

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

BACHELOR OF ARCHITECTURE II Semester (CBGS)

S.No	Subject Code	Subject Name	Maximum Marks Allotted					Teaching Hours per Week			Total credits
			Theory			Practical		Lectures (L)	Tutorials (T)	Practical/Studios (P/S)	
			End Sem	Mid Sem Test	Assignment/ Quiz	End Sem	Lab/ Studio Work				
1	AR 121	Design-II	100	30	20	50	100	2	-	6	8

FIRST YEAR – SECOND SEMESTER

1. Introduction of Architectural design with an approach of functional understanding and analysis of problems with studies of space requirements for different furniture (objects), activities and circulation. Relationship between occupied and unoccupied spaces.
2. Anthropometric study and analysis. Study of single units Viz / living area, sleeping area, cooking area, study area, toilet etc.
3. Design of small shelters and study of multi units involving max. 3 to 4 functional spaces natural and man made objects of functional and aesthetic value. Aspects of area determination in conjunction with relevant building Bye Laws and area relationship.
4. Colour theories and colour schemes and its effect on the users.
5. Case studies for measured drawing of small buildings and furniture. Introduction to draw presentation drawings. Small views (isometric and perspective) of the studied buildings.
6. Study and design of small structures like ceremonial gates, temporary exhibition stalls, drinking water fountains, milk booths etc.
7. Minimum one time problem of 6 hrs duration is to be attempted in class other than regular design problems.

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Note: The sessional will be in the form of drawings and models along with technical report for the design dealt with. The evaluation should be done in intermediate reviews consisting of internal / external experts. There should be regular site visits to the building types dealt in the studio problem for which audio visuals should be prepared.

LIST OF TEXT AND REFERENCE BOOKS:

AR121 - Design-II

1. "Planning by E. & O.E". Liffé book Ltd., London.
2. D.E. CHIRAIRA & CALLENDAR, "Times Saver Standard for Building Types".
3. RUDOLF HERGE, "Nuferts Architects Data", Cross By Lockwod & Sons Ltd.
4. EDWARD D. MILLS, "Planning The Architects Hand Book".
5. National Building Code.

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2	AR 122	Graphics-II	50	30	20	50	50	1	-	5	6

PERSPECTIVE:

1. Introduction to basic terms, principles, types and techniques of perspective drawing: realistic expression of ideas.
Two point perspective of simple objects (drafted & free hand)
 2. Presentation of interior and exterior views in one point perspective (drafted and free hand)
- An idea of development of surfaces is also to be given to the students.

SCIOGRAPHY:

1. Introduction to basic principles of sciography and it's application to the field of architecture.
2. Sciography of two dimensional objects in plan and elevation.
3. Sciography of three dimensional objects in plan, elevation and views, (Isometric, Axonometric and Perspective)
4. Sciography of simple building elements.

Note: The sessionals will be in the form of drawings and sketches.

LIST OF TEXT AND REFERENCE BOOKS:

AR122 - Graphics- II

1. S. MULLIK, "Perspective & Sciography", Allied Publishers Ltd.
2. ROBER W. GILL, "Basic Perspective, "Thames & Hudson, London 1974.
3. Interior Perspective in Architectural Design Graphics.
4. BERNARD ALKINS, "Architectural Rendering", Walter, Foster, Art books.
5. ROBERT W. GILL, "Advance Perspective", Thames & Hudson, London.

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3	AR 123	Building Construction - I	50	30	20	50	50	2	-	4	6

1. FOUNDATION: Brick, stone, plinth filling, entrance, steps/ramps plinth protection D.P.C. & coping, timbering.
 2. ARCHES and LINTEL: Brick, stone lintels, centering materials and methods.
 3. PRECAST UNIT MASONRY: Concrete block, decorative brick work, compound, mud wall (C.B.R.I) other bonds.
 4. DOORS (TIMBER): Ledged braced and battened door, panel door, glazed door, flush door.
 5. WINDOWS (TIMBER): Side and Top hung, pivoted, louvers, ventilators and fixed fanlight.
 6. DOORS (METAL) PRESSED STEEL AND 'Z' SECTION: With and without fanlight.
 7. WINDOWS (METAL) PRESSED STEEL AND 'Z' SECTION: Top and side hung, fixed, pivoted, louvers, ventilators and fanlight.
 8. MISCELLANEOUS: Jamb casing, architrave, pelmet, mouldings, skirting and window boards, door and window fixtures.
- Note: Sessional shall be done as drawing sheets and occasional visits to construction sites. Minimum 8 sheets shall be prepared out of which two may be in the sketch form (scaled).

