

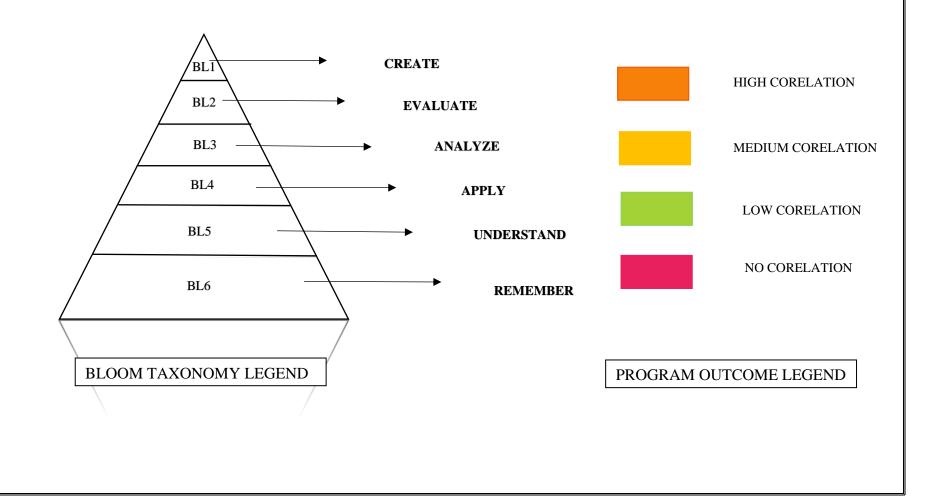
Criterion II

Teaching- Learning and Evaluation

Key Indicator- 2.6 Student Performance and Learning Outcome



CO-PO MAPPING WITH SUPPORT OF BLOOM TAXONOMY



CO-PO MAPPING

FIRST YEAR B.ARCH. SEM-I

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	BLOOM TAXONOMY NUMBER
Aesthetics & visual arts – I	CO- 1	To develop within students' manual presentation skills like, sketching and rendering													BL1, BL3, BL4
	CO- 2	To understand and relationship of surface from space masses, point, line, light, and shade, aesthetics in motion, sound, touch and smell.													BL3, BL4, BL5, BL6
	CO- 3	To learn Aesthetics as part of mind, with the knowledge of Colour theory, colour circle, various colour schemes and their combinations, general psychological effects of colours.													BL3, BL4, BL6
	CO- 4	To learn appropriate use of Elements of design such as line, form & shape, colour& texture, patterns etc.													BL3, BL4, BL5, BL6
Graphics – I	CO- 1	To introduce students to architectural drawing techniques and to the language of graphics, its vocabulary and grammar such as scale, annotations, labelling and dimensioning													BL1, BL3, BL4, BL5

	CO- 2	To enable students to express simple three-dimensional objects and					_		BL1, BL3, BL4, BL5, BL6
		building components through Technical Drawings, using various graphic projection systems such as orthographic, Isometric and Axonometric projections. To introduce various techniques of							BL1, BL3, BL4,
	CO- 3	sketching for recording, studying and communicating objects, buildings and building components							BL5, BL6
Architectural Design – I	CO- 1	To learn to the fundamentals and principles of basic design with proper understanding and to enable students to undertake design by application of basic design principles.							BL3, BL4, BL5, BL6
	CO- 2	To comprehend Design as a creative process of choice making and statement of intent.							BL3, BL4, BL5, BL6
Human Settlement & History of Civilization	CO- 1	Understand and study the settlement and the History of Civilization from Prehistoric period and ancient civilization. Settlement pattern and architectural built from have the influence of geography, geology, climate, socio-climate and religious aspect of that particular place, which emphasis the context of specific							BL3, BL5, BL6

		planning and design approach is required.							
	CO- 2	Understand comparative study of various civilizations will give the appropriate guideline for the study of settlement and architecture							BL3, BL4, BL5, BL6
Building Construction & Material – I	CO- 1	Help students understand the basic building elements, their function and behaviour under various conditions with specific reference to load bearing construction.							BL3, BL4, BL5, BL6
	CO- 2	Help students develop and analytical and logical sequence in thinking about structural aspects of architecture							BL3, BL4, BL5, BL6
	CO- 3	Help students develop and analytical and logical sequence in thinking about structural aspects of architecture.							BL3, BL4, BL5, BL6
	CO- 4	Encourage a mix of classroom and field learning							BL4, BL5, BL6
Theory of Structure – I	CO- 1	Introduce Applied Mechanics as an important Subject for Architecture.							BL4, BL5, BL6

СО-	Understand Different Systems of							BL3, BL4, BL5,
2	Forces and their Equilibrium and that							BL6
	a Building is a System of Forces in							
	Equilibrium							
СО-	To Introduce and Understand							BL3, BL4, BL5,
3	Concepts of Support, Support							BL6
	Reactions, Beams, Loads, Bending							
	and Shear.							

