

NOTIFICATION

No. 106 /2022

Date : 10/08/2022

Subject : Implementation of new Syllabi of Semester I & II of B.Arch. (C.B.C.S.)

It is notified for general information of all concerned that the authorities of the University have accepted to implement new Syllabus of Semester I & II of Bachelor of Architecture (B.Arch.) (C.B.C.S.) to be implemented from the academic session 2022-23 onwards as per “**Appendix – A**” as given below:

Sd/-
(Dr.T.R.Deshmukh)
Registrar

“**Appendix – A**”

SYLLABUS OF SEMESTER I & II of B.Arch. [C.B.C.S.]

SEMESTER – FIRST

1ARC01 BUILDING MATERIALS & CONSTRUCTION - I

Course Objective:

To develop understanding of building materials and its application in construction of various building elements. The subject also aims at introducing students with design ability for integrating building elements with conscience of construction techniques in architectural spaces .

Unit I : Introduction to the subject and its relevance in Architecture General introduction of various components of building and materials from foundation to roof.

Different types of soils , load bearing capacity selection of basic Structural Systems, Load Bearing , Framed and Composite structures, brief idea about load transmission .

Unit II: Mud and Clay: as the most ancient material, adobe , wattle and dobe construction-vernacular construction system, soil stabilization , stabilized blocks – use for walling , roofing , plaster of walls – non erodible plasters . Brief introduction on manufacturing of clay bricks

Unit III: Bricks. Sundried & Burnt Bricks, different types of bricks, good quality bricks, manufacturing process , bricks made from other materials and blocks , terracotta bricks . its properties –suitability , Fly ash bricks , Autoclaved concrete blocks , hollow bricks. Innovation in different types of brick arches, various patterns in brick walls, floors and roof construction , guna tiles , decorative brick work and patterns in brick jalis and floor , brick paving patterns

Unit IV: Drawings of different types Brick arches, lintels, bonds in bricks, end junctions, attached and detached piers, jointing and pointing. Brick foundations for wall and piers. Cavity walls & rat trap bonds. DPC and its uses. Plinth filling details.

Unit V: Stone and it's types, stone as a building material , tests for Stone- deterioration – preservation of stone – various stone finishes – cutting and polishing of various types of stones, stone as a natural building material for foundations, walls, roof, as structural elements .

Unit VI: Drawings of types of masonry – random rubble/Ashlar, etc. - cavity walls- flooring – copings, sills, lintels, corbels, Stone foundation for wall and piers. Types of arches in stones.

NOTE: Sessionals in the form of drawings sheets, Assignments and models. Construction site visits are essential for practical exposure. Hands on practical experience on handling different types of materials and construction is desired .

References:

- 1.S.C. Rangwala, Engineering Materials, Charotar Publishing House, Anand,1997
2. HUDCO - All you want to know about soil stabilized mud blocks, HUDCO Pub, New, Delhi, 1989.
3. W.B. McKay Building Constrution, vol. 1, 2, 3, Longmans, U.K.1981.
4. Don A Watson, Construction Materials and Processes, McGraw Hill Co., 1972.

1ARC02 ARCHITECTURAL GRAPHICS - I

Course Objective:

To sensitize students about the significance of graphic fundamentals & train to understand, develop good drafting skill for Architectural drawings. Importance different line intensities, line weights, thickness, handling different drafting equipments and tools.

Unit I: Introduction to drafting procedures, lines, different types of Architectural Letterings and dimensioning techniques. Architectural annotations and conventions including representation of various building materials and building components, different scales graphic codes and symbols.

Unit II: Construction of Architectural scales (plain scales, diagonal scale, isometric scale). Reduction and enlargement of drawings on different scales.

Unit III: Construction of basic and complex geometrical shapes and curves.

Unit IV: Principles and projection methods of orthographic projection (third angle projection). Orthographic projection of simple, complex solids and hollow object.

Unit V: Projection of straight lines, planes, solids, sections of solids and Development of surfaces illustrated on practical examples.

Unit VI: Measured drawings of an existing structure . Architectural elements illustrated by standardized architectural drawing methods.

References:

1. Bhatt N.D. and Panchal V. M. Engineering Drawing, Charotar Publishing House, Gujrat, 1996.
2. I. H. Morris, Geometrical Drawing for Art students-Orient Longman, Madras, 1982 .

