Re-Accredited 'B++' 2.86 CGPA by NAAC
VEER NARMAD SOUTH GUJARAT UNIVERSITY
University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી
યુનિવર્સિટી કેમ્પસ, ઉધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.
Tel : +91 - 261 - 2227141 to 2227146, Toll Free : 1800 2333 011, Fax : +91 - 261 - 2227312
E-mail : info@vnsgu.ac.in, Website : www.vnsgu.ac.in

ક્રમાંકઃઓથો./બી.આર્ક./સિલેબસ/૨૭૫૦૪/૨૦૨૫
તા.૩૦/૧૦/૨૦૨૫

પ્રતિ,
આચાર્યશ્રી,
શ્રી જી.સી.પટેલ ઈન્સ્ટીટયૂટ ઓફ આર્કિટેકચર,
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી,
સુરત.

વિષયઃ– Bachelor of Architecture નાં સેમ.–૧ થી ૧૦ નાં અભ્યાસક્રમ અંગે.

સુજ્ઞશ્રી,

સવિનય જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૨–૨૩ થી અમલમાં આવેલ Bachelor of Architecture ના અભ્યાસક્રમને શૈક્ષણિક વર્ષ ૨૦૨૫–૨૬ થી યુનિવર્સિટીના નિયત ફોર્મેટમાં જરૂરી સુધારા–વધારા સાથે સેમેસ્ટર –૧ થી ૧૦ નો અભ્યાસક્રમ અને પરીક્ષા સ્કીમને આર્કિટેકચર વિદ્યાશાખા ઈ.ચા. ડીનશ્રીએ આર્કિટેકચર વિદ્યાશાખા વતી તૈયાર કરી મંજૂર કરવા એકેડેમિક કાઉન્સિલને ભલામણ કરેલ છે. જે એકેડેમિક કાઉન્સિલની તા.૨૪/૧૨/૨૦૨૪ની સભાનાં ઠરાવ ક્રમાંક : ૩૫૩ અન્વયે માન. કુલપતિશ્રીને આપેલ સત્તા અંતર્ગત માનનીય કુલપતિશ્રી ધ્વારા મંજૂર કરેલ છે. જે Bachelor of Architecture નો સંપૂર્ણ અભ્યાસક્રમ આ સાથે સામેલ છે. જેનો અમલ કરવા આથી જાણ કરવામાં આવે છે.

બિડાણ : ઉપર મુજબ

કુલસચિવ વતી

પ્રતિ,
૧) ઈ.ચા.ડીનશ્રી, આર્કિટેકચર વિદ્યાશાખા,
૨) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.

...તરફ જાણ તેમજ અમલ સારૂ.

VEER NARMAD SOUTH GUJARAT UNIVERSITY

FACULTY OF ARCHITECTURE

PROGRAM:

BACHLORE OF ARCHITECTURE

REVISED

NEW SYLLABUS & EXAM SCHEME

(EFFECTIVE FROM 2022-2023)

Name of Programme	Bachelor of Architecture
Abbreviation	B. Arch.
Duration	5 years
Admission to B. Arch.	1. The candidate shall be admitted to an architecture programme after passing 10+2 or equivalent examination with Physics and Mathematics as compulsory subjects along with either Chemistry or Biology or Technical Vocational subject or Computer Science or Information Technology or Informatics Practices or Engineering Graphics or Business Studies with at least 45% marks in aggregate or passed 10+3 Diploma Examination with Mathematics as compulsory subject with at least 45% marks in aggregate. 2. Candidates belonging to SC, ST, SEBC (Non-Creamy Layer), and EWS categories shall be eligible with a minimum of 40% aggregate marks, as per the reservation policy of the Government of Gujarat. 3. The candidate needs to qualify Aptitude Test conducted by the Council of Architecture (NATA) or any other approved by the Council. 4. Merit list shall be prepared based on 50% weightage to qualifying exam and 50% weightage to aptitude test for the admission purpose.
Objective of Program	1. To study the evolution of mankind in terms of various geographical, cultural, psychological and socio-economic aspects as determinants of built environment. 2. Learn the technology to build various types of buildings and surroundings by the knowledge of materials, construction techniques using principles of various structural systems and use of digital tools, software, smart buildings and technologies with AI. 3. To learn how to build various structure; functional, stable, aesthetical and sustainable, using the knowledge of technology and principles of visual and applied arts as per the needs and aspirations of the society. The student should also learn designing as per the Development Control Regulations, contexts and climate. 4. To learn how to communicate the design ideas to the stakeholders like; the client, contractors, workers, authorities and the society, through various mediums such as graphical presentation, write-up, verbal and other means of communication including command over digital technology, tools and technical terms. 5. To learn how to render architectural services as per the provisions by the council of Architecture and promote aesthetic, scientific and practical efficiency of the profession.

Program Outcomes	**PO1:** Graduates will demonstrate a comprehensive understanding of architectural theories, principles, history, and contemporary practices. **PO2:** Graduates will be able to apply creative and critical thinking to develop innovative architectural solutions that address user needs and contextual requirements. **PO3:** Graduates will gain technical knowledge of building materials, construction techniques, structures, and building services, and will integrate these into their design process. **PO4:** Graduates will be able to conduct research, analyse data, and synthesize information to inform architectural decision-making. **PO5:** Graduates will effectively communicate architectural ideas and solutions through oral, written, and visual means to diverse audiences. **PO6:** Graduates will understand and uphold professional ethics, responsibilities, and societal values in architectural practice. **PO7:** Graduates will demonstrate awareness of environmental, social, and cultural contexts, and will promote sustainable and inclusive design practices. **PO8:** Graduates will be able to work collaboratively in multidisciplinary teams to address complex architectural challenges.
Program Specific Outcomes	**PSO 1:** Students will develop the ability to design and develop innovative architectural solutions, demonstrating a clear understanding of architectural design principles, elements, and the creative process. **PSO 2:** Students will acquire proficiency in building materials, construction techniques, structural systems, and building services (such as plumbing, electrical, and HVAC systems), enabling them to integrate technical considerations into architectural design. **PSO 3:** Students will gain knowledge of urban design principles, urban planning strategies, sustainable development, and smart city

<table>
<tr><td></td><td>concepts, preparing them to contribute to the creation of resilient and sustainable built environments.

PSO 4: Students will develop the ability to communicate architectural ideas and solutions through various sources, and will learn to work collaboratively in multidisciplinary teams to address complex design challenges.

PSO 5: Students will understand professional ethics and responsibilities, and will acquire knowledge of project management principles and practices, equipping them for successful careers in the field of architecture.</td></tr>
<tr><td>Mapping Between PO and
PSO</td><td>
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>PO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO5</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO6</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO7</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PO8</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Medium</td><td>English</td></tr>
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SEMESTER - 1

Basic Design – I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Basic Design – I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To enable students to apply fundamental principles and elements of design in creating meaningful relationships between buildings, users, and their environment.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To develop creativity and problem-solving skills by applying basic design principles, colour theories, and elements through hands-on exercises to encourage exploration, experimentation, and innovative thinking.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to understand elements and principles of visual arts.

CO2: Students will develop the ability to observe and interpret visual and spatial relationships in the nature and apply into designing built form.

CO3: Students will demonstrate skills in translating abstract concepts into two-dimensional and three-dimensional design compositions.

CO4: Students will gain proficiency in using various tools, media, and techniques to express design ideas effectively.

CO5: Students will be able to analyse basic design works, including their own and others’, using appropriate design vocabulary and reasoning.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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Prerequisite	Nil
Course Content	**Unit 1: Elements and Principles of Spatial and Volumetric Composition** • Introduction to art-related basic terminologies. • Understanding elements and principles of design in spatial and volumetric composition. • Exercises in arranging and composing 2D and 3D forms. **Unit 2: Colour Theories and Applications** • Introduction to colour palette: primary, secondary, and tertiary colours. • Exploration of colour schemes and contrasts. • Activities to translate abstract ideas into tangible forms. • Exercises in visual expression using psychology of colour perception in design. **Unit 3: Materials, Media, and Visual Literacy** • Experiments with light and shadow analysis of simple compositions. • Sketching light and shade, exploring quality of light on geometric volumes. • Creation of spatial models using linear parts, planar surfaces, and solids. • Use of diverse materials and textures in model making. • Photo documentation and sketching of models for visual literacy. **Unit 4: Scale and Proportion in Design** • Understanding human scale as a reference in design. • Proportion: relationships of height, width, depth, and spacing for harmony. • Study of Golden Ratio, Modular, and Fractal Geometry. • Exercises in applying scale and proportion to spatial compositions.
Reference Books	**Book Name** — **Author Name** Form, Space and Order — Francis D.K. Ching Experiencing Architecture — Stein Eiler Rasmussen Rendering with Pen and Ink — Robert Gill Architecture: Scale and Proportion — Eugene Ruskin Lateral Thinking — Edward De Bono
Teaching Methodology	Sketching, Colour Wheel, hands on art and craft.
Evaluation Method	50% Internal assessment, 50% External assessment

Architectural Design Studio I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Design Studio I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop foundational design skills by exploring form, space, and visual expression through the fundamental elements and principles of design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To introduce the basic elements and principles of design, while developing their ability to observe, extract, and creatively interpret forms and spaces. It aims to build foundational skills in visual expression, spatial organization, and conceptual thinking.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to develop understanding of the fundamental elements and principles of design.

CO2: To observe, analyse, and extract visual and spatial information from the environment to develop design ideas.

CO3: Students will be able to generate conceptual design solutions through interactive processes involving drawing, model making, and exploration of materials.

CO4: Students will be able to understand spatial relationships, form, function, and human scale.

CO5: Students will be able to communicate design ideas effectively using appropriate visual and verbal techniques.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
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<table>
<tr><td>Course Content</td><td>Unit 1: Fundamentals of Spatial Understanding
Understanding the role of point → line → plane → volume → space in architecture.
Exploring the transformation of geometric concepts into spatial compositions.
Introduction to positive and negative space in design.
Unit 2: Principles of Architectural Composition
Principles of 2D and 3D composition, human scale, abstraction, and sensory stimuli as components of architectural design.
Introduction to architectural terminology.
Unit 3: Volumetric compositions
Understanding simple platonic volumes through models and representation drawings.
Experiencing structural stability through stick and string models with drawings.
Unit 4: Scale, measurement and proportion(Anthropometric)
Introduction to scaling, measurement formats, proportion studies, analysis of simple function and creation of a utilitarian space.
Unit 5: Project Presentation
Seminars and exercises on art, music and the deliberation of abstraction into tangible forms with real life examples. Discussions and analysis on the elements of art and design.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Form, Space and Order</td><td>Francis D.K. Ching</td></tr><tr><td>Experiencing Architecture</td><td>Stein Eiler Rasmussen</td></tr><tr><td>Ways of Seeing</td><td>John Berger</td></tr><tr><td>Rendering with Pen and Ink</td><td>Robert Gill</td></tr><tr><td>Architecture: Scale and Proportion</td><td>Eugene Ruskin</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Model making, Drawings, Workshops</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
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Building Materials and Construction I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Materials And Construction - I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To explore fundamental building materials, structural systems, and construction techniques to understand how buildings are built and function.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To develop an understanding of fundamental building materials, building elements, structural systems and their functional behaviour with focusing Masonry and foundation systems in building construction.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will gain an understanding of the properties and applications of basic construction materials for appropriate use in building construction.

CO2: Students will be able to explain the key components of building structures, including both substructure and superstructure.

CO3: Students will learn different methods, techniques of construction and suitability for various building types.

CO4: Students will be able to learn different types of brick and stone masonry in forms of bonds and construction techniques.

CO5: Students will understand the design and construction of building openings and various forms of arches.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
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<table>
<tr><td>Course Content</td><td>Unit 1: Introduction to Basic Materials
Study of basic materials of construction such as sand, cement, lime, aggregates; brick stone their structural & physical behaviour with respect to its properties & application in building.
Unit 2: Introduction to Components of Buildings
Study of various core-building components and their functions like foundations, walls and columns, arches, vaults, domes, exterior skins of buildings, roofing, openings, etc.
Unit 3: Concept of Building Structural Systems:
Introduction to the different building structural systems such as Load Bearing, Framed Structure and Composite Structure.
Unit 4: Brick and Stone Masonry:
Study types and properties of bricks, brick bonds and their application and advantages/Disadvantages.
Study types and properties of stones, stone masonry and their application and advantages/Disadvantages.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Building Construction</td><td>B.C. Punmia</td></tr><tr><td>Building Construction (Vol-I-IV)</td><td>W.B. McKay</td></tr><tr><td>Building Construction</td><td>S.C. Rangwala</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>On board tutorials, Presentations, Sheet Drafting, Observations at execution site visits and related case studies.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
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Architectural Graphical Skill - I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Graphical Skill I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">04 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop drawing skills to communicate design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To develop foundational skills in the presentation of geometric forms and compositions as tools for design communication.
• To develop essential skills to prepare technical and architectural drawings manually or computer aided for effective design communication.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will develop proficiency in manual drafting by using drawing instruments, line compositions, lettering techniques, and architectural abbreviations.

CO2: Students will apply geometric principles to create orthographic, isometric, axonometric, and oblique projections for accurate architectural representation.

CO3: Students will demonstrate competence in computer-aided design (CAD) by preparing technical drawings, representations of geometry, and architectural compositions using digital tools.

CO4: Students will integrate manual and digital drawing methods, employing software tools for effective architectural presentation and communication.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
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<table>
<tr><td>Course Content</td><td>Unit 1: Introduction to Manual Drawing
Familiarization with drawing materials and equipment.
Construction, use, and composition of different types of lines in drawing preparation.
Lettering techniques and architectural abbreviations.
Unit 2: Principles of Geometry in Architectural Drawing
Basic principles of geometry and its construction.
Orthographic projections of points, lines, planes, and solids.
Understanding the multi-view drawing system.
Isometric, Axonometric and Oblique.
Unit 3: Fundamentals of Computer-Aided Drawing (CAD)
Familiarization with different Computer-Aided Design software and their use in architectural representation.
Application of principles of technical representation and construction in digital drawing.
Representation of different types of lines, shapes, geometry, and their compositions using software such as AutoCAD.
Unit 4: Digital Presentation Tools for Architecture
Introduction to software such as PowerPoint, Photoshop, and Google Sketch Up as tools to develop architectural presentation skills.
Integration of manual and computer-aided drawings for comprehensive architectural representation.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Graphic Thinking for Architects and Designers</td><td>Paul Laseau</td></tr><tr><td>Graphics in Architecture</td><td>Francis D.K. Ching</td></tr><tr><td>Design Drawing</td><td>Francis D.K. Ching</td></tr><tr><td>Architectural Drawing</td><td>Rendow Yee</td></tr><tr><td>Engineering Drawing</td><td>N.D. Bhatt</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Drawings, Model making, and Tutorial.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Structural Design Systems I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Structural Design Systems I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To make the students aware of Applied Mechanics and Structural systems mainly statics, dynamics, kinematics, kinetics & mechanics of solids.</td></tr>
<tr><td>Course Objective</td><td colspan="3">● To provide the fundamental knowledge of Applied Mechanics, Structural Systems & Analysis.
● To acquaint students with concepts of Basics Engineering Mechanics and its applications on the Building components and systems.
● To analyse and understand fundamentals of different structural systems.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: A student will gain comprehensive knowledge of the fundamental components of Basic Applied Mechanics.

CO2: A student will develop understanding of different forms of forces and their systems.

CO3: A student will learn diverse forces employed in Equilibrium, Resultant, Simple Stress and Strain.

CO4: A student will be able to interpret the flexural elements, including beams and trusses, along with their applications.

CO5: A student will develop understanding of determinate and indeterminate structures, to be will applied for a suitable structural analysis method.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
</table>

Prerequisite	
Course Content	**Unit 1:** **1.1 Introduction** 1.1.1 Introduction Fundamental principles of Engineering Mechanics, Newton's laws of motion, law of parallelogram of forces, principle of transmissibility, concept of rigid body particle. **1.2 Natural forms** 1.2.1 Understanding Nature a creative base for understanding structure, correlation between Natural & manmade structure. **Unit 2:** **2.1 Forces** 2.1.1 Introduction to types of forces, Static loading, Time dependent loading, Impact loading, Cause & effect of various forces like Dead load, Imposed load, Wind load, Earthquake load, Hydrostatic load, erection force etc. on building. Effect of physical form on load transfer i.e. Forces acting through point, distributed forces on line & area. **2.2 Force systems** 2.2.1 Free body diagram, Resolution of forces into components, Types of force systems, Concurrent, coplanar, non-concurrent, etc. Forces in plane & space. Calculation of resultant for coplanar parallel & coplanar concurrent force system, calculation of moment. **Unit 3:** **3.1 Equilibrium** 3.1.1 Introduction to Equilibrium, Conditions of **equilibrium** for the coplanar parallel & coplanar concurrent force system, Types of supports, Determinacy, & Stability, Basic **behaviour** of elements in load transfer i.e. Bending, torsion, shear, tension, compression, etc. **3.2 Simple stresses & strain :** 3.2.1 Introduction, behaviour of material under loading, stress & strain due to axial force, Hook's law, working stress, Ultimate stress, factor of safety, permissible stress, lateral strain. **Unit 4:** **4.1 Beam** 4.1.1 Introduction as a flexural element, simply supported, overhanging & cantilever beams, determinacy, calculation of reaction at supports for beam and their application. **4.2 Truss** 4.2.1 Introduction, Types of truss, Analysis of a plane truss. Use of graphical method for plane truss.

<table>
<tr><td></td><td>Introduction to Space truss, Application.