FIRST YEAR B.ARCH. SEM-II

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Aesthetics & visual arts – II	CO- 1	Create awareness about principle of good design to develop good aesthetic taste understand of Architecture and different fine arts and their application to study the principle of architecture, interior design, house design, advertising, city planning. etc													BL1, BL3, BL4
Graphics – II	CO- 1	Develop the drawing skills as tools for creative thinking, visualization, perception, imagination and representation of simple architectural shapes, forms and basic elements of building													BL1, BL3, BL4, BL5,
Architectural Design – II	CO- 1	To introduce the students to the iterative design process and various channels of creativity.													BL1, BL3, BL4, BL5
	CO- 2	Develop representational skills and architectural design principles within students													BL4, BL5
	CO- 3	Understanding anthropometry and its architectural design implications													BL4, BL5, BL6

	CO-	Introduction to students the								BL5, BL6
	4	various elements of architectural							-	
		space making.								
	CO-	To make students explore in								BL2, BL3, BL4,
	5	design of built form with reference								BL5
		to climate								
	СО-	Develop skills within students to		1				1		BL3, BL4, BL5,
	6	develop design proposal in the								BL6
		form of sketches drawings and								
	CO	models								
Human Settlement &	CO-	To study of settlement of								BL3, BL4, BL6
	1	development of civilization from medieval period to modern period.								
History of Civilization		Study should emphasize a								
CIVIIIZation		development phase of civilization								
		with reference to socio-cultural,								
		religion, climate geography and								
		geological aspect. Comparative								
		study of various civilization								
Building	CO-	Understand the basic building								BL5, BL6
Construction &	1	elements, their function and								
Material – II		behaviour under various								
		conditions with specific reference								
		to timber construction.								
	CO-	Develop a clear understanding of								BL1, BL5
	2	the basic principles of								
		construction and materials suitable								
		for load bearing construction.								
		Tor road bearing construction.	L							

	со-	Develop analytical and logical					T		BL3, BL5
	3	sequence in thinking about structural aspects of architecture.							
Theory of Structure – II	CO- 1	Analyse the forces in a Frame							BL3, BL4
	CO- 2	Analyse the stresses in various Building Elements like Columns and Beams							BL3, BL4, BL5
	CO- 3	Study the deflection effect of loads on Beams							BL3, BL4, BL5
	CO- 4	Study Combined Stresses on Eccentrically Loaded Columns and Apply the Same to the Design of Foundations of Load Bearing Walls.							BL3, BL4, BL5, BL6
Workshop – II	CO- 1	Introducing students to various materials and techniques used in making Architectural models.							BL1, BL4, BL5
	CO- 2	Enabling Students to make Architectural models for study and presentation.							BL1, BL4, BL5
	CO- 3	To introduce computer aided 3D modelling.							BL1, BL4, BL5, BL6
Communication Skills – II	CO- 1	Introducing various communication skills in the society.							BL5, BL6

	CO- 2	Enabling Students to make presentation in front of mass							BL1, BL4
	_	communication.							
Computer	CO-	Different types of styles for e.g.,							BL4, BL5,
Technology in	1	Dimension style, Text style,							BL6
Architecture -		Symbol library, drawing at							220
II		different scales, composition of							
		drawing at different scales							

SECOND YEAR B.ARCH. SEM-I

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Graphics – III	CO- 1	Study of drafting skills, various techniques of presentation with knowledge of perspective.													BL4, BL5
	CO- 2	Learn to communicate an architectural idea / proposal in a legible and effective manner through perspective projections, use of shades and shadows, and various architectural presentation and rendering techniques."													BL2, BL3, BL4
	CO- 3	Learn to generate simple architectural drawing using CAD													BL1, BL5
Elective – I Art Appreciation	CO- 1	To learn relationships between architectural discourse and the visual arts from the historical Avant-grade to the present.													BL3, BL5
	CO- 2	Learn and interpret the intersection of diverse system of representation: buildings, projects, drawings, but also architectural theory and criticism, exhibitions, photographs, professional magazines, and the popular press.													BL1, BL5