LIST OF TEXT AND REFERENCE BOOKS:

AR123 - Building Construction-I

1. W.B. MCKAY, "Building Construction Vol.1, Orient Longman.
2. R. CHUDLEY, :Building Construction Handbook Vol. 1 to 4 "British Library Cataloguing in Publication Data 1990.
3. DR. B.C. PUNAMIA, "Building Construction", A. Sauraby & Co. Pvt. Ltd.
4. R. BERRY, "Construction of Buildings". The English Language Book Society London 1976.
5. MITCHEL, " Advance Building Construction", Allied Publishers Pvt. Ltd.

Scheme of Examination, (4+1) for Bachelor of Architecture (B. Arch.), RGPV, Bhopal, w. e. f. July 2017 batch.

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4	AR 124	History of Architecture - I	50	20	10	-	20	2	1	1	4

The course aims at understanding the influence of Geographical & climatic, cultural and political situation on Architecture in expressing philosophical and aesthetic concepts in built form.

1. Pre historic, vedic, Indus Valley civilization.
2. Buddhist and Jain period.
3. Egyptian, West Asiatic.
4. Chinese, Japanese
5. Pre Colombian, Mayan Civilization.

Note: Sessionals will be submitted in the form of sketches notes, audio-visuals and reports of site visit to some historical buildings etc. as per programme scheduled by the school per session.

LIST OF TEXT AND REFERENCE BOOKS:

AR124 - History of Architecture-I

1. SIR BANISTER FLETCHER, "History of Architecture", University of London.
2. S. LLOYD & H.W. MULLER, "History of World Architecture", Fibre & Fibre Ltd. London.
3. JAMES FERGUSON - "History of India & Eastern Architecture".
4. BASHAM - "WONDER THAT WAS INDIA" - A.L. BASHAM.

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5	AR 125	Structure - II	50	20	10	-	20	2	1	1	4

- 1.Fixed and continuous beams: Relation between free B.M. diagram fixed B.M. diagram, slope deflection, fixed beam subjected to couple, continuous beam, Clapeyron's theorem of three moments.
2. Moment distribution methods: fixed and continuous beams only.
3. Study of types of structures: load bearing framed, rigid jointed, pin jointed, determinate, indeterminate.
4. Loads of stresses: Dead load, live load, wind load, earth quake forces, soil and hydrostatic pressure, load combinations, factor of safety, permissible stresses, standard specification and codes of practice.
5. Analysis and stability of retaining walls: rectangular and trapezoidal only.

Note: Sessional work shall include assignments/tests on the above topics along with the drawings.

LIST OF TEXT AND REFERENCE BOOKS:

AR125- Structure-II

1. C.S. REDDY, "Basic Structural Analysis", Tata McGraw Hill.

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6	AR126	Workshop-II	-	-	-	30	20	-	-	2	2

1. Models made of paper, thermo cole, wires, plaster of Paris, cardboards, Acrylic sheets and other soft materials based on the program of design.

Note: Sessionals shall include exercises in block and detail model making of students own design or copy design.

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7	AR127	Architecture Appreciation	-	-	-	30	20	-	-	2	2

The course is considered as a medium for understanding architecture as one of the principal arts in the path of human creativity. The generation of aesthetic sensibilities and a taste for the visual and sensory appeal of physical form. The emphasis is to make students into connoisseurs of art rather than consummate artists themselves.

1. History: Architecture through the ages, architecture as art, milestones in art from the prehistoric, Paleolithic, Neolithic, classical, medieval, renaissance and modern periods. Indian Architectural heritage, Indus valley to the present day.
2. Consciousness: Aesthetics, perception, symbolism, expression, style, fashion, appropriateness and values. Critical appraisal of examples from their surrounding or from secondary sources. The students are expected to practice extensively with a view to their own personal improvement till a satisfactory standard is achieved.

Recommended Text

Michael Fazio, Marian Moffett, and Lawrence Wodehouse, Buildings Across Time: An Introduction to World Architecture, 4th edition, (McGraw Hill Education, 2009)

Mark M. Jarzombek, Vikramaditya Prakash, Francis D. K. Ching, A Global History of Architecture, 2nd ed. (Wiley, 2011).