Unit 5:
5.1 Shear force & Bending moment diagram:
5.1.1 Determinate Beams : Introduction to shear force, bending, calculation of Shear force & bending moment for beams subjected to various types of load combination i.e. point load, distributed load with various support conditions like simply supported, overhanging, cantilever, etc. Relationship between bending moment & shear force diagram, Determination of point of contra flexure, Application of Shear force & bending moment diagram.

5.1.2 Shear force & Bending moment diagram for Determinate & Indeterminate:
Plane Frames & Arches: Behaviour of Statically determinate & Indeterminate plane frames subjected to gravity & lateral load. Basic understanding of shear force & bending moment diagram for the same. Behaviour of three hinges & two hinge Arch under point load and uniformly distributed force Understanding of bending moment diagram for Arches.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Vector Mechanics for Engineers – Statics</td><td>Bear & Johnston</td></tr><tr><td>Engineering Mechanics, Statics & Dynamics</td><td>Desai & Mistry</td></tr><tr><td>Seeking Structure from Nature</td><td>Jeffery Cook</td></tr><tr><td>Engineering Drawing</td><td>N.D. Bhatt</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Theory, Tutorial, Presentation and Assignment.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Humanities - I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Humanities - I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To understand mankind, evolution and formation of societies in terms of needs and aspirations to create human centric design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To examines key social theories and perspectives that help in understanding evolution of the society, culture, and community, particularly in relation to architectural design and urban development.
• To introduce basic concepts of sociology; psychology and their roles; social theories and their perspectives on society.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Student will understand the basic concepts, scope, and approaches of sociology and their relevance to architecture and the built environment.

CO2: Students will analyse the structure and characteristics of Human Settlements with perspective of sociology.

CO3: Students will able to interpret social stratification, including caste dynamics, cultural practices, and the impact of social change in Indian society.

CO4: Students will able to process the urbanization as a social phenomenon, including its historical development, related theories, and contemporary urban challenges.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

Prerequisite	
Course Content	**Unit – 01**: **Sociology for Architecture** Introduces to the basic concepts, scope, and approaches of sociology, with a focus on their application in architecture and the built environment. **Unit – 02: Forms of Human Settlements** Principles and laws of ekistics, internal balance and physical characteristics, human needs, forces shaping settlements, Structure and Forms of human settlements, ekistics synthesis. **Unit – 03: Social Stratification** Characteristics & its bases, caste and mythological background of Indian caste system, culture and social change. **Unit – 04: Urbanization as a Social Phenomenon** Introduction to urbanization as a key process of social change**,** highlighting its causes, patterns, and impact on human settlements.
Reference Books	**Book Name** — **Author Name** Social Processes — C. H. Cooley The Social Construction of Reality — Berger & Luckman Society and Knowledge — Garden Child Social Change — William Ogburn Elements of Social Organization — R. Firth The Ascent of Man — Jacob Bronowski
Teaching Methodology	Assignments, Group Discussion, Projects
Evaluation Method	50% Internal assessment, 50% External assessment

Communication Skills - I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Communication Skills - I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop listening, speaking, and writing skills, explore different communication styles and formats, and introduce alternative media like posters, collages, and text analysis.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To develop students’ ability to communicate ideas clearly and effectively through verbal and nonverbal means, while enhancing skills in writing, critical media analysis, preparation of communication materials.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to communicate ideas effectively using appropriate verbal and written language.

CO2: Students will understand and apply both formal and informal writing styles suited to different contexts.

CO3: Students will improve nonverbal cues and apply body language effectively in interpersonal communication.

CO4: Students will demonstrate the ability to create alternative media materials for clear and impactful communication.

CO5: Students will acquire proficiency in note taking, summarizing, and writing for academic and professional use.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
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<table>
<tr><td>Course Content</td><td>Unit – 01: Fundamentals of Communication
Introduces the basic principles of communication, emphasizing clarity, coherence, and accuracy in both verbal and written forms.

Unit – 02: Writing Styles and Contexts
Explores various formal and informal writing styles. Formal writing will include academic essays, reports, and official correspondence, while informal writing will cover emails, blogs, and creative pieces.

Unit – 03: Nonverbal Communication and Body Language
Role of nonverbal cues such as gestures, posture, facial expressions, and eye contact in interpersonal communication.

Unit – 04: Media and Communication Tools
Trains students in the creation and use of alternative media materials such as posters, infographics, digital presentations, and audio-visual aids.

Unit–05: Academic and Professional Writing Skills
Develops proficiency in note-taking, summarizing, paraphrasing, and structured writing for academic and professional purposes.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Language Testing</td><td>J.B. Heaton</td></tr><tr><td>Organized Writing</td><td>V. Saraswati</td></tr><tr><td>Teaching Listening Comprehension</td><td>Penny Ur</td></tr><tr><td>Effective Communication Skills</td><td>G. Brown & Yule</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion, Debate , Drama, Public Speaking</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

SEMESTER - 2

Basic Design – II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Basic Design – II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop design skills by introducing and applying the core principles of design and visual communication in architecture. It enables to understand, form, proportion, and composition, fostering creativity for architectural thinking and expression.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce students to the principles of design and enhance their understanding of colour theory, textures, materials, and graphic techniques.
• To build creative thinking, abstract reasoning, and visual communication skills essential for an architectural design.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will develop drawing skills through sketching, enabling accurate observation and representation of objects.

CO2: Students will understand colour vocabulary, historical and contemporary significance, and the psychology of colour perception in design.

CO3: Students will be able to apply colour properties and harmonies in architectural representation.

CO4: Students will acquire skills in sculpture and three-dimensional form making, by exploring various material.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Indoor and outdoor sketching</td></tr>
</table>

	An immersive experience of live drawing in various contexts to develop a professional level ability to draw existing objects, in pencil and pen/ink. **Unit 2: Applications of Colour in Architectural Representation** Develops an understanding of basic colour properties, harmonies, and their application in design. Students will practice rendering architectural drawings using light, shade, textures, and tonal values to create expressive and realistic representations. **Unit 3: Sculpture and Form making** Focuses on creating sculptures through casting, modelling, additive and subtractive techniques, and fabrication activities. **Unit 4: Materials exploration for design** Students will experiment with a variety of materials such as plaster, wire, clay, wood, paint, board, and paper to explore form, texture, and expression in three-dimensional design.
Reference Books	**Book Name** — **Author Name** Form, Space and Order — Francis D.K. Ching Experiencing Architecture — Stein Eiler Rasmussen Rendering with Pen and Ink — Robert Gill Architecture: Scale and Proportion — Eugene Ruskin Graphics in Architecture — Francis D.K. Ching Lateral Thinking — Edward De Bono
Teaching Methodology	Model making, Drawings, Workshops, Hands on Exercise
Evaluation Method	50% Internal assessment, 50% External assessment

Architectural Design Studio II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Design Studio II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop design skills through exploration of form, space, and visual expression, introducing the fundamental elements and principles of design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">Introduction to the fundamentals of architectural design like, functions and anthropometrics, structure and materials, sensory qualities and developing an understanding of architecture as a process of creating an integrated functional, structural and spatial system.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand human factors in design, to create spaces that respond to human needs and comfort.

CO2: Students will be able to apply spatial and form making principles, in conceptual and functional design.

CO3: Students will analyse and respond site context, functional requirements, and environmental conditions.

CO4: Students will develop the ability to design small multi-functional spaces, which are well organized, functional, and contextually responsive designs.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Design of Small Uni-Functional Spaces</td></tr>
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- This unit focuses on designing small, single/multi, purpose spaces like cafés or display galleries. Students will study case studies, review literature, and use models to analyse and develop functional, well-organized design solutions.

Unit 2: Human Factors in Design

- Anthropometric studies, human physiology and ergonomics**,** emphasizing how human dimensions, capabilities, and comfort influence architectural design. In addition, the students will learn the functions and design response to the needs.

Unit 3: Site, Function, and Environmental Context

- Site context, functional requirements, inter-relationships, and environmental conditions**.** Students will study how these factors influence the evolution of form based on structural modules and guide decision-making in architectural design.

Unit 4: Spatial and Form Principles

- Focuses on design aspects such as spatial order, modularity, structural clarity, circulation and expressionism in form. Principles of abstraction, scales, and ordering mechanisms. This unit examines the evolution of form from conceptual and functional perspectives.

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Body space: Anthropometry, Ergonomics and the Design of Work	Stephen Pheasant & Christine Haslegrave
Form, Space, and Order	Francis D.K. Ching
Architectural Pattern Recommender	Shipra Sharma & Balwinder Sodhi
Architecture: Scale and Proportion	Eugene Ruskin

</td></tr>
<tr><td>Teaching Methodology</td><td>Case studies, Literature, and Model-based analysis and Drawings</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Building Materials and Construction II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Materials And Construction - II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To introduce fundamental building materials, structural systems, and construction techniques essential for understanding how buildings are build and function.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To introduce building materials, soil investigation, foundations, walls, finishes, staircases, and architectural elements, and to apply this knowledge in building design.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: To Understand the properties and applications of advance building materials for appropriate use in building construction.

CO2: To learn the importance of soil investigation and its role in selecting suitable foundation types.

CO3: Identify and differentiate between various foundations systems, and understand their selection based on site and load conditions.

CO4: To Gain knowledge of different wall types and finishes.

CO5: To understand the design and construction of staircases and building elements.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Pre-requisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>Unit 1: Introduction to Building Materials
Overview of construction materials and their properties, structural and physical behaviour, uses, applications, and joinery techniques.
Materials covered Timber/Wood, Metal, Glass, and Plastic.
Unit 2: Soil Investigation and Foundations
Soil Investigation: Properties, applications, and importance in foundation selection.
Footings and Shallow Foundations: Types, load diagrams, and selection criteria for Isolated, Combined, Strap/Cantilever, and Continuous foundations.
Deep Foundations: Concepts and applications of Raft/Mat, Pile, Caissons, and Cofferdams.
Unit 3: Walls and Wall Finishes
Walls: Types and construction details of Load-bearing, Drop, Shear, Retaining, Partition, Curtain, and Pre-cast walls.
Wall Finishes: Types, selection criteria, and applications, including Plastering, Painting, Joining, Cladding, and Pointing.
Unit 4: Staircases
Types, construction details, and materials of staircases: Straight, Quarter-turn, Doglegged, Open Newel, Spiral, Bifurcated, and U-shaped.
Emphasis on functional and structural considerations in staircase design.
Unit 5: Other Building Elements
Types, functions, and construction details of additional architectural elements: Weather shed Balcony, Canopy, and Pergolas.
Focus on integration of these elements with overall building design.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Building Construction</td><td>B.C. Punmia</td></tr><tr><td>Building Construction (Vol-I-IV)</td><td>W.B. McKay</td></tr><tr><td>Building Construction</td><td>S.C. Rangwala</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>On board tutorials, presentations of fixtures and other products used for services, Observations at execution site visits and related case studies.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Architectural Graphical Skill - II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Graphical Skill II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">04 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">T0 enable the students to communicate their design ideas by creating accurate and effective architectural drawings clearly and professionally.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To equip students with the skills and knowledge to prepare 2-D and 3-D architectural drawings accurate and effective manually.
• Provide exposure to use computer and various design software to prepare drawings and presentations.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Apply architectural measurement techniques to conduct fieldwork and prepare accurate measured drawings.

CO2: Develop lateral surfaces of basic and sectioned geometric solids to understand spatial transformations.

CO3: Construct orthographic projections of interpenetrating solids.

CO4: Create one-point and two-point perspective drawings to visually communicate three-dimensional.

CO5: Apply principles of sciagraphy to represent shade and shadows in architectural drawings.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>UNIT 1: Measurement Techniques and Measured Drawings
Introduction to architectural measurements
Field exercise: Measuring a small built unit (e.g., canteen, kiosk, etc)
Preparation of measured drawings: plan, elevation, section.
Annotating dimensions, materials, and details.
UNIT 2: Surface Development of Solids
Understanding geometric solids: cube, prism, cone, cylinder, pyramid, etc.
Surface development of solids and lateral surfaces
Surface development of solids cut by horizontal, vertical, or inclined planes
UNIT 3: Interpenetration of Solids and Orthographic Projections
Principles of interpenetration and intersection of solids
Drawing intersection curves in orthographic views
Use of top, front, and side views for clarity
UNIT 4: Perspective Drawing and sciography
Introduction to perspective projection: eye level, picture plane, vanishing points, one point, two Point
Basics of sociography (shadows)
Shadow casting methods in plan, elevation, and perspective based on solar angles
UNIT 5: Introduction to Computer-Aided Design (CAD)
Introduction to Revit and Sketch UP software
Understanding the interface, tools, and commands
Creation of 3D architectural drawings: plan, elevation, section
Basic 3D modelling commands and generation of isometric/perspective views
Preparing layout sheets, plotting, and file management</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Graphic Thinking for Architects and Designers</td><td>Paul Laseau</td></tr><tr><td>Graphics in Architecture</td><td>Francis D.K. Ching</td></tr><tr><td>Design Drawing</td><td>Francis D.K. Ching</td></tr><tr><td>Architectural Drawing</td><td>Rendow Yee</td></tr><tr><td>Engineering Drawing</td><td>N.D. Bhatt</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Drawings, Model making, and Tutorial.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Structural Design Systems II

Course Code	--		
Course Title	**Structural Design Systems II**		
Marks	100	Credits	2
Teaching per Week	02 hours		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To educate students with the principles of Structural Analysis and its application in Architectural studies.		
Course Objective	● To enable the student to comprehend the principles and techniques of Structural Analysis and to apply them in Building Systems. ● To explain students the fundamentals of Structural Analysis and its applications in Building Materials and their scientific implications. ● To empower and assess students on various structural components acquired during the study of structural analysis.		
Course Objective	**CO1:** A student will develop insight of the fundamental concepts of Structural Analysis in Architectural Education. **CO2:** A student will be trained so that, upon successful completion of the course, they will understand Bending Stress, Shear Stress, Direct and Bending Stress in Beams. **CO3:** A student will enhance their analytical techniques regarding compression elements, specifically the analysis of column areas, thereby advancing their understanding of various vertical structural elements and systems in buildings. **CO4:** A student will comprehend the analysis of beam deflection and will be able to use a suitable structural analysis method to evaluate the behaviour of structural parts. **CO5:** A student will develop knowledge of different types of distribution systems applicable to structural elements and will understand how systems contribute to the overall stability and performance of buildings.		

Mapping between COs with PSOs	

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1					
CO2					
CO3					
CO4					
CO5					

Pre-requisite	Knowledge of basic fundamentals of Structural Mechanics and Analysis.
Course Content	**Unit 1:** **1.1 Bending stress & Shear stress** 1.1.1 Theory of simple bending, Assumptions, calculation of bending stresses for simply supported beams & cantilever beams of various cross sections., beams of uniform strength. 1.1.2 Calculation of shear stress for simply supported & cantilever beams of various cross sections like T, L, I, O, Rectangle, Hollow sections etc. **Unit 2:** **2.1 Direct & Bending stress** 2.1.1 Combined direct & bending stresses, eccentric loading, middle third rule, Core & kernel, application. **Unit 3:** **3.1 Analysis of Column** 3.1.1 Introduction Theory of column under axial loading, behaviour of column, Slenderness ratio, short, medium & long column, buckling of column, effective length, Calculation of load carrying capacity using Euler's & Rankine's formula. **Unit 4:** **4.1 Deflection of Beams** 4.1.1 Introduction to deflection, boundary condition, Deflection of beams for simple cases like simply supported & cantilevers with full uniformly distributed load & central point load.

	Unit 5: **5.1 Distributed forces** 5.1.1 Determination of Centroid, Calculation of Centre of gravity for line & area element, calculation of Moment of inertia of area element, use of parallel axis theorem.	
Reference Books	**Book Name**	**Author Name**
	Mechanics of Structures, Vol. I & II	Junarkar & H.J. Shah
	Mechanics of Materials	E.P. Popov
	A Textbook of Strength of Materials	R.K. Bansal
	Strength of Materials	R.S. Khumri
	Engineering Mechanics, Statics & Dynamics	Desai & Mistry
Teaching Methodology	Theory, Tutorial, Presentation and Assignment.	
Evaluation Method	50% Internal assessment, 50% External assessment	

Humanities - II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Humanities - II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To understand humankind, evolution and formation of societies in terms of needs and aspirations to create human centric design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• Provide an understanding of human behaviour, societies and cultural influences of individuals and communities.
• Explore the interrelationship with psychology, sociology, and culture by analysing human behaviour, social structures, and cultural influences in the context of design.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Demonstrate an understanding of basic psychological concepts and social behaviour as they relate to human perception, user needs.

CO2: Analyse architectural contributions of early civilizations and evaluate the role of religion and culture in shaping architecture.

CO3: Identify and interpret major Western art movements from the Renaissance to Modernism, and understand their influence.

CO4: Evaluate the interrelationship between culture, art, and the built environment, with emphasis on Indian historical contexts.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

Course Content	**UNIT 1: Introduction to Psychology and Social Behaviour in the Context of Art and Architecture** • To introduce students to basic psychological concepts relevant to perception, behaviour, and mental processes. • To develop an understanding of how societal attitudes influence the creation and appreciation of art and architectural forms. • To explore foundational theories of social behaviour and their implications in the built environment. **UNIT 2: Early Civilizations and Architecture** • Rise and decline of Greek city-states; Roman Republic and Empire • Chinese and Japanese architectural traditions • Inca and Aztec built forms and symbolism • Mauryan architecture and Emperor Ashoka's contributions • Influence of religion on Buddhist and Hindu sacred architecture. **UNIT 3: Introduction to Major Art Movements** • Definition and role of art movements • Italian High Renaissance: balance, perspective, humanism (da Vinci, Michelangelo) • Baroque in Spain and Flanders: drama, emotion (Velázquez, Rubens) • Rococo: elegance, ornamentation • Impressionism: light, colour, everyday life (Monet, Renoir) • Cubism: geometric abstraction (Picasso, Braque) • Modernism: innovation and breaking traditions **UNIT 4: Interrelationship Between Culture, Art, and the Built Environment (Indian History)** • Role of culture in shaping architecture and artistic expression • Architecture as a reflection of societal values, identity, and change • Influence of art movements on architectural styles and design thinking • Case studies linking art, psychology, and architecture • Contemporary relevance: user-centred and culturally sensitive design.

