



Balwant Sheth School of Architecture

B.Arch

- **Program Educational Objectives (PEOs)**
- **Program Outcomes (POs)**
- **Course Outcomes (COs)**

Program Educational Objectives (PEOs):

1. **Professional Skills**
2. **Career Growth**
3. **Higher Studies**

Program Outcomes (POs):

PO-1: Continuous workshops, guest lecture series participation by prominent Indian and international Artists, Architects and Project policy planners.

PO-2: Practicing architects, engineers, project managers and experts from the industry would participate as the visiting faculty.

PO-3: Modern, electronic, comfortable studios, physical and electronic library, e-learning and wireless connected campus

PO-4: Opportunity exists for studios and exchange programs in India and abroad with live projects during summer internship.

Courses and Course Outcomes (COs):

Foundation Workshop - 01

- **CO-1:** To analyse and perceive complex objects and dynamic scenarios in their immediate vicinity.
- **CO-2:** To interpret them through various two and three-dimensional representations.

Basic Design Studio- 01

- **CO-1:** Understand properties of various materials.
- **CO-2:** Interpret the explorations in 3D forms .
- **CO-3:** Create various objects.

Digital Design- 01

- **CO-1:** Draw, Illustrate and demonstrate representation skills and technique required for explaining ideas, concepts, Architectural drawings and mapping.

Graphics - 01

- **CO-1:** Acquiring all necessary skills to sketch and draft to scale; Knowledge of 2D projections.
- **CO-2:** Ability to perceive and represent object and space.
- **CO-3:** Develop an attitude of drawing to aid in the Design Studio.

Humanities-01

- **CO-1:** Examine the socio-cultural, political, economic, and historic setting of a society as a cause and consequence of architecture.
- **CO-2:** Relate evolution of human society to evolution of Architecture.

Advance Workshop - 01

- **CO-1:** Work with tools and machines.
- **CO-2:** Use knowledge of material and joineries for design applicability and develop an attitude towards refined model making for design projects.

Building Construction-01

- **CO-1:** Acquire the skill to perceive, draw and differentiate between types of construction system and construction techniques.
- **CO-2:** Identify, label and select the alternative materials used in vernacular architecture based on region.
- **CO-3:** Create models (hands on) with these materials.

Structures - 01

- **CO-1:** Acquiring knowledge basic mechanics and its use in engineering.

Illustration - 01

- **CO-1:** Iterate on representations using lateral thinking tools.
- **CO-2:** Apply and hone their skills using analogue or digital methods of illustration.
- **CO-3:** Understand the professional process of getting a client brief to publishing an illustration.

Photography - 01

- **CO-1:** Break down photography concepts .
- **CO-2:** Apply and hone their skills using analogue or digital methods of photography.
- **CO-3:** Understand the professional application of photography in architecture.

Pottery - 01

- **CO-1:** To strengthen cognitive and abstraction abilities.

Printmaking - 01

- **CO-1:** Implement basic methods of relief print, serigraphy, collography, lithography, monoprint.
- **CO-2:** Iterate on representations using lateral thinking tools.
- **CO-3:** Understand the traditional process of printing.

Specialization Studio - 01

- **CO-1:** Identification of the elements of Architecture observed and learnt.
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography.
- **CO-3:** Integration of classroom learning with field trips.
- **CO-4:** Communication of the learnings through skills developed.
- **CO-5:** Analyze and demonstrate by way of reports/case studies.

Architectural Design - 01

- **CO-1:** The Studio would build conceptual and application skills towards different contexts and programs through design.

Basic Design - 01

- **CO-1:** Understand various systems, mechanisms and materials.
- **CO-2:** Interpret the explorations in 3D forms.
- **CO-3:** Create various objects and space.

Digital Design - 02

- **CO-1:** To draw and draft, understand universal layers / standards of technical drawings and execute plotting / printing at various scales.

