



Vishnu Waman Thakur Charitable Trust's

VIVA SCHOOL OF ARCHITECTURE

Approved by Council of Architecture, New Delhi and Affiliated to University of Mumbai

Website: www.vivaarch.org

E-mail : principal@vivaarch.org & admin@vivaarch.org

Shri. Hitendra V. Thakur
President

Ms. Aparna P. Thakur
Secretary

Prof. Chakor A. Mehta
Principal

2.6 STUDENT PERFORMANCE AND LEARNING OUTCOMES

2.6.1 PROGRAMME OUTCOME AND COURSE OUTCOME FOR ALL PROGRAMMES OFFERED BY THE INSTITUTION ARE STATED AND DISPLAYED ON WEBSITE

Programme Outcome and Learning Outcome for programmes offered by the institution.

Sr. No.	Description of Documents
1.	Programme Outcome and Learning Outcome

VIVA SCHOOL OF ARCHITECTURE

PROGRAMME OUTCOMES BASED ON SYLLABUS DULY APPROVED		
SR. NO.	PROGRAMME OUTCOME STATEMENTS	
PO 1	Knowledge gained during the course	Comprehensive and holistic problem solving, understanding the design evolution encompassing sustainable and humane requirements keeping in tune with ever changing design solutions
PO 2	Analytical thinking	Architectural education being creative is highly subjective which encompasses technological innovation, space requirement, human comfort and needs leading to a strong analytical mind in this creative field
PO 3	Creative thinking and Design Solutions	Architectural design theories and philosophies to instill creative mindsets through interactive sessions between the students and the teacher. Meeting the solutions expected on completion of the programme with the help of simulation tools, architectural scale models and digital softwares.
PO 4	Technology and Innovation	Understand and adopt the appropriate technology and innovation associated with complexities of building construction. Incorporate the ever evolving technologies in the field of architecture.
PO 5	Vocational Skills	Students at the end of the programme shall obtain the various skillsets such as presentation skills, communication skills, model making skills and based on the syllabus shall develop skills for making detailed architectural drawings and other vocational skills such as Interior designing, Landscape designing, graphic designing, etc
PO 6	Life long learning	Sensitivity to design with inclusive approach towards human needs, environment and heritage; understanding recent trends and practices responding to tangible and intangible aspects of physical, social and environmental context
PO 7	Professional Skills	Ability to understand and work on real life situation of Architectural practice with ethical, legal and professional responsibility. Meeting the expectations as a professional designer by the society at large.

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
FIRST YEAR B. ARCH. - SEMESTER - I
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
	FIRST YEAR B.ARCH. : SEMESTER - 1							
	BARC 101: ARCHITECTURAL DESIGN STUDIO - 1							
CO-1	Student Shall be able to understand, visualize and practice Elements and Principles of Design, scale and proportions, ergonomics and its graphical representation	3	2	2	2	2	2	2
CO-2	Student shall be able to understand and express Architectural Vocabulary and representation	3	2	2	2	2	2	2
CO-3	Student shall be able to explore theories and philosophies of design such as hierarchy of spaces, mass void ratio, isms, etc. to derive human centric design	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 102: ALLIED DESIGN STUDIO - 1							
CO-1	The student shall be able to visualize 2D/ 3D visual compositions using elements and principals of design	3	2	2	2	2	2	2
CO-2	Student shall be able to explore various theories of basic design such as color theory, Gestalt theory, etc. and it's implication in design with the help of various compositions or design exercises	3	2	2	2	2	2	2
CO-3	Student should be able to demonstrate workmanship while working on various 2D / 3D exercises, sketching and coloring exercises	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 103: ARCHITECTURAL BUILDING CONSTRUCTION AND MATERIALS - 1							
CO-1	Student shall be able to understand the concepts of Substructure, Superstructure, types of structural systems	3	2	1	2	2	2	2
CO-2	Student shall be able to Illustrate building construction drawing practices	2	2	1	2	2	2	2
CO-3	Student shall be able to Classify different types of natural and artificial material and choose correct building material and construction method for design of buildings	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 104: THEORY AND DESIGN OF STRUCTURES							
CO-1	Students shall be able to explain the fundamentals of mechanics and perform calculations related to it.	3	1	1	1	2	2	1
CO-2	Students shall be able to explain various types of forces, loads and moment acting on the structure	3	1	1	1	2	2	1
CO-3	Students shall be able to express various structural components from foundation to roof and utilize knowledge of conditions of Equilibrium to calculate beam reactions	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 105: HUMANITIES							
CO-1	Student shall be able to understand and discuss stages of Socio-cultural evolution of human beings	3	1	1	1	2	2	1
CO-2	Student shall be able to infer evolution of tools and techniques allowing growth of human beings	3	1	1	1	2	2	1
CO-3	Student shall be able to relate Indian subcontinent timeline / chronology with the world chronology	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 106: ENVIRONMENTAL STUDIES							
CO-1	Student shall be able to define built and differentiate between built and natural Environment (ecology, ecosystem and biodiversity)	3	1	1	1	2	2	1
CO-2	Student shall be able to identify various renewable and non-renewable resources	3	1	1	1	2	2	1
CO-3	Students shall be able to differentiate between various vernacular architectural styles based on different climatic zones and geographical locations	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 107: ARCHITECTURAL REPRESENTATION AND DETAILING							
CO-1	Students shall be able to correctly visualize and express orthographic projections, 2 dimensional to 3dimensional geometry such as solid, void and cut objects, etc.	3	2	2	2	2	2	2
CO-2	Students shall be able to correctly manually represent architectural drawing vocabulary with the help of different drafting tools and equipments.	2	2	2	2	2	2	2
CO-3	Students shall be able to read and document architectural drawings correctly	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	PROGRAMME OUTCOME BENCHMARK	2.7	1.6	1.4	1.6	2.0	2.0	1.6