Reference Books	**Book Name**	**Author Name**
	Social Psychology	F. H. Allport
	Handbook of Perception	E. C. Carterette & M. P. Friedman
	Introduction to Psychology	E. R. Hilgard & R. C. Atkinson
	The World of Ancient Maya	John Henderson
	The History of Architecture in India	Christopher Tadgell
	A History of India, Vol. 1	Romila Thapar
Teaching Methodology	Assignments, Group Discussion, Projects	
Evaluation Method	50% Internal assessment, 50% External assessment	

Communication Skills - II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Communication Skills - II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To enhance students' communication skills using modern communicative methods, preparing them for effective interaction in various professional platforms.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To develop clear and confident communication skills in students by introducing them to modern and effective methods of expression.
• To enable the students to communicate with clients, workers and other stakeholders effectively for the purpose.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will develop an understanding of verbal and non-verbal communication techniques.

CO2: Students will be able to prepare and deliver effective presentations by organizing content, and employing confident body language.

CO3: Students will demonstrate the ability to prepare for and participate in interviews, applying both verbal and non-verbal communication strategies.

CO4: Students will participate actively in-group discussions, understand different roles.

CO5: Students will improve written and reading communication through grammar proficiency, vocabulary enhancement, and reading comprehension strategies.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

Prerequisite	
Course Content	**Unit 1: Technical Communication and General Communication:** • Verbal and non-verbal communication (kinesics). Components of Non-verbal Communication, Barriers to effective communication, (Noise in oral and written communication) Communication across cultures. **Unit 2: Effective presentation strategies:** • Defining purpose, analysis of audience and locate, organizing contents. Preparing an outline of the presentation. Visual aids, nuances of delivery, Body language and effective presentation. • PPT Presentation – Microsoft PowerPoint, Google Slides, • Graphic & Visual Design – Adobe Photoshop, Illustrator, • Videography & Editing – DSLR/phone camera, Adobe Premiere Pro • Animation & Infographics – After Effects, Canva • Audio & Voice Clarity – Audacity, microphone tools • Physical Mediums – Charts, Posters, Models, Handouts **Unit 3: Interview skills:** • Introduction, General preparations for an interview, Types of questions generally asked at the interviews. Types of interviews, Importance of nonverbal aspects. **Unit 4: Group Discussions and team communication:** • Introduction, Group discussions as a part of the selection process, guidelines for group discussion. Role functions in-group discussion. **Unit 5: Written & Reading Communication:** • This unit covers essential grammar, vocabulary development, and formal writing formats such as emails, reports, and memos. Additionally, students will practice reading strategies like skimming, scanning, and summarizing to improve comprehension and interpretation of texts.
Reference Books	**Book Name** — **Author Name** Language Testing — J.B. Heaton Organized Writing — V. Saraswathi Teaching Listening Comprehension — Penny Ur Effective Communication Skills — G. Brown & Yule
Teaching Methodology	Assignments, Group Discussion
Evaluation Method	50% Internal assessment, 50% External assessment

SEMESTER - 3

Architectural Design Studio III

Course Code			
Course Title	**Architectural Design Studio III**		
Marks	100	Credits	8
Teaching per Week	10 hours.		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To introduce students to user-specific domestic architecture, focusing on designing spaces that respond to needs and aspirations of household which may lead to design a typical customised house form.		
Course Objective	• To enable students to understand the needs and aspirations of an individual and the family, and to translate these into functional requirements. • To learn the concept formulation, design development and decision making at each stage of the design.		
Course Outcomes	**CO1:** Students will understand the fundamental elements of space-making**.** **CO2:** Students will learn to prepare programmatic requirements for design purpose. **CO3:** Students will be able to analyze and interpret spatial configurations for design programs, using functional, geometric, and visual principle. **CO4:** Students will demonstrate the ability to formulate design programs by integrating user needs, site context, environmental conditions. **CO5:** Students will acquire skills to design simple residential units**,** applying lessons from space-making and grouping strategies.		

Mapping between COs with PSOs	

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1					
CO2					
CO3					
CO4					
CO5					

Prerequisite	

Course Content

Unit 1: Elements of Space-Making

- Introduction through lectures on the fundamental elements of space-making**.**
- Understanding how space is defined, enclosed, and organized in architectural design.

Unit 2: Interpreting Spatial Configurations

- Learning to interpret spatial configurations for specific design programs.
- Study of configuration/array of multiple repetitive units organized based on functional, geometric, and visual order.

Unit 3: Program Formulation and Design Development

- Developing design programs based on functional needs and user requirements**.**
- Considering site context, environmental conditions, social life, and cultural values as design determinants.
- Evolving conceptual positions and aligning construction systems, materials, and details accordingly.
- Development of functional and aesthetic construction details including fenestration design.

Unit 4: Design of Residence Unit

- Designing simple buildings with multiple uses**,** applying lessons from space-making and lateral thinking.
- Understanding grouping of simple buildings while integrating and transforming spatial qualities of indoor and outdoor spaces**.**

Reference Books	**Book Name**	**Author Name**
	Health – Architectural Space	Lieklider
	Site, Space and Structure	Kim Todd
	Elements of Architecture: From Form to Place	Pierr Von Miers
	Tadao Ando: Architecture of Silence	Werner Blaser
Teaching Methodology	Model making, drawings, Workshops	
Evaluation Method	50% Internal assessment, 50% External assessment	

Building Materials and Construction III

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Materials And Construction - III</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop understanding of building construction techniques and materials. It equips students with the practical and theoretical knowledge required to analyse, select, and apply appropriate construction methods in design and execution.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To understand and apply fundamental principles of building construction. Design and detailing of openings, construction of floors and roofs, and the effective use of construction equipment, thereby developing a practical foundation for architectural design and execution.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the structural behaviour and application of RCC.

CO2: Students will develop the ability to design and detail different types of building openings.

CO3: Students will learn to analyse and apply appropriate flooring construction techniques, materials, and finishes.

CO4: Students will compare and interpret different roofing systems, and illustrate their construction methods and suitable roof coverings.

CO5: Students will gain familiarity with commonly used construction equipments.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

Prerequisite	
Course Content	**UNIT 1: RCC Construction** Properties of RCC Structural and physical behaviour Application of RCC in buildings **UNIT 2: Openings** Operational and fixing details of: Doors Windows Ventilation Skylights **UNIT 3: Floors** Construction details of various floor systems Materials used in flooring Floor finishes (types, techniques, aesthetics) **UNIT 4: Roofs** Types of roofs: Flat Pitched Curved Construction details and materials Roof coverings and their applications
Reference Books	**Book Name** — **Author Name** Building Construction — B.C. Punmia Building Construction (Vol-I-IV) — W.B. McKay Building Construction — S.C. Rangwala
Teaching Methodology	On board tutorials, presentations of fixtures and other products used for services, Observations at execution site visits and related case studies.
Evaluation Method	50% Internal assessment, 50% External assessment

Structural Design Systems III

Course Code			
Course Title	**Structural Design Systems III**		
Marks	100	Credits	2
Teaching per Week	04 hours.		
Minimum weeks per Semester	18 (Including Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To educate students with the principles of R.C.C. Structural analysis and its application in Architectural studies.		
Course Objective	• To enable the student to comprehend the principles and techniques of Structural Analysis and to apply them in Building Systems. • To empower students with concepts of R.C.C. Structural Engineering & Design and its applications on the Building Material and system. • To empower and assess students on various structural components acquired during the study of structural analysis of the R.C.C. Structural Design.		
Course Outcomes	**CO1:** A student will develop insight into the basic fundamental aspects of R.C.C. Structural Design. Upon successful completion of the course, the student will be trained to understand the Introduction to IS Code for Plain & Reinforced Concrete and various methods of R.C.C. Design. **CO2:** A student will gain knowledge of flexural elements such as Beams, Columns, and Footings, including their application, and will be able to analyze and design Singly and Doubly Reinforced Sections, Columns, and Footings using the Limit State Method. **CO3:** A student will understand the analysis and design of Slabs and adopt an appropriate structural analysis technique, as well as comprehend the behavior of structural elements for their design approach. **CO4:** A student will develop analytical and structural designing techniques in the area of load-bearing structures subjected to gravity and seismic loads, thereby advancing their knowledge of different building structural elements and systems.		

	CO5: A student will utilize R.C.C. Structural Analysis problem-solving techniques in the analysis and design of building systems, enabling effective application of these methods in real-world architectural and structural scenarios.
Mapping between COs with PSOs	<table><tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr><tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr></table>
Prerequisite	Knowledge of basic fundamentals of Structural Mechanics and Analysis.
Course Content	**Unit 1:** **1.1 Introduction to IS code :** 1.1.1 Introduction to various load & load combinations, Use of IS code for loads, Introduction to 456-2000 for design of RCC element. **1.2 Methods of design:** 2.1.1 Introduction to limit state, working stress & ultimate state methods of design, Determination of Moment of resistance of homogeneous beams of rectangular , under reinforced, over reinforced & balanced sections by limit state method. **Unit 2:** **2.1 Analysis & design of Singly and Doubly reinforced sections using Limit state method:** 2.1.1 Analysis & design of singly reinforced sections of beams, Design criteria for deflection, shear, development length & anchor length. 3.1.1 Analysis & design of doubly reinforced sections of beams, Design criteria for deflection, shear, development length & anchor length. **Unit 3:** **3.1 Design of RCC Column and Footing:** 3.1.1 Design of RCC column: Analysis & Design and R.C.C. member subjected to an axial compressive load by limit state method. i.e. R.C.C. column. 3.1.2 Ductile detailing of main steel, lateral ties, confine zones, unconfined zones in RCC columns as per I.S. code 13920. **3.2 RCC Footing :**

<table>
<tr><td></td><td>3.2.1 Analysis & Design of RCC isolated column footing. Introduction to Combined footing & Raft footing .i.e. study of behaviour & detailing of steel reinforcement. Analysis & Design of RCC isolated column footing. Introduction to Combined footing & Raft footing .i.e. study of behaviour & detailing of steel reinforcement.
Unit 4:
4.1 Design of Slabs :
4.1.1 Design of slabs spanning in one & two direction. Introduction - Behaviour & detailing of Cantilever slab, continuous slab, Continuous beam & waist slab.

Unit 5:
5.1 Load bearing structure subjected to gravity & seismic load
5.1.1 Introduction to load bearing structure, understanding of various parameters like material, size, slenderness ratio, effective height & length, opening etc. & its impact on the strength & stability of load bearing structure. Use of nomograms to find the thickness of load bearing wall.</td></tr>
<tr><td>Reference Books</td><td><table>
<tr><th>Book Name</th><th>Author Name</th></tr>
<tr><td>Reinforced Concrete, Vol. I</td><td>H.J. Shah</td></tr>
<tr><td>Design of Reinforced Concrete Structures</td><td>S. Ramamrutham & S. Narayan</td></tr>
<tr><td>Treasure of R.C.C. Design</td><td>Sushil Kumar</td></tr>
<tr><td>R.C.C. Theory & Design</td><td>Shah & Kale</td></tr>
<tr><td>IS 456: 2000 – Design of RCC Elements</td><td>Bureau of Indian Standards (BIS)</td></tr>
<tr><td>IS 875: 1987 – Code of Practice for Design Loads (Part I to V)</td><td>Bureau of Indian Standards (BIS)</td></tr>
<tr><td>IS 13828: 1993 – Improving Earthquake Resistance of Low Strength Masonry Buildings</td><td>Bureau of Indian Standards (BIS)</td></tr>
<tr><td>National Building Code of India</td><td>Bureau of Indian Standards (BIS)</td></tr>
</table></td></tr>
<tr><td>Teaching Methodology</td><td>Theory, Tutorial, Presentation and Assignment.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Environmental Science - I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Environmental Science - I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop awareness and understanding of environmental issues, natural resources, ecosystems, and sustainable practices for responsible living and design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• The course introduces students to environmental studies, focusing on ecosystems, biodiversity, pollution and its control.
• To study the interrelationship between society and environment in the present context for environment friendly deisgn.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the nature of environmental studies and analyze the importance of natural resources, both renewable and non-renewable.
CO2: Students will be able to explain the structure and function of ecosystems and evaluate the role of biodiversity.
CO3: Students will identify the causes and consequences of environmental pollution and apply knowledge of pollution control methods.
CO4: Students will examine the interaction between society, population, and the environment, assess related social issues, through sustainable approaches.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Introduction to Environmental Studies</td></tr>
</table>

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<tr><td></td><td>

Covers the nature of environmental studies and highlights its importance in the modern world.
Discusses the role of natural resources (renewable and non-renewable), their utilization, and the challenges of sustainable management.

Unit 2: Ecosystems and Biodiversity

Explains the structure and function of ecosystems, including energy flow, food chains, and ecological balance.
Focuses on the significance of biodiversity, its types, threats.

Unit 3: Environmental Pollution and Challenges

Examines the causes, types, and effects of environmental pollution (air, water, soil, noise, etc.).
Explores methods of pollution control and preventive strategies to reduce environmental degradation.

Unit 4: Society, Population, and Environment

Studies the relationship between society and the environment, including contemporary social issues like climate change, urbanization, and sustainable practices.
Discusses the impact of human population on natural resources and environmental quality.

</td></tr>
<tr><td>Reference Books</td><td>
<table>
<tr><th>Book Name</th><th>Author Name</th></tr>
<tr><td>Text Book of Environmental Studies for Undergraduate Courses</td><td>E. Barucha</td></tr>
<tr><td>Environmental Studies</td><td>Benny Joseph</td></tr>
<tr><td>Basics of Environment and Ecology</td><td>A. Kaushik & C.P. Kaushik</td></tr>
<tr><td>Environmental Biology</td><td>K.C. Agarwal</td></tr>
<tr><td>Hazardous Waste Incineration</td><td>R.C. Brunner</td></tr>
</table>
</td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Survey and Levelling

Course Code			
Course Title	**Survey and Levelling**		
Marks	100	Credits	2
Teaching per Week	02 hours.		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To introduce the fundamental surveying techniques and tools used in architectural site analysis, enabling accurate measurement, mapping, and layout essential for design and construction.		
Course Objective	• To familiarize students with basic surveying terms, principles, and instruments used in architectural and site planning. • To enable students to interpret contour maps and calculate areas and volumes relevant to site development. • To train students in practical site layout techniques essential for setting out architectural structures.		
Course Outcomes	**CO1:** Students will develop an understanding of basic surveying concepts, definitions, and the classification of surveying methods and measurement units. **CO2:** Students will acquire practical skills in chain, compass, and plane table surveying techniques, including fieldwork, data collection, and plotting. **CO3:** Students will learn to calculate areas and levels using trapezoidal and Simpson's rules and levelling instruments, and interpret contour maps effectively. **CO4:** Students will gain the ability to use Total Station for accurate measurement and understand its working principles in modern surveying practice. **CO5:** Students will demonstrate the ability to set out buildings on-site and interpret basic GIS data for site planning and development applications.		

<table>
<tr><td>Mapping between COs with PSOs</td><td>
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<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>N PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Prerequisite</td><td>Familiarity with basic geometry, units of measurement, and technical drawing skills.</td></tr>
<tr><td>Course Content</td><td>1. Introduction of subject: Basic terms, definition and terminologies. Classification and division of survey, units of measurements.

2. Chain Surveying: Linear measurement, principle of chain surveying, framework, instruments used, fieldwork.

3. Compass Survey: Introduction to traversing, principle used, types of meridian, WCB & RB system.

4. Plane Table Survey : Underlying principle, orientation techniques, Instruments used in plane table surveying, radiation, intersection, and traversing & resection methods, plotting in field.

5. Methods of Area Measurements: Introduction to various methods of measuring area between chain line & boundary, calculation of area using trapezoidal & Simpson's formula, use of plannimeter to calculate area. Other approximate methods.

6. Introduction to Leveling & Contour: Introduction to leveling & RL, How to get the RL. Understanding of contours, basic characteristics & uses of contour, study of contour map-identification of ridgeline, valley line, etc. Calculation of volume for cutting & filling using contour map.

7. Introduction to Total station: Introduction to the instrument & working methodology.

8. Setting out of Building : Setting out of building on the ground- Methods for setting out buildings by horizontal and vertical control.

9. Introduction to GIS : Introduction to various terminology & reading of map.</td></tr>
</table>

Reference Books	**Book Name**	**Author Name**
	Surveying – I	B.C. Punmia
	Surveying	Kanetkar & Kulkarni
	Surveying	Arora
Teaching Methodology	Assignments, Group Discussion	
Evaluation Method	50% Attendance and Continuous Evaluation, 20% Internal Examination, 30% External Examination.	

History of Architecture-I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">History of Architecture-I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To study the evolution of architecture and its relevance to contemporary design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce students to the historical timeline and key phases of world architecture.
• To explore early human settlements and the architectural contributions of major ancient civilizations.
• To develop awareness of the significance of heritage conservation in contemporary architectural practice.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the growth of civilizations, cultural elements, societal institutions, and urbanization.

CO2: Students will analyze the evolution of human and prehistoric settlements.

CO3: Students will examine river valley civilization and evaluate their contributions to architecture, planning, and cultural identity.