Building Construction - 02

- **CO-1:** To perceive, draw, compare and differentiate between types of construction system and construction techniques.
- **CO-2:** Identify and draw different components of structures.
- **CO-3:** Utilize the concepts realized to evaluate the architectural structure and represent the same in terms of drawing or documentation.
- **CO-4:** Analyze, represent and build the structural details through scaled models.

Building Materials - 01

- **CO-1:** Classify the materials w.r.t to their Properties and characteristics as a foundational learning to conceive architectural construction process.

- **CO-2:** Evaluate the potential of materials and their application in local and global architectural and allied design practices.
- **CO-3:** Comparing different materials and choosing the most sustainable ones.

Structures - 02

- **CO-1:** Application of basic theories and principles of structural analysis to structural design.

History of Architecture – 01

- **CO-1:** Development of fresh perspective towards history and equipment of skillsets for the same.

Elements of Architecture - 01

- **CO-1:** Decode the complex relationship of Architectural spaces with the human scale & perception, and employ the learnings to defend design standpoints.
- **CO-2:** Effectively interpret and communicate theoretical and practical facets of Architectural space-making.
- **CO-3:** Articulate the intent of Architectural space-making and discover the new ways of interpreting build forms.

Graphics - 02

- **CO-1:** Acquire all necessary skills to measure and represent space in 2D and 3D.
- **CO-2:** Acquire knowledge of reading and crafting Visuals.
- **CO-3:** Develop an attitude to represent and abstract any object or space.
- **CO-4:** Create and compose drawings of any physical object and/or space.

Illustration - 02

- **CO-1:** Break down literary narrative.
- **CO-2:** Iterate on representations using lateral thinking tools.
- **CO-3:** Apply and hone their skills using analogue or digital methods of illustration.
- **CO-4:** Understand the professional process of getting a client brief to publishing an illustration.

Photography - 02

- **CO-1:** Break down photography concepts.
- **CO-2:** Apply and hone their skills using analogue or digital methods of photography.
- **CO-3:** Understand the professional application of photography in architecture.

Pottery - 02

- **CO-1:** To strengthen cognitive and abstraction abilities.

Printmaking - 02

- **CO-1:** Implement basic methods of relief print, serigraphy, collography, lithography, monoprint.
- **CO-2:** Iterate on representations using lateral thinking tools.
- **CO-3:** Understand the traditional process of printing.

Specialization Studio - 02

- **CO-1:** Identification of the elements of Architecture observed and learnt.
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography.
- **CO-3:** Integration of classroom learning with field trips.
- **CO-4:** Communication of the learnings through skills developed.
- **CO-5:** Analyse and demonstrate by way of reports/case studies.

Design Research and Publications - 01

- **CO-1:** Documentation and analysis.

Design Workshop – 01

- **CO-1:** Research and analyse various systems in nature
- **CO-2:** Design based on their analysis of research
- **CO-3:** Build full scale models of their design

Interior Design – 01

- **CO-1:** Understand user related spatial dynamics and develop design strategies for interior space.
- **CO-2:** Use modern computer and machine tools to design.
- **CO-3:** Design and develop complex, sustainable, experiential etc. solutions for the interior space.

Digital Design - 03

- **CO-1:** Illustrate with drafting, modelling, rendering and presentation software.
- **CO-2:** Produce design ideas through 3D modelling and rendering tools.

Building Construction – 03

- **CO-1:** Understand and perceive the skill to represent the structural system in timber.
- **CO-2:** Analyze application of acquired technical data for various structures and its components.

Building Materials - 02

- **CO-1:** Classify the materials w.r.t to their Properties and characteristics as a foundational learning to conceive architectural construction process.
- **CO-2:** Evaluate the potential of materials and their application in local and global architectural and allied design practices.
- **CO-3:** Comparing different materials and choosing the most sustainable ones.

Structures - 03

- **CO-1:** Application of basic theories and principles of structural analysis to structural design.

Climatology – 01

- **CO-1:** Understand the relationship between, climate, built space and comfort.
- **CO-2:** Interpret climate data, undertake city specific climate analysis.
- **CO-3:** Evaluate buildings for its climate responsiveness.