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
FIRST YEAR B. ARCH. - SEMESTER - II
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
	FIRST YEAR B.ARCH. : SEMESTER 2							
	BARC 201: ARCHITECTURAL DESIGN STUDIO							
Co1	Student shall be able to derive specific user requirements with the help of predesign study (Anthropometry, case study, Site Study, etc)	3	2	2	2	2	2	2
Co2	Student shall be able to illustrate the design ideation and document the design development process with the help of sketches, drawings, models, etc.	3	2	2	2	2	2	2
Co3	Student shall be able to give design solution to the given problem responding to the user requirements and context	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 202: ALLIED DESIGN STUDIO							
Co1	The student shall be to explore the elements and the Principles of Design, Colour theory for creation of any kind of art forms or compositions	3	2	2	2	2	2	2
Co2	Student shall be able to visualize and give 2D to 3D output in terms of any artwork/product/composition	3	2	2	2	2	2	2
Co3	Student shall be able to demonstrate sketching, drawing, rendering as well as model making skills with workmanship	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 203: ARCHITECTURAL BUILDING CONSTRUCTION AND MATERIALS							
Co1	Student shall be able to understand the concepts of shallow and deep foundations, load bearing and non-loadbearing structures and walling systems, etc	3	2	1	2	2	2	2
Co2	Student shall be able to identify and classify various building materials used for construction	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 204: THEORY AND DESIGN OF STRUCTURES							
Co1	Students shall be able to understand concepts of Sub structure- Superstructure, load transfer, stress-strain, shear force, bending moment, Centre of gravity, etc	3	1	1	1	2	2	1
Co2	Students shall be able to explain various types of forces, loads and moment acting on the structure	3	1	1	1	2	2	1
Co3	Students shall be able to solve problems/ numericals on any given topic	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 205: HUMANITIES							
Co1	Student shall be able to explain and relate human settlements along river beds, Human evolution socially as well as politically during classical and roman era	3	1	1	1	2	2	1
Co2	Student shall be able to associate chronology of Indian subcontinent with world chronology from the foundation of vedic culture, kingdoms, jainism and buddhism	3	1	1	1	2	2	1
Co3	Students shall be able to make reports, mindmaps, models or presentations on the given topics	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 206: ENVIRONMENTAL STUDIES							
Co1	Student shall be able to define built and differentiate between built and natural Environment (ecology, ecosystem and biodiversity)	3	1	1	1	2	2	1
Co2	Student shall be able to identify various renewable and non-renewable resources	3	1	1	1	2	2	1
Co3	Students shall be able to differentiate between various vernacular architectural styles based on different climatic zones and geographical locations	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 207: ARCHITECTURAL REPRESENTATION AND DETAILING							
Co1	Students shall be able to correctly visualise and express orthographic projections, 2 dimensional to 3dimensional geometry such as solid, void and cut objects, etc	3	2	2	2	2	2	2
Co2	Students shall be able to correctly manually represent architectural drawing vocabulary with the help of different drafting tools and equipments.	2	2	2	2	2	2	2
Co3	Students shall be able to read and document architectural drawings correctly	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	PROGRAMME OUTCOME BENCHMARK	2.7	1.6	1.4	1.6	2.0	2.0	1.6