	CO-	To learn painting and sculpture,							BL1, BL5
	3	photography, cinema, fashion,							
		advertisements, and television.							
Architectural	CO-	1 0							BL2, BL5
Design – III	1	iterative process at various scales/							
		levels							
	CO-	Learn to understand and	1						BL2, BL3,
	2	comprehend relationship between							BL5
		design, visual arts, building							
		construction, climatology,							
		building materials, structure etc							
		and evolve a design solution							
	CO-	To develop Fundamental designs							BL1, BL4,
	3	Skills taught in the context of the							BL5
		architect's wider responsibilities to							
		society, culture and the							
		environment.							
	CO-							1	 BL4, BL5
	4	principles of design, structure and							
		materials, as well as necessary							
		skills in drawing and model-							
		making							
Building	CO-	· · · · · · · · · · · · · · · · · · ·						1	BL3, BL5
Construction &	1	construction materials, methods							
Material – III		and the process of translating							
	~~~	design ideas into built form.							
	CO-	To study various types of deep							BL2, BL5
	2	and shallow foundations used in							
		various types of soils for framed							
		construction.							

	CO- 3	To introduce students to medium span timber roofs between 6m to 12m.							BL5
	CO- 4	To understand basic principles of RCC construction and other components of a building project.							BL4, BL5
Theory of Structure – III	CO- 1	To understand the concept of Buckling and Crushing in Columns.							BL3, BL5
	CO- 2	To understand Fixity at supports and Concept of Continuity over supports and Negative Bending Moments"							BL3, BL5
	CO- 3	To understand the principles of Load Bearing Construction, Use of Arches and Lintels.							BL4, BL5
	CO- 4	To Study the strength of one Material - Steel and the use of these material as Beams, and Columns or as members of a Truss.							BL3, BL4
	CO- 5	To enable to Design by Working Stress Method							BL4, BL5
History of Architecture -I	CO- 1	To study of various styles in Architecture mainly in Asian countries i.e., India and Indian subcontinent, East Asia and West Asia, through various ages from prehistoric period to colonial period.							BL3, BL5

	CO- 2	The study can actively help in its preservation and evolution in design process.							BL3, BL4, BL5
Climatology & Architecture	CO- 1	To understand climate as a determinant of architectural design and to enable the students to evolve climate responsive design							BL1, BL3, BL4, BL5
	CO- 2	To understand terms like weather and climate and to study various instruments and their different methods to record various environment parameters like wind, temperature, humidity, precipitation etc.							BL3, BL4, BL5
	CO- 3	To understand the importance of various environmental issues such as Global Warming, pollution, scarcity of resources etc.							BL3, BL5
	CO- 4	Brief study of the various climatic zones and their behaviours, solar radiation budget, global isolation,, macro and micro climate Study of Solar Geometry and Solar loads heliodon and its use, air movements and aspects of ventilation							BL3, BL5
Building Services – I	CO- 1	Study the concepts of Drainage systems, layouts, different accessories, pipes, chambers, maintenance of systems etc.							BL3, BL5

Environmental Studies	CO- 1	To conceive knowledge about Nature of Environmental Studies							BL3, BL5
	CO- 2	To study Natural Resources and Associated Problems							BL3, BL5
	CO- 3	To study Ecosystems							BL2, BL3
	CO- 4	To study Biodiversity and its conservation							BL3, BL5

## SECOND YEAR B.ARCH. SEM-II

Subject Name		Course Objectives and Outcome	PO 1	<b>PO</b> 2	PO 3	PO 4	PO 5	PO 6	<b>PO</b> 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Graphics – IV	CO- 1	To understand visual effects of shades and shadows cast by light rays.													BL5
	CO- 2	To understand complex sciography on buildings through various experimentation with models and light conditions.													BL3, BL5
	CO- 3	0													BL3, BL5
Elective – II Art Appreciation	CO- 1	To learn to explore the relationships between architectural discourse and the visual arts from the historical avant-garde to the present.													BL5
	CO- 2	To learn the intersection of diverse systems of representation: buildings, projects, drawings, but also architectural theory and criticism, exhibitions, photographs, professional magazines, and the popular press.													BL5

	CO-	To learn painting and sculpture,									BL5
	3	photography, cinema, fashion,									DLJ
	3	advertisements, and television									
Architectural	CO-										DI C
		To learn progressively complex		1			1				BL5
Design – IV	1	exercises involving spatial									
		relations in two dimensions, three									
	<u> </u>	dimensions and time.									
	CO-	To learn fundamental design skills		1	1	1					BL5, BL6
	2	in the context of the architect's									
		wider responsibilities to society,									
	~~~	culture and the environment.									
	CO-	To develop an understanding of		1							BL5, BL6
	3	principles of design, structure and									
		materials as well as necessary									
		skills in drawing and model-									
		making.	<u> </u>								
Building	CO-	To learn the art and science of		1							BL4, BL5
Construction &	1	building with an understanding									
Material – IV		of construction materials, methods									
		and the process of translating									
		design ideas into built form.	<u> </u>								
Theory of	CO-	To learn to identify Types of RCC									BL5
Structure – IV	1	retaining walls, their use and									
		understand the Different types of									
		liquid retaining structures and									
		their structural detailing	L								
	CO-	To learn to design of Steel									BL5
	2	structure elements by L.S.M	L								
	CO-	To Develop the Feel for Structural									BL2, BL3,
	3	Principles and their Relates to									BL5