- **CO-4:** To develop passive design strategies in response to climate and site context.

Survey and Leveling - 01

- **CO-1:** Analyze site conditions for adoption of method for surveying and levelling.
- **CO-2:** Apply the knowledge of geographic topography to refine their design skills.

History of Architecture - 02

- **CO-1:** To describe, explain, compare and contrast various cases from architecture and design in human civilization across time as a way of developing a responsible and critical design practice.
- **CO-2:** Discuss, illustrate, and explain the relationships between architecture and society through case studies as well as theoretical references.
- **CO-3:** Outline, classify, explain, and synthesize cases as well as theoretical positions towards a contemporary architecture practice.

Humanities – 02

- **CO-1:** Examine the socio-cultural, political, economic, and historic setting of a society as a cause and consequence of architecture.
- **CO-2:** Relate evolution of human society to evolution of Architecture.
- **CO-3:** Draw a relationship between national and Global events.

Graphics - 03

- **CO-1:** Acquiring all necessary skills to sketch and draft to scale to aid in the design studio.

Drawing The Language Of Architecture- 03

- **CO-1:** To translate and express their own thoughts and ideas into graphic visualizations.

Film Analysis -01

- **CO-1:** Build objects/products with complex joints.
- **CO-2:** Iterate on joineries, connections, tectonics using different kinds of processes like welding, casting, carving, routing etc.
- **CO-3:** Correlate traditional craft process of various materials with contemporary fabrication processes.

Material Workshop -01

- **CO-1:** Build objects/products with complex joints.
- **CO-2:** Iterate on joineries, connections, tectonics using different kinds of processes like welding, casting, carving, routing etc.

Printmaking – 03

- **CO-1:** Implement basic methods of relief print, serigraphy, collography, lithography, monoprint.
- **CO-2:** Iterate on representations using lateral thinking tools.
- **CO-3:** Understand the traditional process of printing.

Vernacular Crafts – 03

- **CO-1:** Soft skills: cultural relationships with products.
- **CO-2:** Breaking down apparent visual forms to it's fundamental building process.
- **CO-3:** Hard skills: experiments with varying materials and processes building techniques.

Specialization Studio – 03

- **CO-1:** Identification of the elements of Architecture observed and learnt.
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography.
- **CO-3:** Integration of classroom learning with field trips.
- **CO-4:** Communication of the learnings through skills developed.
- **CO-5:** Analyze and demonstrate by way of reports/case studies.

Architectural Design - 02

- **CO-1:** To build conceptual and application skills towards different contexts and programs through design.

Digital Design - 04

- **CO-1:** Understand various modelling techniques in Rhinoceros3D.
- **CO-2:** Apply surface modelling commands to create objects/Furniture and develop techniques to model built architectural projects.
- **CO-3:** Design a 3D model of habitable space using Rhinoceros3D.

Building Construction - 04

- **CO-1:** Utilize the concepts of RCC Construction realized, to evaluate the architectural structures and represent the same in terms of drawing and documentation.
- **CO-2:** Analyze, represent and build the structural details through scaled models and working with the material.

Building Materials – 03

- **CO-1:** Classify the materials w.r.t to their Properties and characteristics as a foundational learning to conceive architectural construction process.
- **CO-2:** Evaluate the potential of materials and their application in local and global architectural and allied design practices.
- **CO-3:** Comparing different materials and choosing the most sustainable ones .

Structures - 04

- **CO-1:** Able to design and detail low rise and low span structures.

Services – 01

- **CO-1:** Apply their learnings reinforced by market surveys and case studies to design

- **CO-2:** Communicate effectively through drawings Building Services with respect to Plumbing for their Design Projects

History of Architecture – 03

- **CO-1:** To describe, explain, compare and contrast various cases from architecture and design in human civilization across time as a way of developing a responsible and critical design practice.
- **CO-2:** Discuss, illustrate, and explain the relationships between architecture and society through case studies as well as theoretical references.
- **CO-3:** Outline, classify, explain, and synthesize cases as well as theoretical positions towards a contemporary architecture practice.