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
SECOND YEAR B. ARCH. - SEMESTER - III
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
SECOND YEAR B. ARCH : SEMESTER 3								
BARC 301: ARCHITECTURAL DESIGN STUDIO								
Co1	Student shall be able to derive design brief with the help of predesign study (Anthropometric and behavioral study, case study, Site Study, etc)	3.0	2	2	2	2	2	2
Co2	Student shall be able to illustrate the design ideation and document the design development process with the help of sketches, drawings, models, etc.	3.0	2	2	2	2	2	2
Co3	Student shall be able to give design spaces suitable for the intended activities for specific group of users and give detailing of infrastructure with reference to the methods of construction and materials.	2.0	2	2	2	2	2	2
AVERAGE		2.7	2	2	2	2	2	2
BARC 302: ALLIED DESIGN STUDIO								
Co1	The student shall be to study, understand and analyse ergonomics, Principles of Design, Colour theory, textural theory, lighting theory etc with the help of case studies, mood board, etc.	3.0	2	2	2	2	2	2
Co2	Student shall be able to design interior theme for the given project	3.0	2	2	2	2	2	2
Co3	Student shall be able to prepare and represent interior drawings	2.0	2	2	2	2	2	2
AVERAGE		2.7	2	2	2	2	2	2
BARC 303: ARCHITECTURAL BUILDING CONSTRUCTION AND MATERIALS								
Co1	Student shall be able to understand and explore foundation systems, floor systems, wall systems (Load bearing and partition walls), staircases, roof systems, moisture and thermal protection etc. for R.C.C. low rise buildings	3.0	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2.0	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2.0	2	1	2	2	2	2
AVERAGE		2.3	2	1	2	2	2	2
BARC 304: THEORY AND DESIGN OF STRUCTURES								
Co1	Students shall be able to understand basic theories and principles of structural analysis, properties of materials relevant to structural analysis and understanding of behaviour of structural elements under various conditions.	3.0	1	1	1	2	2	1
Co2	Students shall be able to utilize the knowledge of simple and direct bending stresses in structural planning	3.0	1	1	1	2	2	1
Co3	Students shall be able to explore the basics of RCC, its thumb rules for designing structural components and testing procedures of various construction materials	3.0	1	1	1	2	2	1
AVERAGE		3.0	1	1	1	2	2	1
BARC 305: HUMANITIES								
Co1	Student shall be able to explain, relate and classify socio-cultural circumstances, the art and architecture of early christianity, byzantine era, romanesque era, medieval era, gothic era, etc	3.0	1	1	1	2	2	1
Co2	Student shall be able to relate reforms in art and architecture, various theories and philosophies, art movements with art and architecture after industrial revolution	3.0	1	1	1	2	2	1
Co3	Students shall be able to make reports, mindmaps, models or presentations on the given topics	3.0	1	1	1	2	2	1
AVERAGE		3.0	1	1	1	2	2	1
BARC 306: ENVIRONMENTAL STUDIES								
Co1	The student must be able to describe various elements of climate and explore climate responsive architecture with the understanding of micro and macro climate.	3.0	1	1	1	2	2	1
Co2	Student shall be able to differentiate between different climatic zones and architectural features accordingly.	3.0	1	1	1	2	2	1
Co3	Student shall be able to practice passive design strategies to achieve thermal as well as visual comfort conditions in the design subjects.	3.0	1	1	1	2	2	1
AVERAGE		3.0	1	1	1	2	2	1
BARC 307: ARCHITECTURAL REPRESENTATION AND DETAILING								
Co1	Students shall be able to sketch/draft given assignment by using correct method, technique to achieve the desired result	3.0	2	2	2	2	2	2
Co2	Students shall be able to visualize and produce perspective and sciography of interior as well as exterior spaces	2.0	2	2	2	2	2	2
Co3	Students shall be able to do measurement study of interior and exterior spaces and document it in correct architectural language of drawing.	2.0	2	2	2	2	2	2
AVERAGE		2.3	2	2	2	2	2	2
BARC 308: ARCHITECTURAL BUILDING SERVICES								
Co1	Students shall be able to understand basic services required for a building and interior spaces	3.0	2	1	2	2	2	2
Co2	Students shall be able to correctly work out all the calculations involved, layouts and drawings of sanitation and water supply services	2.0	2	1	2	2	2	2
Co3	Students shall be able to represent the drawings in the desired format and shall be able to practice the knowledge gained in the subject in the design subjects.	2.0	2	1	2	2	2	2
AVERAGE		2.3	2	1	2	2	2	2
BARC 309: ARCHITECTURAL THEORY								
Co1	Student shall be able to derive design brief with the help of predesign study (Anthropometric and behavioral study, case study, Site Study, etc)	3.0	1	1	1	2	2	1
Co2	Student shall be able to illustrate the design ideation and document the design development process with the help of sketches, drawings, models, etc.	3.0	1	1	1	2	2	1
Co3	Student shall be able to give design spaces suitable for the intended activities for specific group of users and give detailing of infrastructure with reference to the methods of construction and materials.	3.0	1	1	1	2	2	1
AVERAGE		3.0	1	1	1	2	2	1
BARC 320: COLLEGE PROJECT								
Co1	The student shall be to study, understand from attending Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours	3.0	2	1	2	2	2	2
Co2	Student shall be able to analyse the data and infer from the study carried out during field visit	3.0	2	1	2	2	2	2
Co3	Student shall be able to prepare a report in the book format, prepare presentations / videos or display exhibition as a part of compilation of the study	3.0	2	1	2	2	2	2
AVERAGE		3.0	2	1	2	2	2	2
BARE 321: ELECTIVE								
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3.0	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2.0	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2.0	2	2	2	2	2	2
AVERAGE		2.3	2	2	2	2	2	2
PROGRAMME OUTCOME BENCHMARK		2.7	1.6	1.4	1.6	2.0	2.0	1.6

