Troman, R. (ed.), “History of Architecture, From Classic to Contemporary”, Parragon.2009

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MAR-112; LOW COST BUILDING DESIGN AND TECHNIQUES

OBJECTIVE:

- To impart knowledge on various building materials, construction and execution techniques for designing low cost buildings.

CONTENT:

- Introduction to low cost buildings, building components influencing cost of buildings.
- Modular coordination in building design, prefabrication- total and partial, impact of prefabrication on employment
- Building construction detailing for cost reduction.
- Application of low cost building materials and various construction techniques.
- Building cost control techniques, research and development by various organizations in the country and foreign countries to reduce the cost.

SUGGESTED BOOKS:

- Davis, S., "Architecture of Affordable Housing", University of California Press. 1995
- Ruiz, F.P., "Building an Affordable House", Taunton Press. 2005
- Nunan, J., "The Complete Guide to Alternative Home Building Materials and Methods", Atlantic Publishing. 1980
- Lal, A.K., "A Handbook of Low Cost Housing", New Age International. 1995
- Mathur, G.C., "Low Cost Housing in Developing Countries", South Asia Book. 1999
- Sowman, M. And Urquhart, P., "A Place called Home: Environmental Issues and low-Cost Housing", Juta Academic. 1998

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MAR-113; MASS HOUSING DESIGN STRATEGIES AND STANDARDS

OBJECTIVE: To impart comprehensive knowledge about housing design, planning and finance

CONTENT:

1. Introduction to housing, social and economic infrastructures in planning, housing shortage- reasons and remedies.
2. Housing policies and programs, mass housing programs, slums and renewal schemes.
3. Housing finance and schemes, HUDCO and other housing/ building financial institutions, role of revolving funds in housing.
4. Housing design standards for various income group housing, analysis and design for HIG, MIG and LIG housing schemes.
5. Rural and EWS housing schemes, affordable housing, cost effective housing.
6. Selected case studies of housing schemes by government and private developers in India and abroad.

Studio :

Mass housing project for higher income group or combinations of income groups in Urban areas.

- Mass housing projects for slum Improvement schemes by Government or private organizations.
- Mass housing project for Old Age people.
- Rehabilitation / transit accommodation / camps for people affected by natural disasters like earthquake, floods, refugees, or other disasters

SUGGESTED BOOKS:

- Macsai John., "Housing", John Wiley and Sons New York 1982.
- Maurya S.D., "Population and Housing Problems in India Vol.I & II", Chug Publication Allahabad 1989.
- The social impact of housing goals standards, U.N. New York 1977.
- G.I.C: An introduction to housing layout, HNS 1978

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MAR-114; URBAN DESIGN

OBJECTIVE:

- To impart knowledge on various aspects, elements, concepts and principles of urban design.

CONTENTS:

- Various aspects of urban design; relationship of urban design to architecture, planning and landscape; Evolution of professional discipline.
- Review of urban forms, patterns and spaces in different periods of history viz. Ancient river valley civilization, Greek, Roman, Medieval, Renaissance, Baroque, post industrial revolution period in Europe and India and their influencing factors.
- Elements of urban environment-urban form, townscape, urban spaces, streetscapes, building forms and facades, public art.
- Concepts of urban design, public perception, image ability and townscape.
- Emerging concepts in urban design, modern examples of urban settlements, town centers and urban spaces in India and foreign countries.
- Brief overview of legislation and development control wrt the regional plan, development plan, land use, density control, environmental impact, affecting urban design

Studio: Field studies- observational and analytical studies of important urban/ public spaces, roads; Imageability and townscape of selected areas/ settlements. Design evaluation/ analytical study of modern examples.
Urban design proposal for improvement/ renewal/ redevelopment/ new development of an area.