		Building Design and to develop the Concept that "Every Structure is a System that Forms the Space" and the fact that Architecture and Structure cannot be conceived independently							
	CO- 4	To Develop the Mathematical logic that would enable him to design the Structural System for Ground +2I Storey R.C.C Structure and a medium span Factory Building in steel."							BL2, BL4, BL5
Surveying and	CO-	Introduction of survey: aims,							BL5
Levelling	1 CO- 2	objects & importance of subject. Introduction to types of survey, index map, top sheets.							BL5
	CO- 3	Levelling instruments & methods to calculation levels, concept of contours & its uses its characteristics & introduction to theodolite.							BL5, BL6
	CO- 4	Introduction to prismatic compass & its uses.							BL4, BL5
	CO- 5	Uses of photographic surveying & concept of GPS.							BL4
	CO- 6	Introduction to advance instruments like digital plan meter, digital theodolite, automatic level, radiation survey method,							BL3, BL5

		environmental survey instruments, digital distance meter, etc.							
	CO- 7	Uses of photographic surveying & concept of GPS. Lineout of simple residential building plan							BL4, BL5
History of Architecture-II	CO- 1	Study of various styles in Architecture mainly in Asian countries i.e. India and Indian subcontinent, East Asia and West Asia, through various ages from prehistoric period to colonial period. The study can actively help in its preservation and evolution in design process.							BL4, BL5
Building Services – II	CO- 1	Study of different water sources, supply sources.							BL4, BL5
Environmental Studies	CO- 1	Study of Environmental Pollution, types and causes							BL4, BL5
	CO- 2	Study of Disaster management							BL4, BL5
	CO- 3	Study concept of environmental Protection							BL4, BL5

THIRD YEAR B.ARCH. SEM-I

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Architectural Design - V	CO- 1	To understand the socio-cultural aspects on Architectural design.													BL4, BL5
	CO- 2	To understand the climatical considerations bearing on Architectural design.													BL3, BL4, BL5
	CO- 3	To be exposed to suitable building materials and construction technologies to evolve a design solution													BL4, BL5
Building Construction & Material- V	CO- 1	To introduce structural concepts of various parts of buildings													BL5
	CO- 2	To introduce construction techniques													BL3, BL4, BL5
	CO- 3	To explain construction details through case studies													BL5
	CO- 4	To explain process of construction and supervision													BL5
Theory of Structure- V	CO- 1	To study the use and application of tools and techniques required to study the behaviour of various structural system and feasibility of different structural system.													BL5

	CO- 2	To study limitations of forms, spans and develop knowledge about choice of proper structural material, strength consideration, behaviour and response of loads.							BL5
	CO- 3	To learn and understand the practical difficulties face on site							BL3, BL5
History of Architecture-III	CO- 1	To study Architectural development in chronological manner in Europe or western countries.							BL4, BL5
	CO- 2	To understand evolution of different architectural solutions through historical periods within the restraints of prevalent social and religious customs, geography, climate, building materials and techniques, aesthetical influences, structural complexities and technology available at the time							BL4, BL5
	CO- 3	To organise such activities which actively help in preservation of rich Architectural Culture in evolution of Design process.							BL3, BL4, BL5
Estimation Costing &	CO- 1	To learn the factors that affect the cost of construction.							BL3, BL5