1ARC03 HISTORY OF ARCHITECTURE - I

Course Objective : Art and History as Cultural Heritage:

Art and culture goes hand in hand . Various forms of Art have enriched Architecture , History of Architecture exposes the student to evolution of different architectural styles & solutions through historical periods to understand the influence of geographical , topographical , climatic , social , cultural and economic condition of that period and use of appropriate building materials, construction techniques, planning and designing features.

Creation of Art & Architecture is a struggle - journey to explore what is there within . Different form of Art - paintings , sculptures, , relief work – high , low & bass relief work form an eternal link between art , culture and Architecture through various stages of history.

Unit I: Introduction to the course – Old Stone Age – the agricultural revolution – The New stone age- Development of shelter. Prehistoric to Early Civilization

Unit II: Most Ancient Civilizations of the World. River valley civilizations and Cultures – Indus (India), Nile (Egypt), Tigris & Euphrates (Mesopotamia), Yellow River / Yangtse (China) its Architectural Significance, Social & Cultural impact

Unit III: Defining Culture and study of patterns of settlement in India. Impact of Aryan culture – Vedic villages and the rudimentary forms of bamboo and wood. Origin of wooden construction under the Mauryan rule, Buddhist Schools during Ashokan period.

Unit IV: Comprehensive survey of Indian and Western sculptures of different periods, thematic study of cultural influence . Freestanding & Relief Sculptures

Unit V: Cave painting - Frescos and Murals of Ajanta, Bagh, Badami, Ellora, Hampi, etc; Mythological influence; Techniques and characteristics.

Unit VI: Miniature painting – Indian and Islamic miniature paintings; Influence of changing period; Artist, subjects and techniques.

Sessional work : Assignments and drawing on the above topics.

References:

- 1 Janson, H. W. History of Art, New York, 1978. .
- 2 Tomory Edith, A History of Fine Arts in India and the west; Orient Longman, 1995.
- 3 Sir Banister Fletcher, A History of Architecture, University of London, The Antholone press, 1986.

1ARC04 - HUMANITIES & SOCIAL RESPONSIBILITIES

Course Objective: To understand the World History System & Knowledge . History of Culture by understanding the stages Human Development & Sociology ,to sensitize students about the social issues & their significance in Architecture by being a responsible citizen .

Unit-I : Evolution of Significant settlements Patterns world wide along the Timeline

Unit II : Development of Agriculture ,Water Conservation Methods , Greyware & Redware . Development of Language and methods of writing like on Papyrus Leaves , Clay Tablets , Hieroglyphs , Bhurjpatra . Most ancient libraries of world as sources of knowledge

Unit-III: Development of Civilization , Archeological Evidences ,Study of Lost Cities like Susa, Mari , Harappa , Ur , Knossos . Mycenae , Patliputra , Persepolis . Aspects of civilization with respect to culture, language, arts, literature.

Unit-IV: Meaning of Culture , Evolution with religions, customs and philosophies-eastern and western. Social virtues and civic responses in different cultures - Historical developments, India as a cradle of Civilization , significance as a silk route .

Understanding Legacy of Social & Cultural Reforms in India – Philosophies & Works of Raja Ram Mohan Roy , Ishwarchand Vidyasagar , Shahu Mahartaj , Mahatma Phule , Savitribai Phule , Dhondo Keshav Karve , Gopal Ganesh Agarkar , Karmaveer Bhaurao Patil , Dr. Babasaheb Ambedkar , Dr. Panjabrao alias Bhausaheb Deshmukh

Unit-V: Study of salient features of Constitution of India , Duties , Sensitization students of basic Civic sense and responsibility at various levels

Unit-VI: Edicts of Ashoka , Gandhian Philosophy , 4 H Principles – Head , Heart , Hand & Health (Universal Health). Different types of Economies – Economy of Permanence. Environmental Awareness ,Group Dynamics & Social behavior, Status and Role in the society

Reference Books :

1. Urban Pattern by Arthur & Gullion
2. The Economy of Permanence by J.C. Kumarappa
3. Unto the Last by Jhon Ruskin
4. Town Planning by H.K. Hiraskar
4. Rise and Development of Religion by Dr. Panjabrao Deshmukh in Vedic Literature

1ARC05 ARCHITECTURAL COMMUNICATION SKILLS

Course Objective – Develop Good Communication Skill , sensitizing about the roots of words , their **Etymology** , **Prefix & Suffix** . Significance & Development of writing skill as students of Architecture , use of appropriate words , developing vocabulary , word power , Architectural Vocabulary- Illustrative methods of Expression . Developing Skill of Conducting Meeting & Protocol – How to conduct Meeting

Unit I: Comprehension Skills: 1. Skimming for general ideas 2. Contextual vocabulary 3. Summarizing, note-making 4. Ability to answer factual, inference and personal response questions

Unit II: Writing Skills: 1. Architectural reports, inspection reports 2. Paragraph developments 3. Visual Interpretation

Unit III: Architectural Communications 1. Verbal and visual presentations on architectural terminology such as promenade, vista, forum, sky-line, capital 2. Presenting architectural concepts with the help of texts, drawings, transparencies, slides, video, photographs, models etc.