CO4: Students will interpret the architectural and cultural legacy of Greek and Roman civilizations.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>

Unit 1: Timeline of Culture, Society, and History

- Understanding culture, traits, attributes, and important theories of society and change.
- Significance of the subject, relevance of world history, timeline divisions (Classical Antiquity, Middle Ages, Modern Period), and the notion of conserving over creating in the 21st century.
- Introduction to Indian heritage monuments and their values.

Unit 2: Evolution of Early Man and Prehistoric Settlements

- Evolution of mankind and prehistoric shelters through various stages.
- Early settlements and settlement patterns.
- Cultural and social aspects of early human development.

Unit 3: River Valley Civilizations

- Study of Egyptian Civilization: architecture, urban patterns, and cultural values.
- Study of Mesopotamian Civilization: settlement planning and architectural innovations.
- Introduction to Minoan and Mycenaean Civilizations**.**
- Study of Indus Valley Civilization: planning, urban design, and architectural contributions.
- Aryanisation of India and the Vedic Period.

Unit 4: Classical Civilizations and Their Legacy

- Study of Greek and Roman Architecture: principles, forms, and influence on urbanization and built form.
- Understanding how these civilizations shaped architectural traditions and influenced later cultural and spatial development.

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
A History of Architecture	Sir Banister Fletcher
World History of Architecture	Michael Fazio, Marian Moffett & Lawrence Wodehouse
A Global History of Architecture	Francis D.K. Ching

</td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Building Services-I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Services-I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To study the fundamental building services into architectural design with a focus on sustainability and efficiency.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce the essential building services such as water supply, drainage, electricity, and lighting.
• To develop an understanding of service components-units, design strategies, and integration into architecture.
• To promote sustainable practices through water conservation, energy efficiency, and waste management techniques.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand sources, collection methods, treatment processes, and distribution systems of water supply in buildings.

CO2: Students will analyse and design plumbing networks.

CO3: Students will identify components and layout of wastewater and storm water systems.

CO4: Students will gain knowledge of electrical distribution systems and calculate load requirements for buildings.

CO5: Students will apply principles of lighting design, and integrate daylight and artificial lighting in architectural layouts.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>

Unit 1: Water Supply Systems

- Introduction to water supply
- Types and sources of water
- Collection, processing, distribution, and storage methods
- Calculation of water demand and consumption
- Sizing of storage tanks
- Water quality parameters
- Techniques and strategies for water conservation

Unit 2: Water Distribution and Plumbing

- Service connections for buildings
- Hot and cold water supply systems
- Plumbing network layout
- Sanitary fixtures and fittings
- Types of valves and pipes
- Dual plumbing systems for greywater and potable water

Unit 3: Wastewater and Solid Waste Management

- Wastewater systems: components and layout for sewage and stormwater drainage.
- Basics of wastewater treatment systems and septic tanks.
- Site and building-level planning for drainage and disposal.
- Rainwater harvesting and water recycling methods.
- Introduction to solid waste management and disposal practices.

Unit 4: Electrical Systems

- Basics of electricity distribution and safety systems in buildings.
- Types of electrical fixtures, equipment, and appliances.
- Electrical circuit design and internal wiring layout.
- Understanding loads, peak demand, and cost calculations.

Unit 5: Lighting Design and Systems

- Principles and systems of artificial lighting
- Lighting effects and energy-efficient strategies
- Concepts of luminance and glare
- Lighting design and layout for buildings
- Integration of artificial lighting with daylighting strategies.

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Time Saver Standards for Architectural Design Data	John Hancock Callender
Heating, Cooling, Lighting	Norbert Lechner
Electrical Wiring, Estimating and Costing	S.L. Uppal

</td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion, Lectures, Presentations</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

SEMESTER - 4

Architectural Design Studio IV

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Design Studio IV</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>8</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">10 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To learn community living and design responsive built environment; a neighbourhood including common and shared spaces.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To learn how to develop a cluster of dwelling units with common shared spaces for community.
• To understand the manifestation of culture and values of the community on group of houses.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to learn about community living and evaluate the role of individual housing unit in a group of houses.

CO2: Students will be able to design various typologies of housing units as per criteria derived out of different family needs.

CO3: Students will be able to learn and design common and shared open spaces for a community housing.

CO4: Students will understand and learn to design different spaces for different age group of individuals as per their needs and aspirations.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table><tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr><tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Understanding community housing
1.1. Introduction to community living
1.1.1. Role of Common spaces</td></tr>
</table>

	1.1.2. Role of Common infrastructure and services in a community housing 1.2. Introduction to classic case studies of community housing 1.3. Explain various typologies of community housing 1.4. Important terminologies in community housing 1.4.1. Housing Cluster 1.4.2. Housing typology 1.4.3. Layout and plotting 1.4.4. Gathering and congregation spaces 1.4.5. Vehicular and pedestrian segregation 1.4.6. Street layout **Unit 2: Preparation of design brief** 2.1. Introduction to a live community 2.2. Interaction with identified community 2.3. Deriving housing typologies for identified clients **Unit 3: Program formulation and site identification** 3.1. Prepare an architectural program based on community interaction 3.2. Identification of site based on program 3.2.1. live site visits and on site observation 3.2.2. Preparation of Site drawings and site model 3.2.3. Site analysis and identification of site concerns and constrains **Unit 4: Conceptual and deign development** 4.1. Derive conceptual ideas and different alternatives for housing layout 4.1.1. Concerns for conceptualisation 4.1.2. Comparative studies between various conceptual ideas 4.1.3. Finalisation of concept for housing layout and housing units 4.1.4. Layout level model making 4.1.5. Cluster level model making 4.2. Design development based on final concept 4.2.1. Cluster level detailing 4.2.2. Detailing community and gathering spaces 4.2.3. Unit level detailing 4.2.4. detailed model making of site with units and gathering spaces **Unit 5: Preparation of final Design and presentation** 5.1. Analyse design development stage and suggest necessary modification

	5.2. Preparation of final design and details 5.3. Detailing of clusters, streets, and various housing types with specification of material and construction techniques 5.4. Detailing of landscape(demarcation of softscape and hard paved areas) 5.5. Details of common services like water supply, drainage, and storm network electricity, common toilets, etc, common amenities. 5.6. Preparation final drawings and models with presentation.
Reference Books	**Book Name** — **Author Name** The New Landscape: Urbanisation in the Third World — Charles Correa Paths Uncharted — B.V. Doshi Housing Projects — Raj Rewal Houses: How They Are Built — Laurie Baker Tadao Ando: Architecture of Silence — Werner Blaser
Teaching Methodology	Model making, Presenatation Drawings
Evaluation Method	50% Internal Examination, 50% External Examination.

Building Materials and Construction IV

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Materials And Construction - IV</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">04 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop understanding of steel and temporary construction systems, their applications, and detailing for integration into architectural design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce students to the materials, techniques, and applications of steel construction and temporary structures.
• To develop understanding of construction methods through observation, documentation, and technical detailing.
• To familiarize students with modern construction process, techniques and equipments used in building construction.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the physical and structural behavior of steel and its application in various building systems.

CO2: Students will be able to analyze and detail the construction process and stages of retaining walls.

CO3: Students will gain knowledge of temporary structures such as shoring, scaffolding, shuttering, and underpinning, including their applications and selection criteria.

CO4: Students will develop the ability to document and interpret steel construction methods through case studies of buildings.

CO5: Students will identify and understand the operation and selection of construction equipment used in steel construction.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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Prerequisite	
Course Content	**Unit 1: Steel Construction** • Introduction to steel as a building material • Properties: structural and physical behavior • Advantages and limitations of steel in construction • Application in various types of buildings **Unit 2: Retaining Walls** • Types and functions of retaining walls • Construction techniques and detailing • Design considerations and structural behavior • Site examples and case studies **Unit 3: Temporary Structures** • Introduction and classification of temporary structures • Details, construction techniques, and applications • Selection criteria based on site and project needs • Types: Shoring**,** Shuttering**,** Scaffolding**,** Underpinning **Unit 4: Study of Construction Equipment** • Various equipment used in steel construction • Functions, working mechanisms, and site usage • Role in safety, speed, and efficiency of construction **Unit 5: Construction Stages & Case Study** • Stages of steel construction from planning to execution • Coordination with other building systems • Detailed study of a selected building project
Reference Books	**Book Name** — **Author Name** Building Construction — B.C. Punmia Building Construction (Vol-I-IV) — W.B. McKay Building Construction — S.C. Rangwala
Teaching Methodology	On board tutorials, presentations of fixtures and other products used for services, Observations at execution site visits and related case studies.
Evaluation Method	50% Internal Examination, 50% External Examination.

Structural Design Systems IV

Course Code			
Course Title	**Structural Design Systems IV**		
Marks	100	Credits	2
Teaching per Week	04 hours.		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To educate students with the principles of Steel Structural Analysis and its application in Architectural studies.		
Course Objective	• To enable the student to comprehend the principles and techniques of different Structural Systems and to make the student capable of understanding the concepts and methods of Structural Analysis & Design and learn their implementation in Knowledge -Based Systems. • To empower students with concepts of Steel Structural Engineering & Design and its applications on the Building Material and system. • To empower and assess students on various structural components acquired during the study of structural analysis of various parts of different steel structural design & systems.		
Course Outcomes	**CO1:** A student will develop insight into the basic fundamental aspects of Steel Structural Design and will gain knowledge of the Introduction to the IS Code for Steel Structures, as well as various methods of Steel Design. **CO2:** A student will understand roofing elements such as the Simple Roof Truss and their applications, and will be able to analyze and design a Simple Roof Truss using the Limit State Method. **CO3:** A student will understand the analysis of members subjected to axial tensile loads, transverse loads, and axial compressive loads, and adopt appropriate structural analysis techniques to evaluate the behavior of structural elements as part of the design approach. **CO4:** A student will develop analytical and structural design techniques for the design of footings, thereby advancing their knowledge of different building structural elements and systems.		

<table>
<tr><td></td><td>CO5: A student will utilize Steel Structural Analysis problem-solving techniques in the analysis and design of building systems.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td>
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td>Knowledge of basic fundamentals of Structural Mechanics and Analysis.</td></tr>
<tr><td>Course Content</td><td>
Unit 1:
1.1 Introduction to IS code :

1.1.1 Introduction to IS code: Introduction to IS -800 for steel structure.
1.1.2 Rolled Steel sections: Study of IS Rolled steel sections & steel table.

Unit 2:
2.1 Design of Roof Truss

2.1.1 Design of a simple roof truss: Steel trusses, its types, geometry, spans, pitches, spacing etc. Various loads on a roof truss. i.e. Dead, Imposed & Live Load. Analysis & Calculation of Dead load, Live load & Wind Load. Analysis of a truss under various loads and Design of a truss member.

Unit 3:
3.1 Members subjected to Axial Tensile and Transverse Load:

3.1.1. Analysis and Design of a regular & built up steel sections subjected to an axial Tensile load.

3.1.2. Analysis and Design of steel regular & built up sections subjected to bending i.e. beams including analysis and checks for deflection and shear.

Unit 4:
4.1 Members subjected to Axial Compressive Load:

4.1.1. Analysis and Design of a regular & built up steel section subjected to an Axial Compressive Load.
</td></tr>
</table>

	Unit 5: **5.1 Design of Footing:** 5.1.1. Analysis & Design & detailing of slab based footing. Study of behaviour & detailing of Gusseted based footings.
Reference Books	**Book Name** — **Author Name** Design of Steel Structure — L.S. Negi Design of Steel Structure — A.S. Arya & J.L. Ajmani Design of Steel Structure — Kazmi & Jindal Teaching Resources for Steel Design — INSDAG Publication IS 800 – Code of Practice for General Construction in Steel — Bureau of Indian Standards (BIS) IS 875: 1987 – Code of Practice for Design Loads (Part I to V) — Bureau of Indian Standards (BIS)
Teaching Methodology	Theory, Tutorial, Presentation and Assignment.
Evaluation Method	50% Internal Examination, 50% External Examination.

Environmental Science - II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Environmental Science - II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop awareness and understanding of environmental issues, natural resources, ecosystems, and sustainable practices for responsible living and design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce the fundamental principles of climate and its influence on building design and performance.
• To enable students to apply solar control and daylighting strategies using climate analysis tools and techniques.
• To promote climate-responsive architecture by integrating passive strategies and relevant building regulations.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the fundamental climatic elements, types, and their influence on architectural design.

CO2: Students will be able to analyze climate data using tools and software for informed site and design decisions.

CO3: Students will apply principles of solar geometry to develop effective shading strategies for buildings.

CO4: Students will demonstrate the ability to design spaces that optimize natural daylight through appropriate daylighting techniques.

CO5: Students will integrate climate-responsive and bioclimatic strategies into architectural design in accordance with relevant building byelaws.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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Prerequisite	
Course Content	**Unit 1: Climate and Its Influence on Architecture** • Study of elements of climate (temperature, humidity, wind, precipitation, solar radiation, etc.), climatic types and patterns**,** and their impact on architecture. • Interpreting climatic data, including methods of measurement and units to various climate zones. **Unit 2: Solar Control and Site Planning** • Basics of solar geometry and sun-path diagrams**.** • Site planning principles for climate-responsive design, including orientation, landscaping, and open spaces. • Use of solar envelopes to guide building massing and layout. **Unit 3: Building Design Strategies for Climate Response** • Principles of building massing and its impact on microclimate and comfort. • Role of open space exposure in regulating thermal and visual comfort. • Study of shading devices for fenestration: horizontal, vertical, egg-crate, louvers, and dynamic systems. • Application of shading design software to evaluate and optimize performance. **Unit 4: Daylighting and Bioclimatic Design** • Principles of daylighting and strategies for architectural integration across building types. • Use of daylight design software for performance assessment. • Introduction to bioclimatic design standards and building byelaws related to daylighting, natural ventilation, and passive design practices.
Reference Books	**Book Name** — **Author Name** Man, Climate and Architecture — B. Givoni Climate Responsive Architecture — A. Krishan Design with Climate — Victor Olgyay & Aladar Olgyay Manual of Tropical Housing and Building — O.H. Koenigsberger, T.G. Ingersoll & A. Mayhew Sunlighting as Formgiver for Architecture — W. Lam Daylight Design of Buildings — Nick Baker & Koen Steemers
Teaching Methodology	Assignments, Group Discussion.
Evaluation Method	50% Internal Examination, 50% External Examination.

Computer Application-I

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Computer Application-I</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">Introduce students to essential digital tools and software applications used in architectural practice, enabling them to effectively create, edit, and present architectural documents.</td></tr>
<tr><td>Course Objective</td><td colspan="3">To equip students with advanced digital skills for architectural design, documentation, and presentation.The focus is on integrating technology into design workflows for efficiency, sustainability, and high-quality presentation.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will Apply parametric and generative design principles using Rhino, Grasshopper, and AI plugins.

CO2: Students will Develop BIM models in Revit and integrate AI tools for performance and sustainability analysis.

CO3: Students will Produce accurate construction documentation and optimized design outputs using digital platforms.

CO4: Students will Create professional-quality architectural presentations and portfolios using Photoshop.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>N PSO4</th><th>PSO5</th></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Introduction to Digital Tools in Architecture</td></tr>
</table>

	• Role of computer applications in architectural design and practice. • Overview of parametric, BIM, and visualization software. • Basics of AI integration in architecture. • File formats, interoperability, and workflow between different tools. **Unit 2: Rhino + Grasshopper + AI Plugins (Parametric & Generative Design)** • Introduction to Rhino interface and 3D modeling basics. • Grasshopper fundamentals: nodes, components, parametric modeling. • Form finding, façade design, and structural logic using generative design. • AI plugins for Grasshopper (e.g., optimization, climate-responsive design, automation). • Case studies and student exercises in parametric forms & adaptive systems. **Unit 3: Revit + Insight / BIM with AI (Building Information Modeling)** • Revit basics: BIM workflow, modeling of architectural elements. • Families, detailing, and construction documentation. • Introduction to Insight (energy & performance analysis). • AI in BIM: clash detection, automation, predictive design, and sustainability analysis. • Hands-on exercises: small building project in Revit with performance evaluation. **Unit 4: Photoshop for Architectural Presentation** • Photoshop basics: interface, layers, brushes, and selection tools. • Rendering post-production: adding textures, lighting effects, entourage. • Creating architectural sheets, diagrams, and presentation boards.
Reference Books	------
Teaching Methodology	Assignments, Group Discussion
Evaluation Method	50% Internal Examination, 50% External Examination.

History of Architecture-II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">History of Architecture-II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To study the development of architecture focusing on Indian temple and Western medieval architecture.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce students to the evolution and significance of Indian architecture focusing on temple.
• To get exposure and study evolution of western architecture till Renaissance era.
• To enable students to analyze heritage through systematic study and interpretation to find its relevance.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to explain the evolution, significance, and spatial principles of Indian temple architecture and its cultural symbolism.

CO2: Students will analyze and differentiate between architectural styles such as Nagara, Dravidian, Vesara, Jain, and Palace architecture.

CO3: Students will interpret the structural systems, features, and symbolic meanings of Byzantine, Romanesque, and Gothic architecture of the Middle Ages.