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
SECOND YEAR B. ARCH. - SEMESTER - IV
BASED ON SYLLABUS DULY APPROVED**

Sr. No.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
	SECOND YEAR B. ARCH : SEMESTER 4							
	BARC 401: ARCHITECTURAL DESIGN STUDIO							
Co1	Student shall be able to develop research skills for survey research and case study, understand functioning of community spaces in rural areas/semi urban areas, study principles of design, construction, and technology based on tradition and experience.	3	2	2	2	2	2	2
Co2	Student shall be able to design spaces suitable for life style in rural/semi urban areas conserving the natural surroundings and social fabric suitable for communities	3	2	2	2	2	2	2
Co3	Student shall be able to design the buildings suitable to climatic conditions, by using local materials and traditional methods of construction provide specific infrastructure required for communities	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 402: ALLIED DESIGN STUDIO							
Co1	The student shall be able to illustrate zoning and circulation, apply study of ergonomics, Principles of Design, Colour theory, textural theory, lighting theory etc with the help of case studies, mood board, etc. in their design	3	2	2	2	2	2	2
Co2	Student shall be able to design interior theme for the given project	3	2	2	2	2	2	2
Co3	Student shall be able to prepare an interior layout alongwith required drawings and views	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 403: ARCHITECTURAL BUILDING CONSTRUCTION AND MATERIALS							
Co1	Student shall be able to understand concepts of framed structures in Steel for low medium span buildings, methods of construction of various components of steel structures and explain moisture and thermal protection etc. for R.C.C. low rise buildings	3	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 404: THEORY AND DESIGN OF STRUCTURES							
Co1	Students shall be able to understand basic theories, principles and properties of structural analysis, and understanding of behaviour of structural elements under various conditions for steel structural system	3	1	1	1	2	2	1
Co2	Students shall be able to utilize the knowledge of simple and direct bending stresses in structural planning	3	1	1	1	2	2	1
Co3	Students shall be able to explore the basics of RCC, its thumb rules for designing structural components and testing procedures of various construction materials	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 405: HUMANITIES							
Co1	Student shall be able to understand and explain socio-cultural circumstances, the art and architecture of rock cut temples, early vedic period, Hindu era, Mughal Era, British Era, neo classical, neo gothic, indo-sarcenic era, etc. in India	3	1	1	1	2	2	1
Co2	Student shall be able to relate and explain reforms in art and architecture, various theories and philosophies, art movements and modernist impulses in art and architecture leading to independance	3	1	1	1	2	2	1
Co3	Students shall be able to make reports, mindmaps, models or presentations on the given topics	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 407: ARCHITECTURAL REPRESENTATION AND DETAILING							
Co1	Students shall be able to Illustrate various methods of survey, and documentation	3	2	2	2	2	2	2
Co2	Students shall be able to illustrate tools and equipments of Land surveying	2	2	2	2	2	2	2
Co3	Students shall be able to explain modern methods of surveying	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 408: ARCHITECTURAL BUILDING SERVICES							
Co1	Students shall be able to understand external services of water supply and drainage for the buildings, and site lay outs.	3	2	1	2	2	2	2
Co2	Students shall be able to correctly work out all the calculations involved, layouts and drawings of sanitation and Storm water drainage	2	2	1	2	2	2	2
Co3	Students shall be able to represent the drawings in the desired format and shall be able to practice the knowledge gained in the subject in the design subjects.	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 409: ARCHITECTURAL THEORY							
Co1	Student shall be able to write with clarity about architecture and ideas in architecture.	3	1	1	1	2	2	1
Co2	Student shall be able to correctly use architectural terms to communicate architectural ideas and convey effectively in words	3	1	1	1	2	2	1
Co3	Student shall be able to develop the concepts of conducting research and it's various aspects	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARP 420: COLEGE PROJECT							
Co1	The student shall be to study, understand from attending Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours	3	2	2	2	2	2	2
Co2	Student shall be able to analyse the data and infer from the study carried out during field visit	2	2	2	2	2	2	2
Co3	Student shall be able to prepare a report in the book format, prepare presentations / videos or display exhibition as a part of compilation of the study	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	BARE 421: ELECTIVE							
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	PROGRAMME OUTCOME BENCHMARK	2.7	1.7	1.4	1.7	2.0	2.0	1.7