Theory of Design – 01

- **CO-1:** Develop a critical understanding of the production of architecture.
- **CO-2:** Define a range of approaches to interpret and expand their knowledge along historical, cultural and political lines.

Public Space Design – 01

- **CO-1:** Acquiring the skill of developing architectural solutions not in isolation but integrating community spaces within.
- **CO-2:** Develop design responses to social, cultural, aesthetic and utilitarian aspects of public spaces.

Drawing The Language Of Architecture - 04

- **CO-1:** To translate and express their own thoughts and ideas into graphic visualizations.

Film Analysis - 02

- **CO-1:** Build objects/products with complex joints
- **CO-2:** Iterate on joineries, connections, tectonics using different kinds of processes like welding, casting, carving, routing etc

- **CO-3:** Correlate traditional craft process of various materials with contemporary fabrication processes

Material Workshop - 02

- **CO-1:** Build objects/products with complex joints.
- **CO-2:** Iterate on joineries, connections, tectonics using different kinds of processes like welding, casting, carving, routing etc.
- **CO-3:** Correlate traditional craft process of various materials with contemporary fabrication processes.

Printmaking - 04

- **CO-1:** Implement basic methods of relief print, serigraphy, collography, lithography, monoprint
- **CO-2:** Iterate on representations using lateral thinking tools
- **CO-3:** Understand the traditional process of printing

Vernacular Crafts – 04

- **CO-1:** Soft skills: cultural relationships with products
- **CO-2:** Breaking down apparent visual forms to it's fundamental building process
- **CO-3:** Hard skills: experiments with varying materials and processes building techniques

Specialization Studio – 04

- **CO-1:** Identification of the elements of Architecture observed and learnt
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography
- **CO-3:** Integration of classroom learning with field trips
- **CO-4:** Communication of the learnings through skills developed
- **CO-5:** Analyse and demonstrate by way of reports/case studies

Design Research and Publications -02

- **CO-1:** Documentation and analysis.

Architectural Design - 03

- **CO-1:** To build conceptual and application skills towards different contexts and programs through design.

Building Construction - 05

- **CO-1:** Acquiring all necessary skills to work with various materials and structural system for construction.

Working Drawings - 01

- **CO-1:** Acquiring all necessary skills to prepare executable drawings for site and BOQ preparation
- **CO-2:** To prepare architectural drawings for site execution.

Structures - 05

- **CO-1:** Application of principles of high rise and construction of advance foundations.

Services - 02

- **CO-1:** Applying in Architectural design and preparing layout and details

Quantity Surveying - 01

- **CO-1:** Applying in Architectural design and preparing BOQ.

History of Architecture - 04

- **CO-1:** Study and analysis of Indian history with respect to its architecture.

Theory of Design - 02

- **CO-1:** Develop a critical understanding of the production of architecture and to offer the students a range of approaches to interpret and expand their knowledge along historical, cultural and political lines.

Digital Design Studio - 01

- **CO-1:** To undertake Computational analysis to develop design outcome.

Art Appreciation - 01

- **CO-1:** The skills acquired through the elective modules strengthen their Cognitive, abstraction abilities and broader approach to Design.

Art and Design - 01

- **CO-1:** The skills acquired through the elective modules strengthen their Cognitive, abstraction abilities and broader approach to Design.

Coding & Scripting - 01

- **CO-1:** Create their digital and Physical catalogue generated using Grasshopper for Rhinoceros 3D. (Individual Project) Learning new ways of form finding using algorithmic modelling techniques.

Innovation Design - 01

- **CO-1:** Demonstrate a research oriented, critical and collaborative design process
- **CO-2:** Find opportunities for new design activity, build ways of engagement
- **CO-3:** Learn to collaborate with users and stakeholders to generate responses to emerging problems

Specialization Studio - 05

- **CO-1:** Identification of the elements of Architecture observed and learnt
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography.
- **CO-3:** Integration of classroom learning with field trips
- **CO-4:** Communication of the learnings through skills developed
- **CO-5:** Analyse and demonstrate by way of reports/case studies

Design Research and Publications - 03

- **CO-1:** Documentation and analysis.