Specification-	СО-	To understand the concept of rate						BL4, BL5
II	2	analysis for various items in	Ì		Í			
		building construction.						
	CO-	To create ability of taking out of						BL1, BL5
	3	quantities from drawings and to						
		determine estimated cost of						
		building projects as per standard procedures.						
	CO-	To inculcate habit of systematic						BL4, BL5
	4	recording of all the statistics						
		concerned to estimating & costing						
Building	CO-	1						BL2, BL3,
Services – I	1	given situation, its calculations						BL4
		and design.						
	CO-	Artificial Illumination and its						BL4
	2 CO-	application in buildings. Heating, ventilation, and air						
	3	conditioning focusing on different						BL4, BL5
	5	HVAC systems.						
	CO-							BL2, BL3,
	4	requirements for given situation						BL4, BL5
	CO-	Building's firefighting system,						BL3, BL4,
	5	security system and pumps and						BL5
		water.						
	CO-	Introduction to Integrating natural						BL3, BL4,
	6	and artificial illumination.						BL5
Working	CO-	0 0						BL2, BL3,
Drawing – I	1	composite construction with all						BL4, BL5,
Arch, Graphics		the detailing.						BL6
& Drawing								

Landscape	CO-	Learn the process of landscape							BL2, BL3,
Architecture	1	design for small and large						ſ	BL4, BL5,
Landscape		buildings; Indoor and outdoor							BL6
Design		spaces with each detailing.							

THIRD YEAR B.ARCH. SEM-II

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Architectural Design - IV	CO- 1	Understand the visual interaction between indoor – outdoor spaces and landscape elements.													BL4, BL5
	CO- 2	Understand the spatial and structural implications of basic services involved.													BL4, BL5
	CO- 3	Learn Building Bye-laws													BL5, BL6
Building Construction & Material-	CO- 1	To learn structural concepts of various parts of buildings													BL5, BL6
IV	CO- 2	To learn construction techniques													BL4, BL5, BL6
	CO- 3	To understand construction details through case studies and to learn process of construction and supervision													BL4, BL5, BL6
Theory of Structure- IV	CO- 1	To learn and to understand the behaviour of RCC Structural systems, feasibility of different structure systems, limitation of forms, spans, choice of proper structural section, strength													BL3, BL4, BL5, BL6

	CO- 2	consideration, behaviour, and response of loads. To learn to select proper structural section with concept of factor of							BL4, BL5
		safety, characteristic strength of material							
History of Architecture-IV	CO- 1	Study various styles in Architecture mainly of Europe, America and India through various ages of Renaissance, Gothic, Industrial revolution and Modern period.							BL5
	CO- 2	To learn the evolution of different architectural solutions through historical periods within the restraints of prevalent social and religious customs, geography, climate, building materials and techniques, aesthetical influences, structural complexities and technology available at the time.							BL4, BL5
Estimation Costing &	CO- 1	Learn the factors that affect the cost of construction.							BL4, BL5
Specification- III	CO- 2	Understand the concept of rate analysis for various items in building construction.							BL4, BL5
	CO- 3	Create ability of taking out of quantities from drawings and to determine estimated cost of building projects as per standard procedures.							BL1, BL2, BL5

Building Services – IV	CO-4 CO-1	To inculcate habit of systematic recording of all the statistics concerned to estimating & costing To understand and apply in design knowledge about: Hot water supply design in hospitals and hotels, Hospital services like CSSD, hospital gases and incinerators, Community kitchens, laundry and housekeeping services, Swimming pools, Sustainable Services for hospitals and hotels, Solar electrical panels for electricity generation, Water treatment plant for hospitals and hotels. (STP / ETP).							BL2, BL3, BL4, BL5 BL3, BL4, BL5
Working Drawing – II Arch, Graphics & Drawing	CO- 1	Working drawing for composite construction based on design problem done in second year architecture which should include, R.C.C. framed structure, steel framed structure and load bearing structure.							BL3, BL4, BL5
Interior Design	CO- 1	To comprehend relationship between Architecture and Interior Design as a Space making disciplines.							BL2, BL3, BL4, BL5

	aa								
	CO-	To learn to evolve understanding			 				BL1, BL2,
	2	about thoughtful design of interior							BL3, BL4,
		spaces & how it can increase							BL5
		efficiency and add depth and							
		meaning to the built environment.							
	CO-	To learn and comprehend the							BL2, BL3,
	3	connection that the subject of							BL4, BL5
		Interior design has with other							,
		Design Disciplines like							
		Conservation, Preservation,							
		Restoration, Sustainability, Art,							
		Product design and Graphic							
		design. Basics of interior design							
		such as interior spaces, its types							
		and various components,							
		treatments, finishes, etc. Indoor							
		lighting, furniture design materials							
		selection for different							
		environments.							
Architectural	CO-	To learn, understand and apply:		·					BL2, BL3,
Acoustics	1	Basic laws and terminologies							BL4, BL5
		related to Acoustics, Acoustical							22.,220
		requirements of a given activity,							
		its calculations and designing of							
		the space.							
	CO-	Urban noise control and its							BL3, BL4
	2	application at site and building							
		level	.						