VIVA SCHOOL OF ARCHITECTURE

**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
THIRD YEAR B. ARCH. - SEMESTER - V
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
	THIRD YEAR B. ARCH : SEMESTER 5							
	BARC 501: ARCHITECTURAL DESIGN STUDIO							
Co1	Student shall be able to understand the potential of urban land and optimization of spaces, architectural forms, and corresponding functions for different types of buildings	3	2	2	2	2	2	2
Co2	Student shall be able to develop architecture for urban commercial, recreation, entertainment activities for large group of people with respect to appropriate architectural forms, their grouping and composition	3	2	2	2	2	2	2
Co3	Student shall be able to design the buildings responding to the climate incorporating spaces for required infrastructure and services	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 502: ALLIED DESIGN STUDIO							
Co1	The student shall be to understand theories, concepts, themes and role of Landscape in Architecture	3	2	2	2	2	2	2
Co2	Student shall be able to design Landscape theme for the given project	3	2	2	2	2	2	2
Co3	Student shall be able to prepare presentation drawings alongwith the desired technical details and specifications	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 503: ARCHITECTURAL BUILDING CONSTRUCTION							
Co1	Student shall be able to understand concepts shallow foundation systems, canopies in various materials and Building Skin in various lightweight materials for Framed Structure	3	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 504: THEORY AND DESIGN OF STRUCTURES							
Co1	Students shall be able to understand design of simple structural members, joineries and connections of steel structures	3	1	1	1	2	2	1
Co2	Students shall be able to explore the role of forces and moments in the design of the said structural system	3	1	1	1	2	2	1
Co3	Students shall be able to do calculations, carry out experiments/tests and prepare reports related to the given topics	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 505: HUMANITIES							
Co1	Student shall be able to understand and relate modern movements between the wars and after the wars in art and architecture and developments in technology and structural systems	3	1	1	1	2	2	1
Co2	Student shall be able to relate and explain isms, theories/philosophies in art and architecture	3	1	1	1	2	2	1
Co3	Students shall be able to make reports, mindmaps, models or presentations on the given topics	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 507: ARCHITECTURAL REPRESENTATION AND DETAILING							
Co1	Students shall be able to understand and illustrate different methods of quantity, estimation and specifications	3	2	2	2	2	2	2
Co2	Students shall be able to calculate rate analysis for an architectural civil work	2	2	2	2	2	2	2
Co3	Students shall be able to calculate the bill of quantities and draft specifications for the same	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 508: ARCHITECTURAL BUILDING SERVICES							
Co1	Students shall be able to understand planning principals for acoustically designed space, concepts of electrical distribution, safety and lighting	3	2	1	2	2	2	2
Co2	Students shall be able to correctly work out all the calculations involved, layouts and drawings of sanitation and Storm water drainage	2	2	1	2	2	2	2
Co3	Students shall be able to represent the drawings in the desired format and shall be able to practice the knowledge gained in the subject in the design subjects.	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 509: ARCHITECTURAL THEORY							
Co1	Student shall be able to understand format, process and sequence of research	3	1	1	1	2	2	1
Co2	Student shall be able to use research as a tool to critically analyse the data and correctly communicate convey the research effectively in words	3	1	1	1	2	2	1
Co3	Student shall be able to carry out research on the given topic and write abstract/ research papers / research articles	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARP 520: COLLEGE PROJECT							
Co1	The student shall be to study, understand from attending Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours	3	2	2	2	2	2	2
Co2	Student shall be able to analyse the data and infer from the study carried out during field visit/study tour	2	2	2	2	2	2	2
Co3	Student shall be able to prepare a report in the book format, prepare presentations / videos or display exhibition as a part of compilation of the study	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	BARE 521: ELECTIVE							
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	PROGRAMME OUTCOME BENCHMARK	2.3	1.5	1.3	1.5	1.8	1.8	1.5