CO4: Students will develop comparative insights into Indian and Western architecture, demonstrating an understanding of their historical, cultural, and design relevance.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

Prerequisite	
Course Content	**Unit 1: Indian Temple Architecture – Foundations and Evolution** • Introduction to Indian Temple Architecture: significance and evolution. • UNESCO World Heritage Temples: study of selected case examples. • Basic Elements of Hindu Temples: spatial components and symbolic layouts. • Vaastu Purush Mandala: concept and architectural implications. **Unit 2: Styles and Variations in Indian Temple Architecture** • Architectural Characteristics and Temple Layouts: Nagara, Dravidian, and Vesara styles. • Jain Temple Architecture: design principles and symbolism. • Introduction to Palace Architecture in India: form, scale, and cultural context. **Unit 3: Western Architecture – Early Middle Ages** • Byzantine Architecture: structural systems, domes, mosaics, and spatial organization. • Romanesque Architecture: features, construction techniques, and examples. **Unit 4: Western Architecture – High Middle Ages** • Gothic Architecture: innovations in structure, space, and light. • Cultural and symbolic significance of Gothic cathedrals.
Reference Books	**Book Name** — **Author Name** A History of Architecture — Sir Banister Fletcher Architecture Through the Ages — Talbot Hamlin Architecture: From Prehistory to Post-Modernity — Marvin Trachtenberg & Isabelle Hyman Early India: From the Origins to AD 1300 — Romila Thapar The Hindu Temple (Vol. 1 & 2) — Stella Kramrisch Hindu Architecture — Henri Stierlin Indian Architecture (Hindu and Buddhist Periods) — Percy Brown
Teaching Methodology	Assignments, Group Discussion
Evaluation Method	50% Internal Examination, 50% External Examination.

Building Services-II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Services-II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To study the fundamental building services into architectural design with a focus on sustainability and efficiency.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To develop a foundational understanding of system components, their design strategies.
• To acquire knowledge of service’s principles and control measures in built environments.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the principles, components, and applications of building communication systems, and evaluate suitable systems for different contexts.

CO2: Students will be able to analyze, compare, and apply appropriate security and surveillance systems based on functional needs and selection criteria.

CO3: Students will gain knowledge of air conditioning and mechanical ventilation systems, perform basic design condition-based calculations, and integrate HVAC solutions with passive design strategies.

CO4: tudents will demonstrate the ability to apply principles of acoustics in design, implementing effective treatments and control measures for noise and sound management in buildings.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>Unit 1: Communication Systems
Working principles, components, and fixing methods.
Types and selection criteria.
Systems covered: Intercoms, Wi-Fi, Broadband cabling
Unit 2: Security and Surveillance Systems
Working principles and types.
Fixing methods and selection criteria.
Systems covered: CCTV, Laser-based security, Biometric systems, Passive Infrared (PIR) detectors, Electronic fencing, Wired/Wireless security systems, Metal detectors
Unit 3: Air Conditioning and Mechanical Ventilation
Principles and components of mechanical ventilation and HVAC systems.
Design condition-based calculations.
Air Handling Unit (AHU) and other key elements.
Integration of HVAC with passive design strategies.
Unit 4: Acoustics
Working principles and types of acoustical treatments.
Controlling measures including: Sound insulation, Transmission control, Absorption, Reverberation control, Noise mitigation
Acoustical design and planning strategies.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Time Saver Standards for Architectural Design Data</td><td>John Hancock Callender</td></tr><tr><td>Heating, Cooling, Lighting</td><td>Norbert Lechner</td></tr><tr><td>Electrical Wiring, Estimating and Costing</td><td>S.L. Uppal</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion, Lectures, Presentations</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal Examination, 50% External Examination.</td></tr>
</table>

SEMESTER - 5

Architectural Design Studio V

Course Code			
Course Title	**Architectural Design Studio V**		
Marks	100	Credits	8
Teaching per Week	12 hours.		
Minimum weeks per Semester	18 (Including Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	Learn to design institutional spaces that foster interaction, and community, integrating functional needs, environmental responsiveness, and contextual relevance.		
Course Objective	• To learn principles of various institutional designing and develop indigeneous architectural language. • To understand the spatial and functional requirements of institutional buildings and their role in supporting function, interaction, and community. • To explore the interrelationship between built form, site context, and institutional identity in developing contextually responsive architectural designs.		
Course Outcomes	**CO1.** Students will be able to understand and interpret institutional characteristics, functions, and their influence on spatial planning and composition. **CO2.** Students will demonstrate the ability to design buildings in response to contextual parameters. **CO3.** Students will develop skills to integrate spatial hierarchy, functional zoning, and circulation logic. **CO4.** Students will be capable of applying appropriate structural systems, building technologies, and services for efficient institutional design. **CO5.** Students will understand and implement development control regulations and enhance design proposals through literature review and case studies.		

Mapping between COs with PSOs	

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1					
CO2					
CO3					
CO4					
CO5					

Prerequisite	
Course Content	**Unit 1: Institutional Identity and Design Context** • Understanding institutional characteristics and their role in architectural identity • Designing a part in relation to the 'whole' • Nature and purpose of institutions • Concept of 'relevance' in architectural design **Unit 2: Site and Contextual Analysis** • Client contact and program formulation • Land-building relationship • Site analysis: environmental, social, and cultural context • Integration of built and unbuilt spaces **Unit 3: Spatial and Organizational Structure** • Hierarchy in spatial planning • Spatial order and zoning in institutional design • Circulation and functional layout • Public, semi-public, and private zones **Unit 4: Technical and Environmental Integration** • Efficiency in services and utility planning • Clarity and integration of structural systems • Environmental and sustainability concerns in design • Use of appropriate materials and technology **Unit 5: Regulations, Review, and Documentation** • Application of development control regulations • Case studies and literature review of institutional projects • Design development, detailing, and presentation techniques

	• Final design proposal and documentation	
Reference Books	**Book Name**	**Author Name**
	Design in Architecture: Architecture and the Human Sciences	Geoffrey Broadbent
	Analysing Architecture	Simon Unwin
	Creating Architectural Theory	John Lang
	The Grid as a Generative Principle in Architecture	Leslie Martin & Lionel March
	School Buildings	Rolf Gutbrod
Teaching Methodology	Model making, Presentation drawings	
Evaluation Method	50% Internal assessment, 50% External assessment	

Building Construction and Services

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Construction and Services</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To enhance the ability to integrate the construction techniques and services into architectural design adhering to safety regulations and functional efficiency.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To understand the principles, components, and construction techniques of advanced building systems.
• To develop the ability to integrate functional, safety, and technological systems into architectural design.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the components, materials, and techniques of precast and prestressed concrete construction.

CO2: Students will understand principles of fire safety, evaluate fire behavior of building materials, and apply appropriate fire safety systems in accordance with regulations and codes.

CO3: Students will understand the principles and types of vertical and horizontal mobility systems including lifts, escalators, and travolators.

CO4: Students will develop spatial planning and design strategies for the integration of modern building mobility systems and fire safety infrastructure.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Building and Construction Systems</td></tr>
</table>

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- Components of building construction systems
- Applications and significance of precast and prestressed concrete
- Materials and techniques used in precast and prestressed construction
- Advantages, limitations, and case studies of implementation

Unit 2: Fire Safety Systems

- Principles of fire safety and fire behavior of building materials
- Types of fire safety systems and components:
  - Fire hydrants
  - Fire escapes
  - Refuge areas
  - Smoke detection and alarm systems
- Fire safety regulations and codes
- Fire safety drawings and documentation for compliance

Unit 3: Mobility Systems

- Overview of vertical and horizontal transportation in buildings
- Design and construction of:
  - Lifts (elevators)
  - Escalators
  - Travelators
- Space planning and sizing requirements
- Construction and installation processes
- Introduction to automatic parking systems and integration in building design

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Building Construction	B.C. Punmia
Building Construction (Vol-I-IV)	W.B. McKay
Building Construction	S.C. Rangwala

</td></tr>
<tr><td>Teaching Methodology</td><td>On board tutorials, presentations of fixtures and other products used for services, Observations at execution site visits and related case studies.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Structural Design Systems V

Course Code			
Course Title	**Structural Design Systems V**		
Marks	100	Credits	2
Teaching per Week	02 hours.		
Minimum weeks per Semester	18 (Including Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To educate students with the principles of Advanced Structural Analysis and its application in Architectural studies.		
Course Objective	● To make the student capable of understanding the concepts and methods of Advanced Structural Analysis & Design and learn their implementation in Knowledge -Based Systems. ● To educate students with concepts of R.C.C. and Steel Structural Engineering & Design and its applications on the Building Material and system. ● To empower and assess students on various structural components acquired during the study of structural analysis of various parts of different steel and RCC structural design & systems.		
Course Outcomes	**CO1:** A student will develop insight into the basic fundamental aspects of Steel Structural Design for Architecture Education and will also gain knowledge of the behavioral study of typical structures, including both R.C.C. and Steel Structures. **CO2:** A student will understand R.C.C. compression and tensile elements such as R.C.C. water tanks, and analyze design of RCC columns, RCC footings, and different types of water tank sections using the Limit State Method. **CO3:** A student will understand the analysis of members subjected to connections in steel structures, as well as Plate Girders and Castellated Girders, and will adopt appropriate structural analysis techniques to evaluate the behavior of these elements as part of the design approach. **CO4:** A student will develop analytical and structural design techniques for tall structures, thereby advancing their knowledge of different building structural elements and systems. **CO5:** A student will utilize tensile structural analysis problem-solving techniques in the analysis and design of building systems,		

<table>
<tr><td></td><td>enabling effective application of these methods to real-world architectural and structural challenges.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td>
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>Prerequisite</td><td>Knowledge of basic fundamentals of R.C.C. & Steel Structural Design.</td></tr>
<tr><td>Course Content</td><td>
Unit 1: RCC Water Tank :
• Types of water tank, Various types of joints in water tank, Behaviour & reinforcement detailing for On ground water tank- circular & Rectangular, Overhead water tank- Intze tank, Underground water tanks.

Unit 2: Plate Girder & Castellated Girder
• Introduction to plate girder behaviour & Application. Types of stiffeners, Welded & riveted girders. Introduction to castellated girder behaviour & Application.

Unit 3: Connections in steel structure:
• Types of connections - Riveted, Welded & bolted connections. Connection details for axial members i.e. members of a truss.
• Connection for Beam to Beam connection and Beam to Column connection. Framed connection and Seated connection.

Unit 4: Tall Structure :
• Introduction of Tall structures, Effect of gravity & lateral load. Introduction to various Lateral load resisting systems due to wind & earthquake for tall buildings - Truss, frame, shear wall, core & outrigger, Tube, tube in tube, Bundled tube, Belt truss, Staggered truss system etc, Material, connection, Foundation system. Case studies of world’s famous tall buildings.

Unit 5: Tensile structure:
• Introduction to Tensile structure, spanning, application, classification, material, stability against wind, various types of tensile
• Structure- cable stayed, suspension cable, cable nets, membrane, Details of Connection for tensile structure, construction technique.
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</table>

	• Space Frame: Introduction to space frame, behaviour under loading, application, connection & case studies.	
Reference Books	**Book Name**	**Author Name**
	Design of Steel Structure	L.S. Negi
	Design of Steel Structure	A.S. Arya & J.L. Ajmani
	Design of Steel Structure	Kazmi & Jindal
	Teaching Resources for Steel Design	INSDAG Publication
	IS 800 – Code of Practice for General Construction in Steel	Bureau of Indian Standards (BIS)
	IS 875: 1987 – Code of Practice for Design Loads (Part I to V)	Bureau of Indian Standards (BIS)
	Structures in Architecture	Salvadory
	Tensile Structures	Frei Otto
	Cable Net Structure	Daniel L. Schodek
	Structural Systems for Tall Structures	Taranath S. Bungle
Teaching Methodology	Theory, Tutorial, Presentation and Assignment.	
Evaluation Method	50% Internal assessment, 50% External assessment	

Behaviour Science

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Behaviour Science</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To understand how culture and society influence thoughts and behaviors.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To learn about the emotion of space, or how buildings "feel" to observers. They will use that knowledge to create their own virtual space.
• To introduce fundamental concepts of social and cultural psychology, emphasizing their relevance to understanding human behavior.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will discover and identify facts about the emergent field of architectural psychology.

CO2: Students will be able to learn how architect affect our psyche.

CO3: Students will incorporate their discoveries to utilize color symbolism in psychology with architect.

CO4: Students will be able to understand the relationship between human and built environment.

CO5: Students will apply cross-cultural perspectives to understand diversity in social behavior and communication.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

Course Content	**Unit 1: Introduction to Architectural Psychology** • What is the psychology of architecture? • History of architecture psychology. • Why it is needed? • How architecture shapes us ? • What's working behind the scenes - Lights, color, layout & flow, scale, sound. **Unit 2: Influence of architecture on our psyche** • How design influences mood? • Bright space • Cluttered layouts • Low Ceilings • Narrow hallways • Overly echoey rooms • Doorways • Benches Healing through design/designing restorative architect • Natural light • Silence zones • Soft materials and curves • Biophilic elements (space that feel alive) • Key sensory elements in architect Case study: the role of natural light **Unit 3: Psychology and colors. "color talks to your brain"** What is color psychology? • Definition and color symbolism • How colors feel in a space? • Key aspects of Jung's work on color psychology The power of texture and material • Texture matters • Material to mood The Psychology of different architectural styles • Classical architecture • Modern architecture • Postmodern architecture • Urban design and mental health • Smart buildings and mental comfort • Sustainable = Healthy • Designing for workplace well being • How to design with psychology in mind **Unit 4: Explores the relationship between human experience and built environment** • Key areas of focus in architectural psychology • Environmental perception • Emotional responses to environments

	• Behavioral impact • Cognitive processes • Human-environment interaction • Concepts and theories • Behavioral setting • Territoriality • Privacy • Crowding • Restorative environments • Applications • Design of buildings and spaces • Urban planning • Healthcare • Education • Workplace design • Benefits of architectural psychology • Improved well being • Enhanced performance • Increased satisfaction • Stronger communities • Sustainable design
Reference Books	----
Teaching Methodology	Assignments, Group Discussion.
Evaluation Method	50% Internal assessment, 50% External assessment

Estimation & Costing

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Estimation & Costing</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To enable assessment of quantities, costs, and quality parameters essential for effective project planning and execution.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce the principles and significance of estimation and specification in construction and architectural practice.
• To understand the types, methods, and applications of estimation in different project stages.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the purpose and practical significance of estimation in the construction process.

CO2: Students will be able to identify and apply various types of estimation methods, including approximate and detailed estimates.

CO3: Students will gain the ability to calculate material and work quantities using standard methods and measurement techniques.

CO4: Students will understand different types of specifications and their role in defining material quality, workmanship, and project requirements.

CO5: Students will be able to interpret and apply specifications in contract documents and ensure compliance during execution stages.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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Prerequisite	
Course Content	**Unit 1: Introduction to Estimation and Specification** • Importance and role of estimation in architecture and construction. • Practical examples illustrating the need for accurate estimates. • Overview of specifications and their relevance to building standards. **Unit 2: Types of Estimation** • Various types of estimates: Preliminary, Detailed, Revised, Supplementary. • Applicability and significance of each type in different project phases. **Unit 3: Methods of Quantity Calculation** • Approximate and detailed quantity estimation techniques. • Area and volume-based calculations. • Use of standard formats and checklists. • Learning preparation of BOQ. **Unit 4: Types and Components of Specification** • Classification of specifications: Descriptive, Performance, Proprietary, and Reference specifications. • Importance of specifying quality, materials, and workmanship. **Unit 5: Measurement and Quality Aspects** • Mode of measurement based on standard practices (CPWD, IS codes). • Relation between measurements and cost estimation. • Quality parameters: Material strength, durability, and work execution.
Reference Books	**Book Name** — **Author Name** Estimating and Costing — B.N. Dutta Estimating and Costing — Rangwala Professional Practice — Roshan Nanavati
Teaching Methodology	practical site visits, presentations, case studies, tutorial, study of BOQ & workshop based on the application of theory to construction field.
Evaluation Method	50% Internal assessment, 50% External assessment

History of Architecture-III

Course Code			
Course Title	**History of Architecture-III**		
Marks	100	Credits	2
Teaching per Week	02 hours.		
Minimum weeks per Semester	18 (Including Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To develop an overall understanding of historical architectural styles and their influence on contemporary design thinking and practice.		
Course Objective	• To understand the significant architectural styles of the Renaissance upto pre-modernism. • To introduce students to the evolution and significance of Indo-Islamic architecture. • To understand the evolution of architectural elements across different eras and cultures.		
Course Outcomes	**CO1:** Students will be able to explain the evolution, characteristics, and key architects of Renaissance architecture. **CO2:** Students will analyze English Renaissance and Baroque architecture, identifying stylistic features, design principles, and notable works. **CO3:** Students will understand the development of Indo-Islamic architecture, including the Delhi Sultanate and Mughal periods, and evaluate their spatial, structural, and decorative elements. **CO4:** Students will develop the ability to compare architectural styles across periods, create visual representations, and critically interpret historical buildings in a cultural context.		

Mapping between COs with PSOs

	PSO1	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1					
CO2					
CO3					
CO4					

Prerequisite	
Course Content	**Unit 1: Early and High Renaissance Architecture** • Introduction to the Renaissance period and Early Renaissance Architecture in Italy. • High Renaissance Architecture in Rome: key architects, concepts, and buildings. **Unit 2: Late Renaissance and Purism Styles** • Late Renaissance Architecture: Mannerism style. • Purism style of Architecture: principles, characteristics, and notable examples. • English Renaissance Architecture: Elizabethan, Jacobean, Stuart, and Georgian periods. **Unit 3: Baroque Architecture** • Introduction to Baroque style of Architecture. • Study of works by Bernini, Borromini, Carlo Maderna, and Filippo Juvara. **Unit 4: Indo-Islamic Architecture** • Overview of Indo-Islamic Architecture: Delhi Sultanate and Mughal periods. • Architecture of Delhi Sultanate: forms, materials, and significant monuments. • Architecture of Mughal period: styles, elements, and landmark structures.
Reference Books	**Book Name** — **Author Name** Meaning in Western Architecture — Christian Norberg-Schulz A History of Architecture — Sir Banister Fletcher Architecture Through the Ages — Talbot Hamlin Early India: From the Origins to AD 1300 — Romila Thapar Indian Architecture (Hindu and Buddhist) — Percy Brown
Teaching Methodology	Assignments, Group Discussion
Evaluation Method	50% Internal assessment, 50% External assessment

Theory of Design

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Theory of Design</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To explore the architectural theory and criticism to shape design thinking and help in developing a personal and informed design approach.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To focuses on developing critical thinking, analytical reading, and writing skills to evaluate architectural ideas and practices.
• To introduce the key architectural theories and influential thinkers of the 20th and 21st centuries.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will be able to understand and explain major theoretical frameworks influencing 20th and 21st century architecture.