Architectural Design - 04

- **CO-1:** To build conceptual and application skills towards different contexts and programs through design.

Landscape Design - 01

- **CO-1:** Discover and determine appropriate design process and strategies to address to the interface of built and un built spaces.

Digital Design - 05

- **CO-1:** Acquiring all necessary skills to work with drafting, modeling, rendering and presentation software to aid in the design studio.

Graphics - 04

- **CO-1:** Acquiring all necessary skills to sketch and draft to scale to aid in the design studio.

Building Construction - 06

- **CO-1:** Acquiring all necessary skills to work with various materials and structural system for construction.

Working Drawings - 02

- **CO-1:** Acquiring all necessary skills to prepare executable drawings for site and BOQ preparation.

Structures - 06

- **CO-1:** Application of theories of analysis and design of shell structures and special structures.

Specifications - 01

- **CO-1:** Applying in Architectural design and preparing BOQ.

Bye Laws – 01

- **CO-1:** Applications to Understand and implement local body building byelaws and submission procedures for approvals.

Innovation Design – 02

- **CO-1:** Demonstrate a research oriented, critical and collaborative design process
- **CO-2:** Find opportunities for new design activity, build ways of engagement
- **CO-3:** Learn to collaborate with users and stakeholders to generate responses to emerging problems

Advance Basic Design – 02

- **CO-1:** Be exposed to and implement lateral thinking skills
- **CO-2:** Hone their material skills

Art and Design – 02

- **CO-1:** Visual formal analysis
- **CO-2:** Form associations between visual culture in art and technology
- **CO-3:** Analyze methodologies followed by artists

Urbanisation – 01

- **CO-1:** Understand Urban theory & history
- **CO-2:** Understand and analyse relationship between the urban fabric and society

Specialization Studio – 06

- **CO-1:** Identification of the elements of Architecture observed and learnt.
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography
- **CO-3:** Integration of classroom learning with field trips
- **CO-4:** Communication of the learnings through skills developed
- **CO-5:** Analyse and demonstrate by way of reports/case studies

Design Research and Publications-04

- **CO-1:** Documentation and analysis.

Architectural Design -05

- **CO-1:** To build conceptual and application skills towards different contexts and programs through design.

Urban Theory-01

- **CO-1:** To develop a theoretical and spatial understanding of urbanism and urban systems.

Building Construction-07

- **CO-1:** Acquiring all necessary skills to work with various materials and structural system for construction.

Advance Structures-01

- **CO-1:** Acquiring all necessary skills to work with various materials and structural system for construction.

Advance Services-01

- **CO-1:** Applying in Architectural design and preparing layout and details

Professional Practice -01

- **CO-1:** Acquiring knowledge for practice

Ecological Design-01

- **CO-1:** Undertake Ecological site analysis skills so as to develop sustainable environment design strategies.

Design Research and Publications-01

- **CO-1:** Leads towards Research for Design Dissertation

Cultural study of Bldgs. – 01

- **CO-1:** The elective modules are practice oriented and strengthen their Critical thinking skills and application

Indian Aesthetics – 01

- **CO-1:** Reading and understanding the meaning of art forms

Sustainable Architecture – 01

- **CO-1:** The elective modules are practice oriented and strengthen their Critical thinking skills and application

Sustainable Bldg. Skins – 01

- **CO-1:** The elective modules are practice oriented and strengthen their Critical thinking skills and application

Urban Sociology – 01

- **CO-1:** Critically engage with the peculiarities of urban studies particular in the global south.
- **CO-2:** To develop a fundamental bearing towards independent thinking and writing about the city.

Specialization Studio – 07

- **CO-1:** Identification of the elements of Architecture observed and learnt.
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography
- **CO-3:** Integration of classroom learning with field trips
- **CO-4:** Communication of the learnings through skills developed
- **CO-5:** Analyse and demonstrate by way of reports/case studies

Architectural Design-06

- **CO-1:** To build conceptual and application skills towards different contexts and programs through design

Urban Design-01

- **CO-1:** To understand the demands of a growing city and its issues and design in ways that encourage innovative, cross-disciplinary thinking and learn to develop innovative urban design processes and tools.