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
THIRD YEAR B. ARCH. - SEMESTER - VI
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
THIRD YEAR B. ARCH : SEMESTER 6								
BARC 601: ARCHITECTURAL DESIGN STUDIO								
Co1	Student shall be able to understand the design development for enhancement of institutional character and detailing for integration of infrastructure and building systems	3	2	2	2	2	2	2
Co2	Student shall be able to research and develop architecture for the institution building typology for large group of people with respect to appropriate architectural forms, their grouping and composition	3	2	2	2	2	2	2
Co3	Student shall be able to design the buildings responding to the climate and incorporating all the infrastructural and technical details	2	2	2	2	2	2	2
AVERAGE		2.7	2.0	2.0	2.0	2.0	2.0	2.0
BARC 602: ALLIED DESIGN STUDIO								
Co1	The student shall be to understand theories, concepts, themes and role of Landscape/Urban and regional planning in Architecture	3	2	2	2	2	2	2
Co2	Student shall be able to apply know gained work on themes/theories taught	3	2	2	2	2	2	2
Co3	Student shall be able to prepare presentation drawings alongwith the desired technical details and specifications	2	2	2	2	2	2	2
AVERAGE		2.7	2.0	2.0	2.0	2.0	2.0	2.0
BARC 603: ARCHITECTURAL BUILDING CONSTRUCTION								
Co1	Student shall be able to understand RCC Floor system for large bay sizes and Pre cast and Prefab building elements in various materials	3	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	1	2	2	2	2
AVERAGE		2.3	2.0	1.0	2.0	2.0	2.0	2.0
BARC 604: THEORY AND DESIGN OF STRUCTURES								
Co1	Students shall be able to understand Reinforced cement concrete for primary structural elements, RCC theory of grid floors and flat slab and it's relevance in architecture	3	1	1	1	2	2	1
Co2	Students shall be able to explore the role of forces and moments in the design of the said structural system	3	1	1	1	2	2	1
Co3	Students shall be able to do calculations, carry out experiments/tests and prepare reports related to the given topics	3	1	1	1	2	2	1
AVERAGE		3.0	1.0	1.0	1.0	2.0	2.0	1.0
BARC 605: HUMANITIES								
Co1	Student shall be able to understand and relate architecture with reference to social issues related to Urbanization	3	1	1	1	2	2	1
Co2	Student shall be able to relate and explain urban issues with special reference to Mumbai Metropolitan Region (MMR)	3	1	1	1	2	2	1
Co3	Students shall be able to make reports, mindmaps, models or presentations on the given topics	3	1	1	1	2	2	1
AVERAGE		3.0	1.0	1.0	1.0	2.0	2.0	1.0
BARC 607: ARCHITECTURAL REPRESENTATION AND DETAILING								
Co1	Students shall be able to understand and illustrate Working drawing of framed structure indicating foundation plan, floor plans, elevations, sections and details to the appropriate scale	3	2	2	2	2	2	2
Co2	Students shall be able to calculate rate analysis for an architectural civil work	2	2	2	2	2	2	2
Co3	Students shall be able to calculate the bill of quantities and draft specifications for the same	2	2	2	2	2	2	2
AVERAGE		2.3	2.0	2.0	2.0	2.0	2.0	2.0
BARC 608: ARCHITECTURAL BUILDING SERVICES								
Co1	Students shall be able to understand planning principles, bylaws and technical details of Fire protection system, vertical transportation system and building Services for high rise Buildings	3	2	1	2	2	2	2
Co2	Students shall be able to correctly work out all the calculations involved, layouts and drawing and details	2	2	1	2	2	2	2
Co3	Students shall be able to represent the drawings in the desired format and shall be able to practice the knowledge gained in the design subjects.	2	2	1	2	2	2	2
AVERAGE		2.3	2.0	1.0	2.0	2.0	2.0	2.0
BARP 620: COLLEGE PROJECT								
Co1	The student shall be able to study, understand from attending Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours	3	2	2	2	2	2	2
Co2	Student shall be able to analyse the data and infer from the study carried out during field visit/study tour	2	2	2	2	2	2	2
Co3	Student shall be able to prepare a report in the book format, prepare presentations / videos or display exhibition as a part of compilation of the study	2	2	2	2	2	2	2
AVERAGE		2.3	2.0	2.0	2.0	2.0	2.0	2.0
BARE 621: ELECTIVE								
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
AVERAGE		2.3	2.0	2.0	2.0	2.0	2.0	2.0
PROGRAMME OUTCOME BENCHMARK		2.6	1.8	1.6	1.8	2.0	2.0	1.8