CO2: Students will develop critical reading and writing skills to evaluate architectural texts and discourses.

CO3: Students will analyze built forms through theoretical lenses and assess their relevance in practice.

CO4: Students will recognize the contributions of key architects and theorists in shaping contemporary architecture.

CO5: Students will begin to formulate a personal design philosophy informed by theoretical and critical perspectives.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>Unit 1: Introduction to Theory and Criticism in Architecture
Understanding theory in architecture and its role in shaping practice
Relationship between writing, theory, and design in professional practice
Theory as a foundation for forming a personal design philosophy
Unit 2: Critical Reading and Writing in Architectural Thinking
Development of critical reading and analytical writing skills
Theory as a tool for articulating design intention
Exercises in interpreting and critiquing architectural texts
Unit 3: Influential Thinkers and Theorists
Introduction to key 20th-century theorists and architects:
Henri Lefebvre, Robert Venturi, Aldo Rossi, Bernard Tschumi, Peter Eisenman, Martin Heidegger, Juhani Pallasmaa, Alvaro Siza, Charles Correa
Study of selected works and associated theoretical positions
Unit 4: Key Themes in 20th Century Architecture and Urbanism
History and Typology
The Nature of Site / Constructed Site
Tectonics and the Constructed Object
Unit 5: Architectural Movements and Philosophies
Overview of dominant architectural ideologies:
Modernism, Structuralism, Deconstruction, Phenomenology, Postmodernism
Their impact on form, function, and meaning in built environments</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Building, Dwelling, Thinking: Basic Writings</td><td>Martin Heidegger</td></tr><tr><td>An Introduction to Architectural Theory: 1968 to the Present</td><td>H.F. Mallgrave & D. Goodman</td></tr><tr><td>The State of Architecture at the Beginning of the 21st Century</td><td>Bernard Tschumi</td></tr><tr><td>Complexity and Contradiction in Architecture</td><td>Robert Venturi</td></tr><tr><td>The Production of Space</td><td>Henri Lefebvre</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion, Lectures, Presentations</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

SEMESTER - 6

Architectural Design Studio VI

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Design Studio VI</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>8</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">12 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To equip students with the skills to prepare accurate working drawings, architectural details, and specifications, integrating building components and services for execution.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To enable students to translate design concepts into detailed drawings useful for execution.
• To develop specifications in terms of materials, construction methods, and service integration.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will develop comprehensive working drawings for construction and execution of architectural projects.

CO2: Students will detail building components accurately, considering their function, assembly, and integration.

CO3: Students will integrate building services such as electrical, plumbing, and drainage into architectural design.

CO4: Students will select appropriate materials and prepare specifications to ensure clarity and constructability in drawings.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

Course Content	**Unit 1: Working Drawings for Execution**
	• Developing a set of working drawings for the purpose of construction and execution.
	• Understanding the flow from conceptual design to detailed drawings.
	• Iterative design process: back-and-forth refinement between design and drawings.
	
	Unit 2: Architectural Detailing of Building Components
	• Detailing of walls, floors, roofs, doors, windows, staircases, and other building elements.
	• Understanding the function, connection, and assembly of individual components.
	
	Unit 3: Building Services Integration
	• Details and functional layouts of building services:
	  ○ Electrical systems
	  ○ Plumbing and drainage systems
	  ○ HVAC and other essential services (if applicable)
	• Coordination of services with architectural design.
	
	Unit 4: Materials, Products, and Specifications
	• Exposure to construction materials, products, and their assembly.
	• Methods for writing specifications in working drawings.
	• Selection of materials based on function, cost, and durability.

Reference Books	**Book Name** — **Author Name** Building Construction, Vol. I, II, III — W.L. Mackey Building Construction — S.P. Arora & S.P. Bindra The Construction of Building — R. Barry Handbook of Architectural Technology — Henry J. Cowan Fundamentals of Building Construction — Edward Allen Building Construction — Huntington
Teaching Methodology	Model making, Presenation Drawing
Evaluation Method	50% Internal assessment, 50% External assessment

Advanced Building Construction

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Advanced Building Construction</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">06 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To introduce advanced construction systems and materials, and how natural forces and modern technologies influence building design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To develop an understanding of large-span and hi-tech construction systems in modern architecture
• To analyze the impact of natural forces on built forms and explore responsive construction techniques.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Understand the principles and applications of large-span structural systems such as space frames, tensile, shell, and modular units.

CO2: Analyze the impact of natural forces on built forms and apply suitable construction techniques for disaster-resilient architecture.

CO3: Evaluate hi-tech construction systems and structural innovations including cable-stressed structures, skyscrapers, and suspension bridges.

CO4: Apply knowledge of innovative materials and emerging technologies to contemporary architectural design and construction practices.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
</table>

Course Content	**Unit 1: Large Span Structures** • Introduction and architectural significance of large-span structures. • Modular Unit Systems: concepts, advantages, and applications in flexible construction. • Space Frame Systems: components, structural behavior, efficiency, and applications in large halls and stadiums. • Tensile Structures: materials, principles, form-finding methods, and case studies. • Shell Structures: forms, materials, structural behavior, and notable architectural examples. **Unit 2: Natural Forces and Their Impact on Built Form** • Understanding natural forces and their influence on architectural design. • Wind: aerodynamic form, wind loads, bracing, and resistance techniques. • Fire: fire behavior of materials and fire-resistant construction methods. • Flood: site planning, elevated design strategies, and resistant materials. • Earthquake: seismic zoning, base isolation, ductile detailing, and earthquake-resistant construction systems. **Unit 3: Hi-Tech Construction Systems** • Introduction to advanced construction innovations and futuristic technologies. • Cable-Stressed Structures: concept, pretensioned and post-tensioned systems, and applications. • Turning Torso Design Systems: structural challenges, torsion resistance, and case studies. • Skyscrapers: structural systems, wind bracing, core design, and high-performance materials. • Suspension Bridges: design principles, load transfer mechanisms, components, and case studies. **Unit 4: Emerging Materials and Technologies** • Innovative construction materials for large-span and high-performance structures. • Smart and responsive materials (self-healing concrete, ETFE, smart glass). • 3D Printing in construction: processes, case studies, and future scope. • Prefabrication and modular hi-tech systems for speed, efficiency, and sustainability. • Integration of advanced technologies in contemporary architectural practice.

Reference Books	**Book Name**	**Author Name**
	Building Construction	B.C. Punmia
	Building Construction (Vol-I-IV)	W.B. McKay
	Building Construction	S.C. Rangwala
Teaching Methodology	On board tutorials, presentations of fixtures and other products used for services, Observations at execution site visits and related case studies.	
Evaluation Method	50% Internal assessment, 50% External assessment	

Project Management

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Project Management</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To introduce principles of construction and office management, project planning and scheduling, legal and labor welfare aspects, and the fundamentals of building economics.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To develop understanding of construction planning, site management, legal frameworks, and economic principles.
• To define management tools and methods for efficient building project execution and decision-making using various management softwares.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the fundamentals of construction management, including planning, programming, and organizational structures.

CO2: Students will apply site and office management techniques to effectively handle project execution and decision-making.

CO3: Students will analyze work planning strategies and project management tools (CPM, PERT, bar charts, software) to monitor and control construction activities.

CO4: Students will evaluate construction industry laws and building economics to ensure legal compliance and informed decision-making in professional practice.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Fundamentals of Construction Management
• Definition and scope of management</td></tr>
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Planning and programming for timely project execution
Overview of site and office management structures

Unit 2: Site and Office Operations

Site management and job layout
Reshaping and rescheduling work as per site conditions
Office management structure and responsibilities
Decision-making processes in construction projects

Unit 3: Work Planning and Project Management

Methods of planning work execution (design, materials, labour, etc.)
Planned vs. actual execution: evaluation and control
Project management techniques: CPM, PERT, bar charts
Introduction to project management software

Unit 4: Construction Laws and Building Economics

Labour welfare laws and other relevant construction industry laws
Demand and supply of built spaces
Market analysis and consumer choice
Building activity as an industry

</td></tr>
<tr><td>Reference Books</td><td>
<table>
<tr><th>Book Name</th><th>Author Name</th></tr>
<tr><td>A to Z Practical Building Construction and Its Management</td><td>Mantri Institute</td></tr>
<tr><td>Techniques for Construction Networking & Scheduling</td><td>James D. Stevens</td></tr>
<tr><td>A Textbook of Economic Theory</td><td>Aldred W. Stonier & D.C. Hague</td></tr>
<tr><td>Professional Practice: With Elements of Estimating, Valuation, Contract and Arbitration</td><td>Dr. Roshan H. Nanavati</td></tr>
</table>
</td></tr>
<tr><td>Teaching Methodology</td><td>Theory, Tutorial, Presentation and Assignment.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Professional Practice - I

<table>
<tr><td>Course Code</td><td colspan="5"></td></tr>
<tr><td>Course Title</td><td colspan="5">Professional Practice - I</td></tr>
<tr><td>Marks</td><td colspan="2">100</td><td>Credits</td><td colspan="2">2</td></tr>
<tr><td>Teaching per Week</td><td colspan="5">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="5">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="5">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="5">To develop an understanding of professional roles, responsibilities, and ethical standards in architectural practice.</td></tr>
<tr><td>Course Objective</td><td colspan="5">• To familiarize students with office organization, coordination with inter-professionals, authorities and professional organizations.
• To equip students with professional knowledge and skills required for architectural practice, professional roles, ethics and legal frameworks in real-world scenarios.</td></tr>
<tr><td>Course Outcomes</td><td colspan="5">CO1: Demonstrate an understanding of professional skills, roles, responsibilities, and prevailing patterns of professional practice.

CO2: Analyze interrelationships among professionals, associations, and registering bodies while applying principles of professional ethics and fee structures.

CO3: Apply knowledge of professional competitions, office organization, and management practices in handling architectural projects.

CO4: Evaluate and manage contractual practices, site responsibilities, and stakeholder roles in the execution of projects.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="5"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="5"></td></tr>
</table>

<table>
<tr><td>Course Content</td><td>

Unit 1: Introduction to Professional Practice

- Understanding basic professional skills for handling various project types and complexities
- Role and responsibilities of a professional
- Overview of prevailing patterns of professional practice

Unit 2: Professional Relationships and Ethics

- Comparison and interrelationship with other professionals and professional bodies
- Overview of various professional associations and registering bodies
- Responsibilities of associations and bodies
- Detailed understanding of professional ethics and fee structure

Unit 3: Professional Competitions and Office Management

- Understanding different types of professional competitions
- Office organization structures and management skills
- Daily office responsibilities towards staff and interactions with government bodies

Unit 4: Contractual Practices and Site Responsibilities

- Understanding contracts, their management, and site supervision
- Roles, responsibilities, liabilities, and indemnities of clients, contractors, sub-contractors, and clerks of works

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Handbook on Professional Practice	Council of Architecture, New Delhi
Handbook on Professional Practice	Indian Institute of Architecture
Professional Practice with Elements of Estimating, Valuation, Contract and Arbitration	Dr. Roshan H. Namavati

</td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion.</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Building Bye-Laws

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Bye-Laws</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">04 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To provide understanding of building bylaws, regulations, and development control rules, enabling them to apply these legal frameworks in architectural practice.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To provide exposure to legal framework related to physical development prevailing from constitution to local level.
• To develop comprehensive understanding of development control regulations in the context of Gujarat.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will learn zoning concepts and assess their impact on residential, institutional, industrial, agricultural, and entertainment developments.

CO2: Students will Interpret and compare bye-laws applicable to cities, towns, and villages with respect to their implementation.

CO3: Students will analyze the evolution of building regulations through key legislation.

CO4: Evaluate the purpose and necessity of bye-laws in ensuring safety, functionality, and aesthetics within the built environment.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prerequisite</td><td colspan="3"></td></tr>
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<table>
<tr><td>Course Content</td><td>Unit 1: Introduction to Zoning and Land Use

• Zoning of areas: residential, institutional, industrial, agricultural, entertainment, etc.
• Importance and implications of zoning regulations in urban development.

Unit 2: City, Town, and Village Bye-laws

• Introduction to bye-laws for different settlement types: city, town, and village.
• Distinctive features and implementation mechanisms.

Unit 3: Evolution of Building Regulations

• Historical overview of GDCR.
• Key legislations:
o Mumbai Municipal Act
o Town Planning Act
o General Development Control Regulations (GDCR)

Unit 4: Purpose and Necessity of Bye-laws

• Understanding the need for bye-laws in urban governance.
• Role in ensuring safety, functionality, and aesthetics in built environments.</td></tr>
<tr><td>Reference Books</td><td>Book Name — Author Name
CGDCR — ----------
NBC (National Building Code) — Bureau of Indian Standards (BIS)</td></tr>
<tr><td>Teaching Methodology</td><td>Presentations, Disucussions</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

History of Architecture-IV

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">History of Architecture-IV</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">02 hours.</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Including Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop understanding of the evolution, and contextual relevance of Colonial and Modern architecture in India and globally.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce students to the principles and evolution of colonial architecture, highlighting their socio-cultural, technological, and structural influences.
• To study the principles of modern architecture globally with reference to master architect.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Explain the evolution of colonial architecture in India, including its urban and institutional expressions.

CO2: Analyze the foundations of Modernist architecture by evaluating the role of materials, technologies, and structural innovations.

CO3: Interpret the works and philosophies of master architects.

CO4: Assess contemporary architectural approaches in India, focusing on climate-responsive design, modernist practices, and the contributions of women architects.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3"></td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Colonial Architecture in India & Practical Exercises
• Overview of architectural styles and influences during the colonial period</td></tr>
</table>

<table>
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- Study of urban and institutional buildings reflecting colonial ideologies

Unit 2: Foundations of Modernist Architecture

- Rise of Modernism: causes and effects with respect to significant buildings
- Role of materials and structural engineers in shaping modernist design
- Relationship between structure and architecture in built examples
- Inspirations from animal architecture and natural systems
- Construction technologies and their influence on modernist design

Unit 3: Master Architects of India – Part I

- Works of Le Corbusier, Louis Sullivan, B.V. Doshi, Mahendra Raj, Raj Rewal, Charles Correa
- Introduction to Critical Regionalism

Unit 4: Master Architects of India – Part II & Contemporary Directions

- Climate-responsive architecture in India
- Modernist approaches by Sanjay Puri,HCP , Morphogenesis, and others
- Contribution of women in Indian architecture

</td></tr>
<tr><td>Reference Books</td><td>
<table>
<tr><th>Book Name</th><th>Author Name</th></tr>
<tr><td>Meaning in Western Architecture</td><td>Christian Norberg-Schulz</td></tr>
<tr><td>A History of Architecture</td><td>Sir Banister Fletcher</td></tr>
<tr><td>Architecture Through the Ages</td><td>Talbot Hamlin</td></tr>
<tr><td>Architecture: From Prehistory to Post-Modernity</td><td>Marvin Trachtenberg & Isabelle Hyman</td></tr>
<tr><td>Hindu Architecture</td><td>Henri Stierlin</td></tr>
<tr><td>Indian Architecture</td><td>Adam Hardy</td></tr>
<tr><td>The History of Architecture in India</td><td>Christopher Tadgell</td></tr>
</table>
</td></tr>
<tr><td>Teaching Methodology</td><td>Assignments, Group Discussion, Presentration</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
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SEMESTER - 7

Practical Training

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Practical Training</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>24</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">- NA -</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Practical Training, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To provide practical experience through supervised internship under the registered architect, build professional skills, and get prepared for industry.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To provide practical experience in an architectural firm to design and execute building projects.
• To learn project management, teamwork, and professional skills, along through critical observation and prepare reports and a final portfolio.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will apply design and detailing skills by engaging in collaborative discussions with clients, consultants, and project teams.

CO2: Students will prepare professional drawings, specifications, tenders, and estimations to support project execution and documentation.

CO3: Students will able to demonstrate digital proficiency in compiling, managing, and presenting architectural information for office and project use.