FOURTH YEAR B.ARCH. SEM-I

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Environmental Design-I	CO- 1	Study of built-up spaces and negative spaces, natural environment and built-up environment, aesthetics of spaces in groups of buildings, layout and planning of large areas and campuses.													BL2, BL3, BL4
	CO- 2	To study and understand elements of town planning, Urban design and landscape architecture.													BL3, BL5
Adv. Arch. Design-I	CO- 1	To learn to deal with large scale Architectural building projects with emphasis on building services & systems, architectural controls & building bye laws.													BL4, BL5
	CO- 2	Understanding typologies of Architectural Design projects in Urban area.													BL5
	CO- 3	Understanding various architectural services such as sewage & sullage disposal, water supply, Electricity, Air- conditioning & firefighting related													BL4, BL5

		to the interior layout of the concerned building.							
	CO- 4	Understanding of services shall be reflected in drainage layout, layout of water supply, Electrical layout, layout of air-conditioning & layout for firefighting of the concerned design.							BL4, BL5
Adv. Services-I	CO- 1	Understand the advanced structural systems, materials and services required in buildings with complex and special requirements and learn to integrate the same in design.							BL4, BL5
	CO- 2	To learn and understand Sewage disposal system for housing colony.							BL4, BL5
	CO- 3	To learn and understand Refuse disposal system and its different methods.							BL4, BL5
Adv. Structure- I	CO- 1	To study about foundation and types of foundation as per the strata and types of foundation.							BL4, BL5, BL6
	CO- 2	To study and understand types of slabs and uses.							BL4, BL5, BL6
	CO- 3	To study types of stairs and the elements and detailing of the elements and Structural behaviour and reinforcement detailing of different types of slabs.							BL4, BL5, BL6

	CO-	To study concrete mix design						BL4, BL5
	4	parameters for mix design, Water						
		cement ratio, Test for wet &						
		hardened concrete.						
	CO-	To study water tanks and						BL2, BL3,
	5	structural behaviour and						BL4, BL5
		reinforcement detailing of						
		following types Underground						
		(UG), resting on ground, elevated						
		service reservoir (ESR) Shape in						
		plan square, rectangular, circular,						
		advantage and disadvantages						
		Aesthetical form of E.S.R.						
	CO-	To study Construction						BL5
	6	Methodology of	1					DLS
	Ŭ	1) Precast Concrete elements-						
		advantages & disadvantages 2)						
		Prefabricated steel works-						
		advantages & disadvantages 3)						
		Prestressed concrete structure-						
		Concept, Pre-tensioning & post						
		tensioning, advantages &						
		disadvantages.						
Urban &	CO-	To learn all the facts for						BL4, BL5
regional	1	environmental and city planning,						DL4, DL5
planning	1	the process of town planning						
Praiming		factors affecting city planning and						
		procedures involved, to						
		understand bow farsighted city						
		planning will meet present as well						
		praining will meet present as well						

	CO-	as future social, cultural and economical requirements. To understand Town Planning							BL4, BL5
	2	principles which have evolved through ages							
	CO- 3	To learn Land-use maps topography, influences of climate on town planning.							BL3, BL4, BL5
	CO- 4	To understand M. R. T.P. Act, 1966 and Town Planning Act, 1954. Planning for villages and Rural areas.							BL5
Adv. Building Specification and valuation	CO- 1	Learn Importance of specification in building construction, Method of writing in correct order & sequence, use of Indian Standard & "RED BOOK" in drafting specification							BL2, BL3, BL5
	CO- 2	.							BL5