Unit IV: Other forms of written communications 1. Job applications 2. Official Correspondence 3. Preparation of curriculum vitae, resume

Unit V: Public speaking and presentation skills Non verbal communication - personal appearance, posture, gesture, facial expression, eye contact etc.

Unit VI: Methodology of conducting meetings, conferences, seminars, workshops and group discussions. Storytelling & Narration. Office setup, culture and preparation of Design Proposals.

References Books:

1. Developing Communication Skills; Krishna Mohan, Meera Banerjee : Macmillan
2. English for Practical Purposes : Z.N.Patil, B.S.Walake, Ashok Thorat, Zeenat Merchant : Macmillan
3. Business Communication : V.K.Jain, Omprakash Biyani : S.Chand and Company.

Sessional Work : Assignments, reports, seminars and Computer-aided presentation on above topics

1ARC06 BASIC DESIGN SKILLS STUDIO - I

Course Objective:

To impart students an overview of the profession of Architecture and to develop a comprehensive understanding of Design fundamentals.

Introduction to Architecture:

A brief summary of Architecture – its various definitions, aspects/ dimensions, approaches through different ages and factors affecting architecture of a region.

- 1) Introduction to elements of Design like point, line, plane, solid and void etc. with respect to their expression quality.
- 2) Introduction and Importance of Design principles like Balance, Harmony, Rhythm, Contrast, Symmetry, Scale, Proportions etc. leading to unity in design.
- 3) Creation of two and three- dimensional composition of abstract and non abstract architectural nature.
- 4) Introduction to external and internal form concept, their quality, concept of space, relation of space and volume
- 5) Relationship between basic design and Architectural Design, comprehensive understanding of space, form, order and design.
- 6) Preparation of 3D models based above assignments to understand the volumetric concepts by using different materials and textures.

Sessional work: Assignments and drawing on the above topics.

Viva Voce by external examiner at the end of Semester.

Suggested Text Books:

1. Ching, F.D.R. : Form, Space and Order, Van Nostrand Rheinhold, New York (1979).
2. Parmar V.S.: Design Fundamentals in Architecture, Somoiya Publications, Bombay (1973)
3. Scott: Design Fundamentals 4. Edward d Mills- Planning the Architects Hand Book – Bitterworth, London, 1985.

1ARC07 BUILDING MATERIALS & CONSTRUCTION STUDIO - I

Sessional work : Assignments and drawing on the topics given in subject **01AR01** Building Materials & Construction-I.

Viva Voce by external examiner at the end of Semester.

1ARC08 ARCHITECTURAL GRAPHICS STUDIO - I

Sessional work : Assignments and drawing on the topics given in subject **01AR02** Architectural Graphics I.

Viva Voce by external examiner at the end of Semester.

1ARC09 VISUAL ARTS STUDIO

Objective : To sensitize students about importance of Art , Visual Art . nature of Art . Science & Art serve humanity in complementary ways , purpose is to create an awareness among students about Visual Thinking , Aesthetics , Art & Beauty and develop an understanding of principles of design in visual arts.

Unit I : Introduction & definition of art – the necessity of Art , Purposes & Functions of Arts and meanings of the work of art – Technical language of the art – Technique of looking and appreciation of art form.

Visual thinking , Art & experience Drawing – architecture – sculpture – paintings – printing , arts , serigraph , lithographic prints . Experimentation in Art Exercises inspired from different Schools like Bauhaus , Shanti Niketan , Bengal school of Arts , JJ. School of Arts.

Colour in Architecture . Colour as Stimulus . Different Colour Theories – Goeth , Paul Klee Kandinsky .Application of colour in architecture Effect of colour in architecture – colour symbolism.