CO4: Students will analyse on-site construction processes through observation, coordination, and supervision to bridge design and execution.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
</table>

Prerequisite	Nil
Course Content	**Unit 1: Designing and Detailing** • Understanding the design process through active participation in ongoing projects. • Engaging in discussions with project team members, clients, consultants, and suppliers. • Exposure to design development stages, from concept to detailed working drawings. • Developing skills in material selection, joinery details, and finishing techniques. **Unit 2: Office Experience** • Preparation of presentation drawings for client communication. • Developing execution drawings with specifications and detailing. • Understanding project documentation and compliance with building regulations. **Unit 3: Digital Skills and Office Management** • Training in digital tools for design, drafting, and visualization. • Compilation of reports, records, and project documentation in digital formats. • Developing skills in presentation software and digital communication with stakeholders. **Unit 4: Site Visits and Supervision** • Observing construction methods, materials, and detailing at site. • Enhancing coordination skills with contractors, consultants, and site supervisors. • Monitoring progress of work against drawings and specifications. • Identifying and addressing site challenges, safety practices, and quality control. • Learning the role of architects in supervision, decision-making, and client communication on site.
Reference Books	-NA -
Teaching Methodology	-NA -
Evaluation Method	100% External assessment

SEMESTER - 8

Architectural Design Studio - VIII

Course Code			
Course Title	**Architectural Design Studio - VIII**		
Marks	100	Credits	10
Teaching per Week	14 hr		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To develop understanding of urban housing challenges across socio-economic groups and offer strategic solutions for effective housing projects.		
Course Objective	• To understand the complex socio-economic needs of society influencing urban housing and analyse related issues such as land scarcity and housing typologies. • To explore and evaluate recent trends of development, and future directions through design-based investigations. • To develop the ability to design sustainable, resilient, and environmentally responsive housing solutions that address contemporary urban challenges.		
Course Outcomes	**CO1:** Students will understand national and global housing policies, standards, and regulations, and their role in addressing housing challenges across income groups. **CO2:** Students will analyse housing typologies, planning principles, and issues such as shortages, finance, and slum development in urban and rural contexts. **CO3:** Students will able to apply housing design methodologies through case studies and develop urban housing schemes integrating infrastructure, services, and community needs. **CO4:** Students will able to evaluate and incorporate modern construction techniques, disaster-resistant methods, and sustainable practices for innovative and resilient housing solutions.		

Mapping between COs with PSOs

COs	PSO1	PSO2	PSO3	PSO4	PSO5
CO1					
CO2					
CO3					
CO4					

Prerequisite

Nil

Course Content

Unit 1: Housing Contexts and Policies

- National and global housing policy overview
- Housing issues across different income groups
- Housing standards and regulations
- Evolution of housing: global and Indian contexts
- Legal and administrative aspects: building bye-laws, legal documentation, permissions, and approvals

Unit 2: Housing Planning Principles and Typologies

- Site planning principles and concepts
- Types of housing: government, private, traditional, modern
- Evolution of housing typologies and trends
- Urban housing challenges and opportunities
- Housing issues and approaches: shortages, finance, incremental/affordable housing, sites and services, slums and squatter settlements

Unit 3: Design of Urban Housing Schemes

- Housing design methodology
- Case studies of public, private, PPP, traditional, and landmark projects
- Analysis of successful and innovative housing projects
- Design of urban housing schemes: planning, infrastructure, services, amenities
- Climate-responsive and environment-friendly design strategies
- Community participation and social considerations

Unit 4: Construction Techniques and Sustainable Practices

- Modern construction methods: prefabrication and modular systems
- Disaster-resistant housing techniques
- Sustainable practices including TERI-GRIHA certification
- Material selection and construction innovations

Reference Books	**Book Name**	**Author Name**
	Housing and Urbanization in India	S. P. Singh
	Urban Housing and Policy in India	B. N. Dutta
	Site Planning and Housing Development	Kevin Lynch
	Design of Urban Housing Projects	Ravi K. Jain & B. N. Dutta
Teaching Methodology	Lectures & Discussions, Case Study Reviews, Site Visits & Field Surveys, Concept Development & Sketching, Model Making, Final Presentations & report making	
Evaluation Method	50% Internal assessment, 50% External assessment	

Hi-Tech Structures and Performance Analysis

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Hi-Tech Structures and Performance Analysis</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">4 hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To equip students with practical skills in building performance simulation, focusing on energy efficiency, daylighting, and thermal comfort using advanced digital tools.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce the fundamentals of building performance simulation, enabling them to analyse energy, daylight, and thermal comfort using digital tools.
• To explore the impact of innovative materials, structural systems, and digital technologies on overall building efficiency and sustainability.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand building performance techniques for analysing energy use, daylighting, and thermal comfort.

CO2: Students will ensure design compliance with sustainability standards such as ASHRAE, IGBC, and ECBC.

CO3: Students will evaluate advanced materials, construction methods, and structural systems to enhance building performance.

CO4: Students will use digital tools, to conduct integrated environmental and systems performance analysis.

CO5: Students will assess and optimize building designs by integrating traditional principles with modern computational methods for sustainable outcomes.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
</table>

Course Content	**Unit 1: Introduction to High-Performance Building Systems**
	• Overview of integrated building systems (site, climate, structure, skin, services, space, finishes)
	• Principles of designing high-performance buildings through system interconnectivity
	• Key concepts in sustainable and innovative building design
	
	Unit 2: Sky scrapers and smart and intelligent buildings
	• **Skyscrapers:** Tall, multi-storey buildings designed for commercial, residential, or mixed use, optimized for vertical space in dense urban areas.
	• **Structural & Design Features:** Steel or reinforced concrete frameworks, wind and seismic resistance systems, high-speed elevators, and efficient space utilization.
	• S**mart/Intelligent Buildings:** Buildings with integrated automation systems for lighting, HVAC, security, and energy management to enhance efficiency and comfort.
	• **Benefits:** Skyscrapers maximize land use and create iconic skylines; smart buildings reduce energy consumption, improve occupant comfort, and enable real-time monitoring.
	
	Unit 3: Special Structures and Digital Analysis
	• Structural analysis of complex forms using digital tools
	• Case studies of innovative large-scale structures
	• Use of advanced digital tools for complex form generation and analysis
	• Computational design methods and parametric modeling
	• Structural and performance simulation software
	• Optimization techniques for complex structures
	
	Unit 4: Hi-Tech Roofing, Facades, and Smart Materials
	• Tensile and membrane roofing systems
	• Metal lattice and hyperbolic roof structures
	• Retractable and dynamic roof systems
	• Kinetic facades and adaptive building skins
	• Smart and responsive materials:
	  o Thermal expansion materials
	  o Shape memory alloys
	  o Phase-change materials
	• Applications of smart materials in adaptive facades and structural elements
	• Innovations in responsive architecture
	
	Unit 5: Integrated Design and Performance Optimization
	• Integrating structural, façade, and building services systems
	• Design strategies for maximizing performance, sustainability, and aesthetics
	• Case studies demonstrating effective system integration.

Reference Books	**Book Name**	**Author Name**
	Structures	Daniel L. Schodek & Martin Bechthold
	Space Grid Structures	John Chilton
	Tensile Structures	Frei Otto & Bodo Trostel
	Smart Materials and New Technologies	Michelle T. Eddington & Daniel L. Schodek
	Heating, Cooling, Lighting: Sustainable Design Methods for Architects	Norbert Lechner
Teaching Methodology	Lectures with Case Studies, Hands-On Software Training, Group Projects, Site Visits (Virtual or Physical), Studio-Based Learning	
Evaluation Method	50% Internal assessment, 50% External assessment	

Site Planning & Landscape

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Site Planning & Landscape</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">4hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To equip students with foundational knowledge and practical skills in site planning and landscape design.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To introduce the principles and techniques of site planning and landscape design.
• To develop the ability to analyse and respond to natural and built site conditions.
• To enable students to integrate landscape strategies across various projects through both theoretical and studio-based learning.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will gain understanding of site planning and landscape design principles and their application.

CO2: Student will conduct detailed site analyses incorporating environmental, social, and cultural factors to inform design strategies.

CO3: Students will apply appropriate landscape theories and innovative design approaches to a variety of project types.

CO4: Students will integrate sustainable landscape solutions within urban and rural design contexts.

CO5: Students will communicate landscape design concepts effectively using visual and verbal presentation techniques.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
</table>

Course Content	**Unit 1: Site Analysis and Inventory**
	
	• Collect data on on-site and off-site factors:
	  o Topography, slopes, drainage
	  o Soil types and layers
	  o Sensitive areas and natural ecosystems
	  o Vegetation and tree surveys
	• Use symbols and graphical representations for site inventory and analysis
	
	Unit 2: Landforms and Contours
	
	• Read and interpret survey maps
	• Understand landforms, topography, and contour lines
	• Practical skills:
	  o Identifying contours and contour analysis
	  o 3D modeling of the site
	  o Using existing levels to minimize cut and fill
	• Plan for effective site drainage and rainwater harvesting
	
	Unit 3: Elements of Designed Landscapes
	
	• Use of landforms, water, plants, and built elements in landscape design
	• Application of materials and street furniture
	• Understand physical properties, spatial effects, and design values
	• Principles of planting design and plant selection
	
	Unit 4: Site Circulation
	
	• Design considerations for circulation networks (pedestrian and vehicular)
	• Study of road types, hierarchy, and network planning
	• Consider turning radius, street intersections, and parking standards
	• Integration with existing contour profile and landscape
	
	Unit 5: Site Services
	
	• Design of site-level infrastructure:
	  o Water supply and sewage conveyance
	  o Positive drainage and surface runoff management
	  o Rainwater harvesting
	• Location and design of sewage treatment plants

Reference Books	**Book Name**	**Author Name**
	Site Analysis: A Contextual Approach to Sustainable Land Planning	Edward T. White
	The Shape of the Land: Topography & Landscape Architecture	Marc Treib
	Basic Elements of Landscape Architectural Design	Norman K. Booth
	Site Planning and Design Handbook	Thomas H. Russ
Teaching Methodology	Site Analysis and Documentation, Site Planning Exercises, Urban-scale Interventions, Rural Context Design	
Evaluation Method	50% Internal assessment, 50% External assessment	

Professional Practice - II

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Professional Practice - II</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">2 hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop an understanding of professional roles, responsibilities, and ethical standards in architectural practice.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To equip students with knowledge of tendering, contracts, dispute resolution, land acquisition, easements.
• To equip students with professional knowledge and skills required for architectural practice, professional roles, ethics and legal frameworks in real-world scenarios.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Student will interpret tender and contract documents, identifying potential issues in execution.

CO2: Student will analyse disputes and apply arbitration or conciliation methods for resolution.

CO3: Student will evaluate land acquisition and easement laws, applying them in architectural planning.

CO4: Student will examine legal obligations in building maintenance, repairs, and fixtures, and integrate them into professional practice.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Tender and Contract Basics
• Tendering Process: Definition, purpose, types of tenders (open, selective, negotiated, limited, and global).</td></tr>
</table>

- Tender Documents: Notice inviting tender, instructions to tenderers, schedule of quantities, specifications, drawings, general and special conditions.
- Contracts in Architecture: Nature and formation of contracts, types (lump sum, item rate, cost plus, turnkey, BOT/PPP).
- Common Issues in Contracts: Breach of contract, delays, termination, liquidated damages, escalation clauses.
- Role of Architect: As an agent, certifier, and contract administrator.

Unit 2: Dispute Resolution – Arbitration and Conciliation

- Dispute in Construction Projects: Causes (payment delays, defective work, scope changes, misinterpretation of clauses).
- Arbitration: Concept, legal framework (Arbitration and Conciliation Act, 1996), appointment of arbitrator, arbitration procedure, award enforcement.
- Conciliation and Mediation: Informal resolution methods, advantages over litigation.
- Role of Architect: As an expert witness, mediator, or arbitrator in disputes.

Unit 3: Land Acquisition and Easements Law

- Land Acquisition: Principles, procedures under Land Acquisition Act (Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013).
- Compensation and Rehabilitation: Criteria for valuation of land/buildings, rehabilitation/resettlement of displaced persons.
- Easement Rights: Right of way, light and air, support, water rights; affect building design and planning.
- Urban Land Ceiling and Regulation Act (ULCRA) and implications for architects.

Unit 4: Building Laws and Legal Issues in Practice

- Repairs and Dilapidation: Definition, architect's role in advising landlord/tenant, obligations under lease agreements.
- Waste and Fixtures: Legal meaning of waste (voluntary, permissive, equitable waste), distinction between movable/immovable fixtures, rights of property owner vs. tenant.
- Building Maintenance Laws: Responsibilities of owners, societies, municipalities.
- Legal Responsibilities of Architects: Duties under Architects Act 1972, liabilities in contract administration.

Reference Books	**Book Name**	**Author Name**
	Professional Practice	B.J. Patil
	Professional Practice	Roshan Namavati
	Professional Practice Manual	Ar. Prof. Madhav Deobhakta
	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Government of India
Teaching Methodology	Lectures & Discussions, Final Presentations & report making	
Evaluation Method	50% Internal assessment, 50% External assessment	

Town Planning

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Town Planning</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">4hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To introduce the principles of town planning for creating sustainable, functional, and well-organized urban environments that promote responsible and resilient development.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To understand the history, evolution, and fundamental principles of town planning and urban design.
• To explore key components of urban systems — including land use, transport, housing, and public spaces.
• To develop the ability to analyse urban challenges and propose innovative, context-sensitive strategies for resilient urban development.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Students will understand the history, evolution, and fundamental principles of town planning.

CO2: Students will analyse urban land use patterns, perform site suitability assessments, and evaluate the social and economic impacts of land use policies and zoning regulations.

CO3: Students will apply urban design and master planning principles to create functional, sustainable, and integrated urban environments.

CO4: Students will interpret and apply legal, policy, and regulatory frameworks.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Introduction to Town Planning
• History and evolution of urban planning</td></tr>
</table>

<table>
<tr><td></td><td>

- Principles and importance of sustainable urban development
- Key concepts: zoning, land use, urban form, and public spaces
- Overview of global and regional urbanization trends

Unit 2: Urban Land Use Planning

- Land classification and zoning regulations
- Urban hierarchy: centres, corridors, neighbourhoods
- Site analysis and suitability assessment
- Land use policies and their social/economic impacts

Unit 3: Urban Design and Master Planning

- Concepts of urban form, morphology, and design principles
- Master planning processes and steps
- Design of public spaces, green areas, and transportation corridors
- Integration of architecture with urban design

Unit 4: Legal, Policy, and Regulatory Frameworks

- Urban planning laws and regulations
- Building codes and compliance
- Land acquisition and rights
- Policy formation and governance

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Urban Planning: Theory and Practice	B. R. Vishwanath
The City Planning Process	John F. Reynolds
Urban Planning and Design Handbook	David Rivkin & Michael Neuman
Town Planning Principles and Practice	James LaGro Jr.
Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century	Peter Hall

</td></tr>
<tr><td>Teaching Methodology</td><td>Case Study analysis, on site Study, Group Discussions</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

SEMESTER - 9

Architectural Design Studio - IX

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Architectural Design Studio - IX</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>10</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">14hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop an understanding of towns and cities in their historical, natural, and functional contexts, and apply this knowledge to design context-sensitive public buildings.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To analyse urban patterns, site conditions, and develop programmatic requirements influencing architectural design.
• To explore and evaluate alternative design approaches responding to contextual, social, and functional needs.
• To develop architectural solutions that integrate creativity with sensitivity to urban context and user requirements.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Student will study and analyse the history, evolution, and demographic patterns of towns and cities to understand urban development trends.

CO2: Student will assess natural elements, regional connectivity, and urban infrastructure to evaluate their impact on settlement patterns.

CO3: Student will examine administrative setups, development control mechanisms, and settlement typologies to identify suitable sites for design.

CO4: Student will develop architectural design solutions for public buildings that are contextually responsive and functionally efficient.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3">
<table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr>
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</table>

<table>
<tr><td>Prerequisite</td><td>Nil</td></tr>
<tr><td>Course Content</td><td>Unit 1: History and Evolution of Town/City
Study of the historical development and evolution of the town/city.
Analysis of demographic profile, occupational patterns, and their influence on urban development trends.
Unit 2: Natural and Regional Context
Study of natural elements like climate, topography, water bodies, and vegetation to understand settlement patterns.
Study of regional connectivity, city structure, and urban infrastructure (physical & social).
Unit 3: Analysing Urban Context and Identification of Architectural Project
Understanding administrative setup, development control mechanisms, and regulation of the city.
Detailed study of settlement patterns including blocks, clusters, house forms, typologies, important institutions, marketplaces, local materials, and construction technologies.
Analysing Urban Parameters and Project Identification.
Identification of relevant site and project for design exercise.
Unit 4: Design Exercise
Site analysis and programmatic case study.
Exploration of various alternatives for design approach.
Architectural design of a public purpose building keeping “context” as the central idea.</td></tr>
<tr><td>Reference Books</td><td><table><tr><th>Book Name</th><th>Author Name</th></tr><tr><td>Urban Land Use Planning</td><td>Philip R. Berke, David R. Godschalk, Edward J. Kaiser</td></tr><tr><td>The Image of the City</td><td>Kevin Lynch</td></tr><tr><td>Site Planning and Design Handbook</td><td>Thomas Russ</td></tr><tr><td>Urban Planning in India: Concepts, Policies, Practices</td><td>Bimal Patel & Others</td></tr><tr><td>Smart Cities: Applications, Technologies, Standards, and Driving Factors</td><td>Zaigham Mahmood</td></tr></table></td></tr>
<tr><td>Teaching Methodology</td><td>Site Analysis and Documentation, Site Planning Exercises, Urban-scale Interventions, Rural Context Design</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Research methods & Technical writing

Course Code			
Course Title	**Research methods & Technical writing**		
Marks	100	Credits	4
Teaching per Week	4hr		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To develop analytical, critical thinking, and data interpretation skills while emphasizing accurate communication of complex architectural ideas through structured methodologies and professional standards.		
Course Objective	• To develop the ability to collect, analyse, and critically evaluate architectural and environmental data. • To enhance proficiency in written, visual, and verbal communication for effective professional expression. • To strengthen research skills through appropriate methodologies, data interpretation, and coherent presentation of findings.		
Course Outcomes	**CO1:** Students will conduct comprehensive research using appropriate data collection and analysis techniques. **CO2:** Students will critically evaluate and interpret data, reports, and scholarly literature to inform architectural design decisions. **CO3:** Students will articulate research findings and technical concepts through well-structured reports, papers, and presentations. **CO4:** Students will demonstrate mastery of technical writing conventions, including clarity, coherence, and accuracy. **CO5:** Students will apply various research methodologies—such as qualitative analysis, case studies, and surveys—to support project development and architectural inquiry.		