VIVA SCHOOL OF ARCHITECTURE

**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
FIFTH YEAR B. ARCH. - SEMESTER - IX
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
	FIFTH YEAR B. ARCH. :SEMESTER 9							
	BARC 901: ARCHITECTURAL DESIGN STUDIO							
Co1	Student shall be able to understand the design of complex/ multifunctional buildings and surrounding spaces for urban commercial, transportation, recreation, entertainment activities for masses	3	2	2	2	2	2	2
Co2	Student shall be able to research and develop architectural forms, their grouping and composition	3	2	2	2	2	2	2
Co3	Student shall be able to design the buildings responding to the climate and incorporating all the infrastructural and technical details	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 902: ALLIED DESIGN STUDIO							
Co1	The student shall be to understand theories, concepts, themes and role of urban design and town planning in Architecture	3	2	2	2	2	2	2
Co2	Student shall be able to map a part of the city w.r.t. all the aspects of town planning and derive urban design solutions for the area under the study	3	2	2	2	2	2	2
Co3	Student shall be able to prepare presentation drawings alongwith the suggestive policies for the area under the study and generate reports, presentations, model etc as a final outcome of the study	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARC 903: ARCHITECTURAL BUILDING CONSTRUCTION							
Co1	Student shall be able to understand long span structural systems, cable supported structural system, folded plates, space frames, shell structures and it's application in various typology of projects	3	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 904: THEORY AND DESIGN OF STRUCTURES							
Co1	Student shall be able to understand thumb rules, moment diagrams, load distribution analysis for long span structural systems methods of constructions eg. cable supported structural system, folded plates, space frames, shell structures, precast structures, pre-tensioning-post tensioning, etc	3	1	1	1	2	2	1
Co2	Students shall be able to explore the role of forces and moments in the design of the said structural systems and detailing involved in said structural systems	3	1	1	1	2	2	1
Co3	Students shall be able to do calculations, carry out experiments/tests and prepare reports related to the given topics	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 906: ENVIRONMENTAL STUDIES							
Co1	The student must be able to understand sustainable building design processes through the study of NBC(Chapter 11 on sustainability), ECBC, water efficiency, material efficiency, solid waste management practices, etc	3	1	1	1	2	2	1
Co2	Student shall be able to explore and research about sustainable design practices	3	1	1	1	2	2	1
Co3	Student shall be able to practice write research papers on passive design strategies to achieve thermal as well as visual comfort conditions and use the knowledge gained in the design subjects.	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARC 908: ARCHITECTURAL BUILDING SERVICES							
Co1	Students shall be able to understand integrated building services and specialized Services required for specific functions / building types (for example hospitals, hotels, auditorium, etc), specialized services as per climatic conditions and BMS system	3	2	1	2	2	2	2
Co2	Students shall be able to carry out case studies, and calculations involved and work on co-ordinated layouts	2	2	1	2	2	2	2
Co3	Students shall be able to represent the drawings and case studies in the desired format and shall be able to practice the knowledge gained in the design subjects.	2	2	1	2	2	2	2
	AVERAGE	2.3	2.0	1.0	2.0	2.0	2.0	2.0
	BARC 910: PROFESSIONAL PRACTICE							
Co1	Students shall be able to understand and explain topics such as Land Acquisition, valuation, property rights, easements rights, structural repairs, rent control act, etc.	3	1	1	1	2	2	1
Co2	Students shall be to interact with the architects in the field and illustrate the procedures to be followed and documents required for it	3	1	1	1	2	2	1
Co3	Students shall be able to participate in the discussions, debates, generate reports/ presentation/ panels, mind maps on the given topic and become ready to go for an internship in semester 8	3	1	1	1	2	2	1
	AVERAGE	3.0	1.0	1.0	1.0	2.0	2.0	1.0
	BARP 912: Design Dissertation							
Co1	The student shall be able to choose a topic for Design Dissertation and conduct research under the guidance of internal teachers	3	2	2	2	2	2	2
Co2	Student shall be able to choose appropriate research methodologies to collect and analyse the data and infer from the study carried out	3	2	2	2	2	2	2
Co3	Student shall be able to prepare a report in the Black book format, prepare presentations / videos and infer from the study to formulate a design brief for the chosen project	2	2	2	2	2	2	2
	AVERAGE	2.7	2.0	2.0	2.0	2.0	2.0	2.0
	BARE 921: Elective -8							
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	BARE 921: Elective -9							
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
	AVERAGE	2.3	2.0	2.0	2.0	2.0	2.0	2.0
	PROGRAMME OUTCOME BENCHMARK	2.6	1.7	1.5	1.7	2.0	2.0	1.7