Unit II: Composition Basic Design. Visual elements -Line , shape, mass, light, color, texture. Principles of Design

Understanding order , scale, proportion, proximity, visual tension, balance and rhythm co-ordination skills . Develop different types of perceptions – visual , tactile

Unit III : Basic Design – harmony character , sense of solid and void , the hollow , positive spaces , form – space inter relation, juxtaposition, and a contrast , sketching skills indoor and outdoor sketching , life drawing - rapid sketching , creative skills , Sculpture in different materials – clay , wire , rope , jute , paper . Sensitizing & developing students about the idea of Space – time , Spatial sequence , aesthetics & kinesthetics

Unit IV : Fabonnaci Series , Golden Ration , Gesalt Theory , Teachers and Experimentation at Bahauss , Johannes Itten , Kandisky , Schlemmer

Unit V : Hues , grades & different scales of grey & color , Language & Art of Graphic Design , Significance of White Space in Graphic Design , Logo Designs , Different types & fonts , Calligraphy

Unit VI: Impressionism/Expressionism/Cubism/Fauvism Futurism/ Purism / Abstract Art/ Art Installations . Indian Schools , Shanti Niketan , Bengal School , Progressive Art Group- Famous works of contemporary artist, sculptors from West & India.

Sessional work : Assignments and drawing on the above topics.

Viva Voce by external examiner at the end of Semester.

References :

- 1.Jax Themier, B.W., “How to paint and draw”, Thames and Hudson, 1985
- 2.Gill, R.W., “Rendering with Pen and Ink”, Thames and Hudson, 1985
3. “Principles of three Dimensional Design” by Wucious Wong
4. “Principles of Two Dimensional Design” by Wucious Wong.

SEMESTER - SECOND

2ARC01 BUILDING MATERIALS & CONSTRUCTION-II

Course Objective :

To enable students about the learning in progression, starting from simple building elements, components, materials and construction techniques to develop strong sense of visualization.

Unit I : Timber and allied products Timber – Properties and uses – Defects, Conversion, Seasoning, decay and preservations of timber – Unit II : Fire retardant treatment, anti-termite treatment. Industrial timbers – plywood, blockboard, particle board, fibre boards. Manufacture and uses – advancements & developments.

Unit III : Timber doors and windows Drawings of timber joinery for windows, doors, ventilators. Types of timber doors such as ledged, braced and battened, panel, glazed, flush doors.

Unit IV : Types of windows such as Fixed, side and top hung, pivoted, louvered, ventilators and fanlights

Unit V : Timber partitions, paneling, wall paneling. Timber staircases – Designed staircase

Unit VI : Timber trusses – lean to – close couple – Kingpost – Queen post – Trusses.

References:

1. S.C. Rangwala, Engineering Materials, Charotar Publishing House, Anand, 1997.
2. W.B. McKay Building Construction, vol. 1,2,3, Longmans, U.K. 1981. .
3. Don A Watson, Construction Materials and Processes, McGraw Hill Co., 1972.
4. R.Chudleu, 'Building Construction Handbook', British Library Cataloguing in Publication, Data, London, 1990.
5. S.C. Rangwala, Engineering Materials, Charotar Pub. House, Anand, 1997.

2ARC02 ARCHITECTURAL GRAPHICS -II

Course Objective:

To make students understand the idea of drawing as a Language of Architecture and its expression . Develop the skill of drawings in by means of visual thinking , develop skill of observation , drawing objects , elements , perspective & isometric view, & Sciography

Unit I: Measured drawing of simple objects (like furniture, entrance gates, etc) and building components (like columns, cornice, door, window, etc.)

Unit II : Introduction to architectural presentations techniques, isometric and oblique three dimensional views, conical projections, perspectives, one point and two point. Development of surfaces.

Unit III : Perspective Introduction to basic terms, principles, types and techniques of perspective drawing: realistic expression of ideas.

Unit IV : Two point perspective of simple objects. (drafted and free hand) presentation of interior and exterior views in one point perspective .

Unit V : Introduction of basic principles of Sciography and it's application to the field of architecture - two dimensional objects in plan and elevation

Unit VI : Sciography of three dimensional objects in plan and elevation and views. (isometric, Axonometric and Perspective) simple building element

References:

1. Bhatt N.D. and Panchal V. M. Engineering Drawing, Charotar Publishing House, Gujrat, 1996.
2. Clande Batley, Indian Architecture, D.B. Taraporevale Sons and Co. Ltd., Bombay.
3. John M. Holmes, Applied Perspective, Sir Isaac, Piotman and Sons Ltd., London 1954
4. Robert W. Gill, Basic Perspective, Thames and Hudson, London, 1974.