FOURTH YEAR B.ARCH. SEM-II

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Environmental	СО-	To study and understand													BL2, BL5
Design-II	1	 i) Correlations of F.S. I. Ground coverage, floor heights. ii) Co- relation of positive and negative spaces, aesthetics of spaces in groups of buildings, Block model making iii) Delineation of Architectural character. iv) Urban Renewal, conservation, design in relationship with historic buildings. Elements of Landscape Architecture: i) Materials-hard and soft, textures, shapes-uses. ii) Types of trees and other landscape elements, their uses in landscape arch. iii) Relationship between built up and natural environment. iv) Integration of buildings and landscape, design of open spaces inside and outside buildings. v) Design of street furniture and signage. 													
Adv. Arch.	CO-	To analysis, planning, design with													BL3, BL4,
Design-II	1	the understanding of a wide range													BL5

		of related issues in urban & rural context.							
	CO- 2	To understand design of complex buildings & campuses involving analytical study of building spaces with consideration of sociological, economical, cultural & climatic factors.							BL4, BL5
	CO- 3	To understand application of technology, design of structure involving services & interior & landscape design of the concerned project.							BL4, BL5
	CO- 4	To study urban structures, urban continuity, movement structure, landscaping, people & vehicular movement's system design, economics, Architectural aesthetics & details.							BL4, BL5
Professional Practice and Building Bye- laws	CO- 1	To learn to embark on his professional career in any capacity, to practice his profession efficiently and to know bye-laws and regulation of various public authorities.							BL5
Adv. Structure- II	CO- 1	To study concept & structural behaviour of Industrial Building with different construction materials and methods							BL4, BL5
	CO- 2	To study and analyse earthquake resistant structures in detail.							BL4, BL5

	СО-	To study applications of							BL4, BL5
	3	computers in structure with							
		introduction to analysis of							
		building, Introduction of different							
		software's used in analysis of							
		structure.							
	CO-	To study and understand rigid and							BL4, BL5
	4	hinged portal frames in RCC &							
		steel structure.							
	CO-	To study concept & detailing of							BL4, BL5
	5	multi-storeyed load, bearing non							
		load bearing structure							
		Introduction of folded plate,							
		geodesic dome, hyperboloids,							
		paraboloids, Concept of space							
		frames.							
Urban Design	CO-	To study definitions of urban							BL4, BL5
	1	planning, urban design and							
		architecture.							
	CO-	Urban morphology, public realm,			1	1			BL3, BL4,
	2	urban pattern, grain, texture.							BL5
	CO-	Land use, Scale of urban design,							BL5
	3	heritage of urban design, Elements							
		of urban design – image of the							
		city.							
	CO-	Principles of urban design.							BL5
	4	Building bye- laws and zoning							
		regulations.							
Arch. Project-I	CO-	Learn intensive investigation and							BL3, BL4,
-	1	research on social and economic-							BL5

	aspects project needs, climatology							
	and learn different aspects							

FIFTH YEAR B.ARCH. SEM-I

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy
Practical Training and Report	CO- 1	To learn and complete practical training under a registered architect in Private Office/ Corporate office/ Government Organizations etc with the permission and approval of the Principal/ HOD / Director of the college. The period of practical training shall be of two semesters													Number BL3, BL4, BL5, BL6
	CO- 2	 To learn: Day-to – day working of an Architect's Office and Correspondence. Presentation techniques. Working Drawings and detailed drawings. Preparing estimates, checking of contractor's bills. Site Visit for Supervision of the work. Item rates, labour rates and cost of standard materials available in the market. 													BL5, BL6

Arch. Project-II	CO-	Data Collection							BL1, BL2,
	1								BL3, BL4,
									BL5
	CO-	Case Studies							BL1, BL2,
	2								BL3, BL4,
									BL5
	CO-	Design Program and							BL1, BL2,
	3	Requirements							BL3, BL4,
									BL5
	CO-	Site analysis							BL1, BL2,
	4								BL3, BL4,
									BL5

FIFTH YEAR B.ARCH. SEM-II

Subject Name		Course Objectives and Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	Bloom Taxonomy Number
Arch. Project III	CO- 1	Analysis & Conclusion													BL1, BL2, BL3, BL4, BL5
	CO- 2	Decision of approach to Final Design –concept & zoning etc.													BL1, BL3, BL4, BL5
	CO- 3	Draft Design submission – Includes single line conceptual plans													BL1, BL3
	CO- 4	Detailed layout plan showing building footprints, roadways, parking, service line, ETP/STP, Landscaping etc.													BL1, BL3
	CO- 5	Learn and prepare technical drawings including plans, elevations, Sections, interior & Exterior Views, model, construction techniques applied, security systems etc. with typewritten bound report and drawing													BL1, BL3