Mapping between COs with PSOs	<table><tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr><tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr></table>
Prerequisite	Nil
Course Content	**Unit 1: Introduction to Architectural Research** • Purpose and importance of research in architecture • Types of research: exploratory, descriptive, explanatory, applied • Overview of secondary and primary data sources • Developing research questions and objectives **Unit 2: Defining the Research Problem and Formulating Hypotheses** • Identifying research gaps and framing research problems • Constructing research hypotheses and objectives and scope • Literature review techniques and synthesis **Unit 3: Research Methodologies and Strategies** • Qualitative vs. Quantitative research • Case studies, surveys, field studies, experiments • Data collection tools • Selecting appropriate methodology **Unit 4: Data Collection and Analysis** • Techniques for secondary data collection • Primary data collection methods • Data organization and management • Analytical tools and techniques **Unit 5: Research Report Writing and Communication** • Structure of research reports and papers • Clarity, coherence, and proper documentation • Visual aids, charts, and presentation techniques • Academic and professional standards in citation and referencing

Reference Books	**Book Name**	**Author Name**
	Research Methods for Architecture	Ray Lucas
	Architectural Research Methods	Linda N. Groat & David Wang
	Architectural Research Methods and Practice	Matthew Hodge
Teaching Methodology	Site Analysis and Documentation, Site Planning Exercises, Urban-scale Interventions, Rural Context Design	
Evaluation Method	50% Internal assessment, 50% External assessment	

Building Economics and Real Estate

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Building Economics and Real Estate</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>4</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">4hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To equip students with an understanding of economic principles, project financing, and real estate management to support informed decision-making in building design, construction, and investment.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To analyse project inputs, assess financial viability, and understand market dynamics influencing architectural and real estate development.
• To apply economic and legal principles for informed decision-making in planning, design, and management of building projects.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Student will understand and apply micro and macroeconomic principles to assess the feasibility of building and real estate projects.

CO2: Student will analyse project inputs including land, labour, capital, and materials, and evaluate their impact on construction economics.

CO3: Student will calculate investment returns using concepts like IRR, Present Value, and profitability measures for architectural and real estate projects.

CO4: Student will perform economic analyses, cost projections, and valuation studies while considering legal and institutional frameworks in real estate and building projects.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
</table>

<table>
<tr><td>Course Content</td><td>

Unit 1: Fundamentals of Economics in Construction

- Microeconomics: Market structures, demand and supply, consumer choice, budget constraints, monopoly and oligopoly, production, profit, welfare, and public goods.
- Macroeconomics: National income (GNP, NNP), aggregate demand and supply, inflation, interest rates, employment, saving, investment, and monetary/fiscal policies.
- Relevance of economic principles to architectural projects and real estate.

Unit 2: Theory of Demand and Project Inputs

- Theory of Demand: Utility analysis, marginal utility, and consumer equilibrium.
- Project inputs: Economics of land, labour, capital, and materials.
- Labour-intensive vs. capital-intensive projects.
- Agencies and institutions influencing project economics.
- Public-private partnerships (PPP) in building and real estate projects.

Unit 3: Capital, Interest, and Profitability in Real Estate

- Basic concepts of capital, interest, and profits.
- Pricing, rentals, and return on investment.
- Capital vs. financial assets; nominal vs. real investment.
- Internal Rate of Return (IRR), Present Value (PV), and their applications in project appraisal.

Unit 4: Economic Analyses of Building Projects

- Project feasibility studies, cost control, and cash flow analysis.
- Cost projection, cost-benefit analysis, and valuation of properties.
- Estate investments and expected returns.
- Legal aspects related to real estate and building projects.

</td></tr>
<tr><td>Reference Books</td><td>

Book Name	**Author Name**
Economics	P. Samuelson & W. Nordhaus
Principles of Economics	N. Gregory Mankiw
Construction Economics and Management	Dr. B.N. Dutta

</td></tr>
<tr><td>Teaching Methodology</td><td>Site Analysis and Documentation</td></tr>
<tr><td>Evaluation Method</td><td>50% Internal assessment, 50% External assessment</td></tr>
</table>

Urban Design (Seminar)

<table>
<tr><td>Course Code</td><td colspan="3"></td></tr>
<tr><td>Course Title</td><td colspan="3">Urban Design (Seminar)</td></tr>
<tr><td>Marks</td><td>100</td><td>Credits</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td colspan="3">4hr</td></tr>
<tr><td>Minimum weeks per Semester</td><td colspan="3">18 (Class work, Examination, Preparation, Holidays etc.)</td></tr>
<tr><td>Effective From</td><td colspan="3">June 2025</td></tr>
<tr><td>Purpose of Course</td><td colspan="3">To develop understanding of urban design principles, contextual analysis, and sustainable strategies for proposing innovative, human-centric urban interventions.</td></tr>
<tr><td>Course Objective</td><td colspan="3">• To analyse urban spaces and study relevant precedents to understand design, planning, and social dynamics.
• To develop seminar-based conceptual proposals that integrate design thinking with contextual and societal considerations.</td></tr>
<tr><td>Course Outcomes</td><td colspan="3">CO1: Student will analyse urban forms, public spaces, and city structures to understand the principles of urban design.

CO2: Student will evaluate contextual and environmental factors to propose sustainable urban design strategies.

CO3: Student will develop conceptual urban design proposals through research, sketches, and diagrams.

CO4: Student will present, defend, and critically review urban design ideas, integrating feedback and best practices.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td colspan="3"><table>
<tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
<tr><td>Prerequisite</td><td colspan="3">Nil</td></tr>
<tr><td>Course Content</td><td colspan="3">Unit 1: Introduction to Urban Design

• Understanding the scope, importance, and objectives of urban design.</td></tr>
</table>

	• Urban design as an interdisciplinary field: architecture, planning, landscape, and sociology. • Key principles of urban design: legibility, connectivity, scale, and human experience. • Discussion on urban design theories and philosophies. **Unit 2: Urban Form and Public Spaces** • Study of urban morphology: streets, blocks, plots, and land use patterns. • Role of public spaces: squares, parks, waterfronts, plazas, and streetscapes. • Analysis of pedestrian movement, accessibility, and urban connectivity. • Case studies of exemplary urban spaces and their social, cultural, and functional aspects. **Unit 3: Contextual and Sustainable Urban Design** • Designing for climate, topography, and local context. • Sustainable urban design strategies: green infrastructure, storm water management, and energy efficiency. • Integration of transport, utilities, and urban services in design. • Community participation and inclusive design approaches. **Unit 4: Urban Design Projects and Research** • Seminar-based discussion of live or hypothetical urban design projects. • Development of conceptual proposals, sketches, and diagrams for urban interventions. • Critical analysis of urban design precedents and best practices. • Presentation and defence of urban design ideas with feedback from peers and faculty.
Reference Books	----
Teaching Methodology	Documentation
Evaluation Method	50% Internal assessment, 50% External assessment

SEMESTER - 10

Architectural Dissertation

Course Code			
Course Title	**Architectural Dissertation**		
Marks	100	Credits	24
Teaching per Week	30hr		
Minimum weeks per Semester	18 (Class work, Examination, Preparation, Holidays etc.)		
Effective From	June 2025		
Purpose of Course	To integrate theory and practice by developing a comprehensive architectural design project that demonstrates analytical thinking, technical proficiency, and effective communication of strategies.		
Course Objective	• To research, analyse, and develop context-sensitive and innovative architectural design solutions. • To enhance professional communication, technical competencies and report writing in architectural practice.		
Course Outcomes	**CO1:** Students will identify and select a relevant architectural topic, formulate research questions, and define objectives based on literature review. **CO2:** Students will conduct comprehensive research using appropriate methodologies, analyse site and contextual data. **CO3:** Students will develop design concepts and innovative solutions integrating sustainability, functionality, aesthetics, and cultural relevance. **CO4:** Students will produce detailed architectural designs, technical drawings, and 3D models incorporating structural, material, and environmental considerations. **CO5:** Students will effectively document and communicate research findings and design solutions through reports, presentations, and visual media.		

Mapping between COs with PSOs	<table><tr><th>COs</th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th></tr><tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td></tr></table>
Prerequisite	Nil
Course Content	**Unit 1: Introduction & Topic Selection** • Understanding the purpose, scope, and significance of the dissertation • Identifying individual interests and specialization areas • Brainstorming and selecting a relevant, feasible topic • Reviewing existing literature and current debates • Formulating initial research questions and objectives **Unit 2: Identification of Research Method & Site/Context Analysis** • Defining research methods: qualitative, quantitative, mixed • Developing strategies: case studies, surveys, historical research, site analysis • Understanding ethical considerations in research • Conducting site visits and analysing social, cultural, environmental, and physical contexts • Examining zoning, regulations, and urban fabric (if applicable) **Unit 3: Concept Development & Design Ideation** • Developing design concepts based on research findings • Incorporating sustainability, cultural relevance, and innovative solutions • Exploring spatial organization, form, aesthetics, and functionality • Creating conceptual sketches, diagrams, and initial models **Unit 4: Design Development & Technical Detailing** • Refining designs based on feedback • Developing detailed architectural plans, sections, elevations, and 3D models • Addressing structural, environmental, material, and construction aspects

	• Integrating sustainability and technical considerations **Unit 5: Documentation, Presentation & Review** • Preparing comprehensive drawings, models, and visual presentations • Writing the dissertation report with proper referencing and formatting • Presenting and defending the project to juries and peers • Incorporating feedback and reflecting on learnings from the process
Reference Books	**Book Name** — **Author Name** Writing Tools: 50 Essential Strategies for Every Writer — Roy Peter Clark The Dissertation: An Architecture Student's Handbook, 2nd Ed — I. Borden & K.R. Ray Conducting Research Literature Reviews: From Paper to the Internet — A. Fink
Teaching Methodology	Site Analysis and Documentation, Site Planning Exercises, Urban-scale Interventions, Rural Context Design
Evaluation Method	50% Internal assessment, 50% External assessment

A.Y. 2022-23

SEMESTER - I Marking Scheme (NEW)													
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam(20%)	Total	Theory	Jury / Viva	Duration	
1		Basic Design- I	4	-	6	6	30	20	50	-	50	Jury	100
2		Architectural Design Studio - I	4	-	6	6	30	20	50	-	50	Jury	100
3		Building Materials and Construction - I	4	2	4	6	30	20	50	50	-	3 hours	100
4		Architectural Graphics Skill - I	4	1	3	4	30	20	50	50	-	3 hours	100
5		Sturctural Design System - I	2	2	-	2	30	20	50	50	-	2 hours	100
6		Humanities - I	2	2	-	2	30	20	50	50	-	2 hours	100
7		Communication Skills - I	2	2	-	2	30	20	50	50	-	2 hours	100
8		Elective - I 1. Photography 2. Infographics 3. Workshop (wood, steel, POP, Clay, etc.) 4. Screen Printing 5. Sculpure 6. Leather printing	2	-	-	2	50	-	100	-	-	-	100
		Total	24			30							800

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - II Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam(20%)	Total	Theory	Jury / Viva	Duration	
1		Basic Design- II	4	-	6	6	30	20	50	-	50	Jury	100
2		Architectural Design Studio - II	4	-	6	6	30	20	50	-	50	Jury	100
3		Building Materials and Construction - II	4	2	4	6	30	20	50	50	-	3 hours	100
4		Architectural Graphics Skill - II	4	1	3	4	30	20	50	50	-	3 hours	100
5		Sturctural Design System - II	2	2	-	2	30	20	50	50	-	2 hours	100
6		Humanities - II	2	2	-	2	30	20	50	50	-	2 hours	100
7		Communication Skills- II	2	2	-	2	30	20	50	50	-	2 hours	100
8		Elective - II 1. Photography 2. Infographics 3. Workshop (wood, steel, POP, Clay, etc.) 4. Screen Printing 5. Sculpure 6. Leather printing	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							800

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - III Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam(20%)	Total	Theory	Jury / Viva	Duration	
1		Architectural Design Studio - III	8	2	8	10	30	20	50	-	50	Jury	100
2		Building Materials and Construction - III	4	2	4	6	30	20	50	50	-	3 hours	100
3		Sturctural Design System - III	2	2	2	4	30	20	50	50	-	2 hours	100
4		Enviromental science- I	2	2	-	2	30	20	50	50	-	2 hours	100
5		Survey and Leveling	2	1	1	2	30	20	50	50	-	2 hours	100
6		History of Architecture - I	2	2	-	2	30	20	50	50	-	2 hours	100
7		Building Services - I	2	2	-	2	30	20	50	50	-	2 hours	100
8		Elective - III 1. Creative writting 2. Art Apriciation 3. Indic studies 4. Vastu shastra 5. IPDC : Integrated personality development Course 6. Vernacular Architecture	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							800

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - IV Marking Scheme (NEW)													
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam(20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Design Studio - IV	8	2	8	10	30	20	50	-	50	Jury	100
2		Building Materials and Construction - IV	4	2	2	4	30	20	50	50	-	3 hours	100
3		Sturctural Design System - IV	2	2	2	4	30	20	50	50	-	2 hours	100
4		Enviromental science- II	2	2	-	2	30	20	50	50	-	2 hours	100
5		Computer application - I	2	1	1	2	30	20	50	50	-	2 hours	100
6		History of Architecture - II	2	2	-	2	30	20	50	50	-	2 hours	100
7		Building Services - II	2	2	-	2	30	20	50	50	-	2 hours	100
8		Elective - IV 1. Creative writting 2. Art Apriciation 3. Indic studies 4. Vastu shastra 5. IPDC : Integrated personality development Course 6. Vernacular Architecture	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							800

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - V Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Design Studio - V	8	2	10	12	30	20	50		50	Jury	100
2		Building Construction and Services	4	4	2	6	30	20	50	50	-	2 hours	100
3		Sturctural Design System - V	2	1	1	2	30	20	50	50	-	2 hours	100
4		Behaviour science	2	2	-	2	30	20	50	50	-	2 hours	100
5		Estimation & Costing	2	2	-	2	30	20	50	50	-	2 hours	100
6		History of Architecture - III	2	2	-	2	30	20	50	50	-	2 hours	100
7		Theory of Design	2	2	-	2	30	20	50	50	-	2 hours	100
8		Elective - V 1. BIM 2. Comp. Design 3. Visulization Application 4. Valuation 5. Film Appreciation 6. Building performance & Compliances 7. Foregine Language (Spanish/Greek/French)	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							800

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - VI Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Design Studio - VI	8	2	10	12	30	20	50		50	Jury	100
2		Advanced Building Construction	4	4	2	6	30	20	50	50	-	2 hours	100
3		Project Management	2	2	-	2	30	20	50	50	-	2 hours	100
4		Professional Practice - I	2	2	-	2	30	20	50	50	-	2 hours	100
5		Building By-Laws	4	4	-	4	30	20	50	50	-	2 hours	100
6		History of Architecture - IV	2	2	-	2	30	20	50	50	-	2 hours	100
7		Elective - V 1. BIM 2. Comp. Design 3. Visulization Application 4. Valuation 5. Film Appreciation 6. Building performance & Compliances 7. Foregine Language (Spanish/Greek/French)	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							700

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - VII Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Practical Training	24	-	-	-	-	-	-	-	-	Jury	100
		Total	24	-	-	-	-	-	-	-	-	-	100

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - VIII Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Design Studio - VIII	10	4	10	14	30	20	50		50	Jury	100
2		Hi-Tech Structures and Performance Analysis	4	2	2	4	30	20	50	50	-	2 hours	100
3		Site Planning & Landscape	2	2	2	4	30	20	50	50	-	2 hours	100
4		Professional Practice - II	2	2		2	30	20	50	50	-	2 hours	100
5		Town Planning	4	2	2	4	30	20	50	50	-	2 hours	100
6		Elective - V 1. Conservation 2. Disaster Managment 3. Barrier free Architecture 4. Sustainable Architecture 5. Internationalism in Architecture	2	-	-	2	30	20	100	-	-	-	100
		Total	24			30							600

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - IX Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (40%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Design Studio - IX	10	4	10	14	30	20	50	-	50	Jury	100
2		Research methods & Technical writing	4	4	-	4	30	20	50	50	-	2 hours	100
3		Building Economics & Real Estate	4	2	2	4	30	20	50	50	-	2 hours	100
4		Urban Design (Seminar)	2	-	4	4	30	20	50	-	50	Jury	100
5		Elective - IX (A) 1. Foregin Language 2. Temple ARchitecture 3. Ecology & Architecture 4. Architecture and Local Economy Development 5. Expressionism in Architecture 6. Iconic Architecture 7. Futuristic Architecture	2	-	2	2	30	20	50	-	50	Jury	100
6		Elective - IX (B) 1. Foregin Language 2. Temple Architecture 3. Ecology & Architecture 4. Architecture and Local Economy Development 5. Expressionism in Architecture 6. Iconic Architecture 7. Futuristic Architecture	2	-	2	2	30	20	100	-	-	-	100
		Total	24			30							600

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C

SEMESTER - X Marking Scheme (NEW)														
Sr. No	Subject Code	Subjects	Credit	Contact hours /week			Examination Scheme						Total (A+B) = C
							Internal (50%) A			External (50%) B			
				L/T (Hours)	S/W/P (Hours)	Total Hours/ week	Term work / Continous (30%)	Jury / Viva/Theory Exam (20%)	Total	Theory	Jury / Viva/ Practical	Duration	
1		Architectural Dissertation	24		30	30	30	20	50		50	Jury	100
		Total	24			30							100

General Note :

1 L= Lecture, S= Studio, W= Workshop, T= Tutorial, P= Practical

2 Minimum passing marks are 50% for Column no. C