2ARC03 HISTORY OF ARCHITECTURE - II

Course Objective :

We learn from the wisdom of our ancients . History of Architecture enrich the students by exploring our treasures of past , study the evolution of different architectural styles through different periods , understand the influence of geographical , topographical , climatic , social , cultural and economic condition on Architecture and use of appropriate building materials, construction techniques, planning and designing features.

Unit I: Rock cut Architecture, Hindu, Buddhist & Jain Caves – Ajanta, Ellora, Pitalkhora, Nasik , Bhaja, Bedse caves, Karla, Kanheri caves & Elephanta, Rani gumpha (Bhubaneswar), Udaigiri. Takt-i-bhai Buddhist Monastery, Gandhara, Most ancient Lomus Rishi Cave-Barabar.

Unit II: Architecture of Hinayana and Mahayana Buddhism. Interaction of Hellenic & Indian Ideas in Northern India – Architecture during Ashoka's rule – Ashokan Pillar, Sarnath , Sanchi Stupa. Salient features of a Chaitya hall and Vihara, Tibetan Architecture

Unit III: Hindu Architecture - Evolution of form of Temple, Symbolism, Coding & decoding of Spatial Sequence in Temples.

Unit IV: Different Styles of Temple Architecture. Comparison between North Indian & South Indian Temples during Gupta and Chalukyan periods

Unit V: Early Chalukyan Architecture at Aihole, Badami, Pattadakal Late Chalukyan/ Hoysala Style Dravidian Architecture under Pallavas – Shore Temple, Mahabalipuram, Dravidian Order, Brihadeeswara Temple-Tanjore , Minakshi Temple-Madurai.

Unit VI: Northern/ Indo Aryan style – Orissa , Khajuraho (Central India) , Salient features of an Indo Aryan Temple – Lingaraja Temple, Bhubaneswar – Sun temple, Konarak Kunds and Vavs, Sabali Kund Vav – Adalaj, Surya kund-Modhera.

Sessional work: Assignments and drawing on the above topics.

References:

1. Sir Banister Fletcher, A History of Architecture, University of London, The Antholone press, 1986.
2. Percy Brown, Indian Architecture (Buddhist and Hindu Period), Taraporevala and Sons, Bombay, 1983
3. Satish Grover, The Architecture of India (Buddhist and Hindu Period), Vikas Publishing Housing Pvt. Ltd., New Delhi, 1981
4. Christopher Tadgelli, The History of Architecture in India from the Dawn of Civilization to the end of Raj, Longman group, U.K.Ltd., London, 1990.

2ARC04 THEORY OF ARCHITECTURE

Course Objective :

To understand the Spirit and soul of principles of Architecture pertaining to visual and aesthetic aspects of architecture. Comparisons with nature and other forms of visual art are intended to be understood through study of examples.

Unit I: Trinity of Architecture, introduction to Architecture, understanding Architecture, interpreting, reinterpreting, coding -decoding Architecture. Thoughts on Architecture by eminent personalities. Different schools of thought in Architecture & their influence

Unit II: Scope of Architectural Design, Architectural design – An analysis – Integration of aesthetic and function.

Unit III : Architecture as a narrative. Architecture as subjective & Objective Expression. Narrating Architectural thinking from concept to manifestation.

Unit IV : Architectural space , Mass and Space, Visual and Emotional effects of geometric forms and their derivatives – the sphere, the cube, the pyramid, the cylinder and cone.

Unit V : Aesthetic components of Design Proportion, scale, balance, rhythm, symmetry, hierarchy, pattern and axis with building examples. Subtractive & additive surfaces & forms, Fenestration Exercises

Unit VI : Influence of Industrial Revolution on Architecture and contribution by Masters in Architecture. Architectural Orders.

Sessional work: Assignments and drawing on the above topics.

References:

1. Paul Alan Johnson – The Theory of Architecture – Concepts and themes, Van Nostrand Reinhold Co., New York, 1994.
2. V.S.Pramar, Design Fundamentals in Architecture, Somaiya Publications Private Ltd., New Delhi, 1973
3. Francis D.K.Ching, Architecture – Form, Space and Order, Van Nostrand Reinhold Company, New York, 1979
4. Helm Marie Evans and Caria David Dunneshil, an initiation to design, Macmillan Publishing Co.Inc., New York, 1982.

02AR05 ARCHITECTURAL STRUCTURE - I

Course Objective : To introduce students the Theory and Design of Structure , understand the necessity of studying the subject & significance of studying the structural components from foundation to the roof The course also envisage the simple types of structural elements followed by determination of forces and stresses .