VIVA SCHOOL OF ARCHITECTURE**COURSE OUTCOME AND PROGRAMME OUTCOME FOR
FIFTH YEAR B. ARCH. - SEMESTER - X
BASED ON SYLLABUS DULY APPROVED**

SR. NO.	COURSE OUTCOME	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7
		Knowledge Gained	Analytical Thinking	Creative & Design Solutions	Technology & Innovations	Voc. Skills	Life long learning	Prof. Skills
SEMESTER 10								
BARC 1006: ENVIRONMENTAL STUDIES								
Co1	The student must be able to understand concepts of post occupancy evaluation and urban sustainability and impact of built environment on the surrounding.	3	1	1	1	2	2	1
Co2	Student shall be able to carry out case studies, literature reviews to illustrate post occupancy evaluation of buildings	3	1	1	1	2	2	1
Co3	Student shall be able to evaluate and apply sustainable building strategies over design in their Design Dissertation	3	1	1	1	2	2	1
AVERAGE		3.0	1.0	1.0	1.0	2.0	2.0	1.0
BARC 1007: ARCHITECTURAL REPRESENTATION AND DETAILING								
Co1	Students shall be able to understand and choose appropriate Structural systems, methods of construction and materials, active and passive systems related to building sciences and environment protection for the DD projects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature reviews to illustrate post occupancy evaluation of buildings	2	2	2	2	2	2	2
Co3	Students shall be able to detail out any significant part of their design under supervision of guides.	2	2	2	2	2	2	2
AVERAGE		2.3	2.0	2.0	2.0	2.0	2.0	2.0
BARC 1012: ADVANCED BUILDING CONSTRUCTION AND STRUCTURES								
Co1	Student shall be able to understand long span structural systems, cable supported structural system, folded plates, space frames, shell structures and its application in various typology of projects	3	2	1	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing for their Dissertation projects	2	2	1	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings for Dissertation projects with clarity and workmanship	2	2	1	2	2	2	2
AVERAGE		2.3	2.0	1.0	2.0	2.0	2.0	2.0
BARC 1009: ARCHITECTURAL THEORY								
Co1	Student shall be able to interact with the architectural thinking and ideas in architecture, readings, and discussions on both the ideas and the language of theory especially after the modernist era.	3	1	1	1	2	2	1
Co2	Student shall be able to write about architecture, becoming conversant with the current language of theory and gaining an insight and sensitivity to architectural thinking that influences architectural practice today	3	1	1	1	2	2	1
Co3	Student shall be able to produce reports/presentations/videos based on the research carried out.	3	1	1	1	2	2	1
AVERAGE		3.0	1.0	1.0	1.0	2.0	2.0	1.0
BARC 1010: PROFESSIONAL PRACTICE								
Co1	Students shall be able to understand and explain Professional and legal responsibilities of Architects	3	1	1	1	2	2	1
Co2	Students shall be able to infer from all acts related to non agricultural lands in relation to Building activities related to regions such as M.R.T.P, M.H.A.D.A and M.M.R.D.A. acts Environmental policy and laws related to protection of environment.	3	1	1	1	2	2	1
Co3	Students shall be able to participate in the discussions, debates, generate reports/ presentation/ panels, mind maps on the given topics	3	1	1	1	2	2	1
AVERAGE		3.0	1.0	1.0	1.0	2.0	2.0	1.0
BARP 1011: DESIGN DISSERTATION								
Co1	The student shall be able to choose a topic for Design Dissertation and conduct research under the guidance of internal teachers	3	2	2	2	2	2	2
Co2	Student shall be able to choose appropriate research methodologies to collect and analyse the data and infer from the study carried out	3	2	2	2	2	2	2
Co3	Student shall be able to prepare a report in the Black book format, prepare presentations / videos and infer from the study to formulate a design brief for the chosen project	2	2	2	2	2	2	2
AVERAGE		2.7	2.0	2.0	2.0	2.0	2.0	2.0
BARE 1022: Elective -10								
Co1	Student shall be able to understand and use knowledge imparted in the elective for strengthening the core subjects	3	2	2	2	2	2	2
Co2	Student shall be able to carry out case studies, literature review and prepare lecture notes and work out detailing of the same.	2	2	2	2	2	2	2
Co3	Student shall be able to produce reports, models as well as technical drawings on the specified topics with clarity and workmanship	2	2	2	2	2	2	2
AVERAGE		2.3	2.0	2.0	2.0	2.0	2.0	2.0
PROGRAMME OUTCOME BENCHMARK		2.7	1.6	1.4	1.6	2.0	2.0	1.6