Building Construction and Materials – 01

- **CO-1:** Acquiring all necessary skills to work with various materials and structural system for construction

Advance Working Drawings-01

- **CO-1:** Acquiring all necessary skills to prepare executable drawings for site and BOQ preparation.
- **CO-2:** To prepare architectural drawings for site execution.

Professional Practice-02

- **CO-1:** Acquiring knowledge for practice

Research Methodology-01

- **CO-1:** Leads towards Research for Design Dissertation

Advance Services-02

- **CO-1:** Understanding Application of Advance services, technology in practical design

Cultural study of Bldgs. - 02

Geographic Information Systems & Architecture – 01

- **CO-1:** Access & Utilise Geo data to make accurate site surveys and urban interventions at specific sites
- **CO-2:** Read and design maps of varying scales and types
- **CO-3:** Understand the contribution of Geography, cartography in architecture

Sociology – 02

- **CO-1:** The elective modules are practice oriented and strengthen Critical thinking skills and application.

Sustainable Architecture – 02

- **CO-1:** The elective modules are practice oriented and strengthen Critical thinking skills and application.

Sustainable Bldg. Skins – 02

- **CO-1:** The elective modules are practice oriented and strengthen Critical thinking skills and application.

Urban Sociology – 02

- **CO-1:** Critically engage with the peculiarities of urban studies particular in the global south
- **CO-2:** To develop a fundamental bearing towards independent thinking and writing about the city.

Writing in Architecture – 02

- **CO-1:** To identify different forms of writing in architecture and also differentiate one form from the other, understanding the need and relevance of each form of writing
- **CO-2:** To relate architectural arguments and projects to mechanisms specific to the discipline
- **CO-3:** To construct a clearly defined and structured argument which establishes and develops the student's view of a specific problem, through writing

Specialization Studio – 08

- **CO-1:** Identification of the elements of Architecture observed and learnt
- **CO-2:** Demonstration of the understanding/learnings of the trips through exhibition of sketches/photography
- **CO-3:** Integration of classroom learning with field trips
- **CO-4:** Communication of the learnings through skills developed
- **CO-5:** Analyse and demonstrate by way of reports/case studies

Design Research and Publications-05

- **CO-1:** Documentation and analysis

Design Dissertation-01

- **CO-1:** Independent development of a project from concept to completion
- **CO-2:** Modification of Research and Case Studies for an architectural project
- **CO-3:** Compare, Analysis, Document research and case studies for an architectural idea and building program

Allied Seminar-01

- **CO-1:** To incorporate research, technology, services and sustainability in the process and design outcome.

Conservation – 01

- **CO-1:** To strengthen analytical abilities, critical thinking and practical application.

Economics – 01

- **CO-1:** To strengthen analytical abilities, critical thinking and practical application.

Project / Construction Management – 01

- **CO-1:** To strengthen analytical abilities, critical thinking and practical application.

Sociology – 03

- **CO-1:** To strengthen analytical abilities, critical thinking and practical application.

Urban Sociology – 03

- **CO-1:** Critically engage with the peculiarities of urban studies particular in the global south.
- **CO-2:** To develop a fundamental bearing towards independent thinking and writing about the city

Design Dissertation – 02

- **CO-1:** To develop strategies and processes to transfer ideas and research results into a building design idea
- **CO-2:** Develop architectural ideas to shape design strategies and philosophical / other ideas / concerns
- **CO-3:** Resolve a building ready for occupation and construction
- **CO-4:** Develop design theory stages of architectural, structural and design aspects

Professional Practice (Training)

- **CO-1:** To familiarize with architectural practice in an architect's office / studio, site, consultant office etc
- **CO-2:** To Study and analyze work in an office and on site
- **CO-3:** Familiarization and analysis of architectural work in contemporary India