Unit I: introduction to the Theory and Design of Structure , its importance in Architecture .Technical terms for various structural components of the buildings from foundation to the roof . Fundamentals of Mechanics .

Unit II: Forces & Moments , Determination of forces in members of frames by analytical and graphical methods . Concurrent and non-concurrent coplanar forces, moment, conditions of equilibrium.

Unit III: Understanding Stress, strain . Shear force and bending moment diagrams for strained beams subjected to concentrated and distributed loads

Unit IV: : Centroid and moment of inertia of plain areas, parallel axis theorem, moment of inertia, principal axis

Unit V: Bending stresses , shear stresses and deflection in simply supported beams

Unit VI : Determination of support reactions using visual work principles

Sessional work : Assignments and tutorials on the above topics.

References:

1. P.C.Punmia, Strength of Materials and Theory of Structures; vol I, Laxmi Publications, Delhi 1994.
2. S.Ramanmurtham, Strength of Materials – Dhanpatrai & Sons, Delhi 1990
3. W.A.Nash, Strength of Materials – Schaums Series – McGraw Hill Book Company, 1989
4. R.K.Bansal – engineering Mechanics and Strength of Materials – Lakshmi Publications, Delhi, 1990.

02ARC06 ARCHITECTURAL DESIGN STUDIO - II

Course Objective : To introduce architectural design as a process and as a final product; to understand fundamentals of space, form and order through basic perception of architectural skills.

Basic Exercises:

1. Study of anthropometrics and their relationship with the dimensioning of objects of daily use viz. furniture, fixtures equipments vehicles, etc; determining space for activities, such as, living, dining, sleeping, conveniences, etc.
2. Measured drawing of small building, such as a small house or office, etc.
3. Simple circulation/flow diagrams for a small house or a small school or hostel or an office to understand the functional interrelationships of various spaces in building.

4. Three dimensional organization of a variety of forms to create built forms and importance of shades and shadows in the entire composition. Layout of repetitive units within a site to create interesting and functional compositions.

5. Design exercise (Two Nos.) of small space structures or buildings such as, compound wall, gate, milk booth, vendor stall, guard room, cycle stand, bus stop/ shelter. Etc.

6. To prepare different views such as, Perspective, Hexanometric and Isometric views to express the building design and hands on exercises for 3D model.

Sessional work Assignments and drawing on the above topics.

Viva Voce by external examiner at the end of Semester.

Suggested text books :

1. Ching, F.D.R. : Form, Space and Order, Van Nostrand Rheinhold, New York (1979).
2. Parmar V.S.: Design Fundamentals in Architecture, Somoiya Publications, Bombay (1973)
3. Scott: Design Fundamentals
4. Edward d Mills- Planning the Architects Hand Book – Bitterworth, London, 1985.

2AR07 BUILDING MATERIALS & CONSTRUCTION STUDIO - II

Sessional work: Assignments and drawing on the topics given in the subject 02AR01 Building Materials & Construction-II Viva Voce by external examiner at the end of Semester.

2AR08 ARCHITECTURAL GRAPHICS STUDIO - II

Sessional work: Assignments and drawing on the topics given in the subject 02AR02 **Viva Voce** by external examiner at the end of Semester.

2AR09 CARPENTRY & MODEL MAKING WORKSHOP

Course Objective : To make students aware of the skill of Model making as one of the tool for creative thinking and to understand it's practical application in construction . The students are to made acquainted to the different tools & materials in model making, the quality of materials, its properties and its response.

Unit I: Study and preparations of wooden joineries required in timber constructions.

Unit II: Use of clay, Plaster of Paris, metal scrap, Jute fiber, bamboo sticks, Papier-mache etc. for study of forms.

Unit III: Development of surfaces of simple and composite forms using paper, foam sheets, wire. Model making with different materials.

Unit IV: Introducing various tools, machineries and equipments of model making in card & mount boards, wood – soft wood (e.g. Balsa), teak wood, plywood, mdf, foam & acrylic sheets, aluminum sheets

Unit V: Paintings on Terracotta/ ceramic/ Cloth –items in context with Architectural theme.

Unit VI: Carvings on Soap/ Soft wood/ Chalk, etc based on Historical theme.

Sessional work: Assignments and drawing on the above topics.

Viva Voce - by external examiner at the end of Semester.

References:

1. Wenninger (Magrus.J.) Spherical Models, Cambridge University Press, 1979.
2. John W. Mills, The Technique of Sculpture, B.T.Batsford Ltd., New York Reinhold Publishing Corpn., London, 1966.