SUGGESTED BOOKS:

- Broadbent, G., “Emerging Concepts of Urban Space Design”, Van Nostrand Reinhold.1990
- Cowan, R., “Urban Design Guidance by UD Group”, Thomas Telford Publishing.2002
- Punter, J. And Carnoma, M., “The Design Dimension of Planning-Theory, Content and Best Practices for Design Policies”, E&FN Spon.1997
- Spreiregen, P. D., “Urban Design; Architecture of Towns & Cities”, mcgraw Hill.1965
- Watson D. Et. Al (ed), “Time Saver Standard for Urban Design”, mcgraw Hill.2003\
- Jane Jacobs, “Death and life of Great American Cities”
- Colin Rowe, “Collage City”

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MAR; 115 ELECTIVE-I

1.Vernacular Architecture

OBJECTIVES :

- After successful completion of this course, student should be: · Identify and conserve the untapped values and principles in the evolution of new theories for architectural creations ·
- Highlight needs and various ways of vernacular building research, analysis, presentation of finding and its application to contemporary buildings

CONTENT:

- Introduction to Vernacular architecture it's nature, purpose and scope. Analytical review classification, salient features and important contributions in evolving workable solutions. Study of examples of Vernacular architecture in history of world architecture (outside Indian subcontinent) to understand evolution of building forms based on functions, building materials and construction techniques, art & crafts, the local conditions, traditions, climate & geography, religion & culture in the period when they were built
- Case study/ies of works of architects in contemporary world architecture (outside Indian subcontinent) whose works are influenced by the Vernacular Architecture of the region.
- Introduction to Vernacular architecture it's nature, purpose and scope. Analytical review classification, salient features and important contributions in evolving workable solutions. Study of examples of Vernacular architecture in history of architecture in Indian subcontinent; to understand evolution of building forms based on functions, building materials and construction techniques, art & crafts, the local conditions, traditions, climate & geography, religion & culture in the period when they were built
- Case study/IES of works of architects in contemporary Indian architecture; whose works 28 are influenced by the Vernacular Architecture of the region

SUGGESTED BOOKS:

- R.W. Brunskill , “Vernacular Architecture: An Illustrated Handbook” , Faber and Faber ISBN-10: 0571195032 ,4th ed 2000

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- Bernard Rudofsky , “Architecture Without Architects: A Short Introduction to Non-pedigreed Architecture”
- “Bhatia, Gautam,Laurie Baker, Life, Work, Writings, New Delhi, India,”, Penguin Books,.ISBN 0-14-015460-4, 1994.
- Madhaoachwal ,”Voluntary Agencies and Housing: A Report on Some Voluntary Agencies Working in the Field of Housing in India”, UNICEF, 1979 .
- John May, “Handmade Houses and Other Buildings The World of Vernacular Architecture” , Thames & Hudson, 2010.
- James Steele, Hassan Fathy- Architectural Monographs, St. Martin's Press, 1988.

2.Futuristic Architecture

OBJECTIVE:

- To understand and explore new building materials, future building technologies and various futuristic architectural concepts

CONTENTS:

- Future concepts envisioned by Antonio Saint Elia, Frank Lloyd Wright, Corbusier
- Future trends being evolved by Marcos Novak, Neil Denari, Greg Lynn, Toyo Ito and others.
- Evolution of contemporary architectural concepts such as biomimcry, Adaptive reuse, low cost development and urban regeneration.
- “Zero energy” and “Energy +” buildings with emphasis on an integrated approach. Green buildings.
- Socio-cultural and economic impacts of future urban habitat. Futuristic Homes.
- Futuristic building materials, building tectonics and systems of the future.

SUGGESTED BOOKS:

- Bell, J., “21st Century House”, Laurence King Publishing. 2006
- Jodidio, P., “Building a New Milleneum”, Vol.1 Taschen2003
- Jodidio, P., “Architecture Now”, Vol. 2, Taschen. 2004

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MAR-116 ARCHITECTURAL DESIGN STUDIO-I

DESIGN EXERCISES:

Objective: To explore various building design aspects through architectural design studio exercises.

CONTENTS:

1. Understanding of functional activities to be performed in building, aspects of ergonomics.
2. Architectural and engineering aspects of building design.
3. Site planning and environmental considerations.
4. Physical and economic constraints in designing.
5. Elements and principles of design of solar passive buildings. Study of design standards.

Studio: Major design exercises in residential, educational, commercial and recreational buildings.

Minor design exercises on specific aspects related to spatial planning, site planning, structural innovations, passive designing and building services.