Adv. Building Construction &	CO- 1	Paint and Varnishes						BL3, BL4
Materials	CO- 2	False Ceiling						BL3, BL4
	CO- 3	Thermal and Sound Insulating Materials						BL3, BL4
	CO- 4	Mastic Sealants and Adhesives						BL3, BL4
	CO- 5	Epoxy materials and their varied uses in construction						BL3, BL4
	CO- 6	Constructional measures adopted for fire resisting and fire retarding structures						BL3, BL4
	CO- 7	Market survey and study of new products						BL3, BL4
	CO- 8	Construction aspects and details of foundation						BL3, BL4
	CO- 9	Learn and understand Superstructure						BL3, BL4
	CO- 10	Learn and understand Bank vaults						BL3, BL4
	CO- 11	Demolition of structures						BL3, BL4
	CO- 12	Earthquake resistant structures						BL3, BL4
	CO- 13	Different types of roofing with details						BL3, BL4
Elective-I	CO- 1	Introduction, definition, nature, purpose and scope.						BL3, BL4, BL5

Architectural	CO-	Conservation preparatory									BL3, BL4,
Conservation	2	procedure for conservation									BL5
		Inventories, Inspection,									
		documentation; degree of									
		intervention for prevention of									
		deterioration, prevention of									
		existing state, consolidation of the									
		fabric, restoration, rehabilitation,									
		reproduction, reconstruction									
	CO-	Study structural elements such as			1	1	1				BL3, BL4,
	3	beams, arches and domes; thumbs									BL5
		and walls, piers and columns,									
		foundation of the building. Causes of decay in buildings.									
	CO-	Study the work of conservation			J]					BL3, BL4,
	4	procedure of conservation	i T								BL5, BL4, BL5
	-	Architect.									DL3
Disaster	CO-	Learn basics about disaster									BL2, BL3,
management	1	management									BL4, BL5
C	CO-	Detail study of Environmental			1						BL4, BL5
	2	Planning & Disaster Management	i l								
	CO-	To prepare Case study and report									BL3, BL4,
	3	writing Site visit to any disaster									BL5
		mitigation layout for public									-
		building/institutional									
		buildings/national important									
		structures									
Building	CO-	Study Economics and Sociology									BL2, BL4,
Economics and	1										BL5
Sociology			1								

Industrial	CO-	Study Industrial Architecture	BL1, BL3,
Architecture	1		BL4, BL5
Sustainable	CO-	Introduction to sustainable	BL1, BL3,
Architecture	1	architecture, need and scope	BL4, BL5
	CO-	Historical Perspective	BL3, BL4,
	2		BL5
	CO-	Challenge of Sustainable	BL3, BL4,
	3	Development	BL5
	CO-	Human Impact on Earth	BL3, BL4,
	4	sustainability	BL5
	CO-	Strategies for Sustainability	BL3, BL4,
	5		BL5
	CO-	Sustainability applications to	BL3, BL4,
	6	Architecture and Planning	BL5
	CO-	Use of sustainable materials and	BL3, BL4,
	7	certification systems	BL5
Digital	CO-	Creating software	BL3, BL4,
Architecture	1		BL5
	CO-	3D studio study	BL3, BL4,
	2		BL5
Vernacular	CO-	Introduction to Vernacular	BL3, BL4,
Architecture	1	architecture it's nature, purpose	BL5
	<u> </u>	and scope	
	CO-	Study of examples of Vernacular architecture in history	BL4, BL5
	2 CO-	Introduction to Vernacular in	
	3	history of architecture in Indian	BL4, BL5
		subcontinent.	

Contemporary	CO-	Background study of								BL4, BL5
Architecture	1	Contemporary Architecture			1					DL+, DLJ
Architecture	CO-	Industrial Revolution, New			1					BL4, BL5
	2	materials steel concrete, revolution	1							
		in their techniques and adoption in								
		building technology, new socio-	1							
		economic views, speed,	1							
		standardization large scales								
	CO-	Study of various art movements in							 	BL4, BL5
	3	various fields								
Project	CO-	Study of fundamentals of project					ļ			BL4, BL5
Management	1	management, planning,								
		scheduling, Controlling and	1							
		reviewing.	1							
	CO-	Management through traditional								BL4, BL5
	2	methods, Bar/ Gnatt's Chart, Load								
		chart Merits and demerits of Gnatt								
		Chart.	1							
	CO-	Study of Modern management								BLK2, BL3,
	3	system concept, Introduction to								BL4, BL5
		Critical path method Network,								,
		Concept of event, activity, time	1							
		estimates, float and slack								
	CO-	Introduction to Programme								BL4, BL5
	4	Evaluation Review technique								