MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY BATHINDA-151001 (PUNJAB), INDIA

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Department: **G.Z.S. SCHOOL OF ARCHITECTURE & PLANNING, MRSPTU**

Program: B.Arch

COURSE ARTICULATION MATRIX (STUDY SCHEME: 2016)

Subject	S Code	Semester	Credit	Duration (Hrs)	L S T P	COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
Architectural Design - I	BARC1-101	1	6	3	2 4 0 0	CO1	Knowledge of basic form and elements of Architectural Design.	3	3	2	0	0	0	0	0	1	0	0	2	2	2	1
						CO2	Understand Anthropometry and its application in design.	3	0	0	0	0	0	0	0	0	0	0	2	2	2	1
						CO3	Distinguish between Architectural Form and Space	3	1	2	2	0	0	0	0	0	0	0	0	1	2	1
						CO4	Employ learning's for design spaces which are up to single room.	3	2	3	0	0	0	0	0	1	0	0	0	2	3	1
						CO5	Employ skills to enhance indoor aesthetics.	3	2	0	0	0	0	0	0	0	2	0	0	2	3	1
						CO 6	Knowledge about local level soft and hard landscape elements.	3	2	3	2	0	0	1	0	0	0	0	0	2	3	1

		1	5	3			Understanding the process of building construction from the very first step.	2	3	0	0	0	0	0	3	0	0	0	3	2	1	3
						CO2	Understanding skills and equipment used in shaping them with the help of basic construction details.	2	3	0	0	1	0	0	0	3	0	3	3	1	2	2
						CO 3	Understanding masonry construction details	2	3	2	2	-	0	0	0	2	0	0	2	1	1	3
						CO4	Understanding all the components of building construction.	3	2	0	0	2	0	0	0	0	0	0	3	3	1	2
						CO 5	Developing the understanding of the junction details in masonry.	2	2	0	0	0	2	1	2	0	0	2	0	1	2	3
						CO 6	Developing the knowledge of components of the brick masonry	2	2	0	0	0	0	2	0	0	0	2	0	1	1	1
Architectural Drawing- I	BARC1-103	1	5	3	2 3 0 0	CO1	Draft 2-D and 3-D objects.	3	1	1	0	0	0	0	0	0	0	0	2	2	1	1
						CO2	Types of construction of plain and diagonal scales	3	3	2	0	0	0	0	0	0	0	0	2	1	1	1
						CO 3	Orthographic projections of points	3	2	2	0	0	0	0	0	0	0	0	1	1	1	1
						CO4	Isometric views of simple and complex forms.	3	2	0	0	0	0	0	0	0	0	0	2	2	1	1
						CO 5	Design development of basic forms	2	1	0	0	0	0	0	0	0	0	0	1	1	1	1
						CO 6	To develop critical and analytic thinking.	1	0	0	0	0	0	0	0	0	0	0	2	1	1	1

		1	2	3			Understanding the basic chronology of historical development in the field of Architecture and civilization.	2	0	0	0	0	0	0	0	0	1	0	1	1	1	2
						CO2	Acquainting themselves with the key historical buildings and their characteristic features.	2	1	1	0	0	0	0	1	0	1	0	1	1	1	2
						CO 3	Developing understanding of Architecture through different historical phases.	2	1	1	0	0	0	0	1	0	1	0	1	1	1	1
						CO4	Developing understanding of Architecture in Greek Civilization	2	1	1	0	0	0	0	1	0	1	0	1	2	1	1
						CO 5	Developing understanding of Architecture during Roman period	2	1	1	0	0	0	0	1	0	1	0	1	2	1	2
						CO 6	Developing understanding of Dravidian Architecture through different phases	2	1	1	0	0	0	0	1	0	1	0	1	1	1	2
Visual Communication - I	BARC1-105	1	3	3	2 0 0 2	CO1	The art of using the potential of pencil	3	2	0	0	0	0	0	0	0	0	0	3	3	2	1
						CO2	Colour as a tool of graphic communication.	1	2	3	0	0	0	0	0	0	0	0	3	2	1	1
						CO 3	To learn of scale elements	0	3	2	0	0	0	0	0	0	0	0	3	2	1	1
						CO4	To learn various colour schemes, tints and shades.	3	2	1	0	0	0	0	0	0	0	0	3	2	1	1
						CO 5	To learn rendering of textures of different building materials in pencil.	3	0	2	0	0	0	0	0	0	0	0	1	2	1	1
						CO 6	To learn free hand still life sketching in pencil	2	0	1	0	0	0	0	0	0	0	0	0	2	1	1

							converse fluently, without strain with international speakers of English in an accent and lexis that is widely understood across the globe.	0	0	0	1	0	0	0	1	0	2	0	2	3	3	1
						CO2	Architectural reports and texts on their own and shall be able to communicate in a professional manner.	2	0	0	0	0	0	0	1	2	0	0	2	2	2	1
		1	2	3		CO 3	the qualities of good writing.	0	0	0	0	0	0	0	0	1	3	0	3	2	2	1
						CO4	building up and expansion of vocabulary active use of Architectural vocabulary	2	0	0	1	0	0	0	0	0	3	0	3	2	1	1
						CO 5	Presentation of various site reports, case studies and methods of holding meetings.	2	0	2	2	0	0	0	0	2	2	0	2	2	2	1
						CO 6	Preparation of press note of Architectural reports and events.	2	2	-	2	0	0	0	0	-	2	0	2	2	2	1
Building Science & Technology - I	BARC1-107	1	1	3	1 0 0 0	CO1	Understanding the various building materials used in construction of a building with study of their Constituents, Properties.	1	1	2	0	0	0	0	0	2	0	1	2	2	1	1
						CO2	Understanding the Types, Uses & Market rates of building materials.	1	2	0	0	0	0	0	0	0	1	2	1	1	2	1
						CO 3	Understanding the details of Brick masonry & Stone masonry	2	1	0	1	0	0	0	2	0	0	1	2	3	1	1
						CO4	Understanding the construction details of locally available materials	1	2	1	1	0	0	0	0	0	0	0	1	1	1	2

							Understanding of relevance of Building science in Architecture	1	2	0	0	0	0	0	1	0	0	1	3	1	2	3
						CO 6	Knowledge about the natural calamities and its effects on the stability of buildings	2		0	0	0	0	1	1	1	0	2	3	1	1	1
Model Making - I	BARC1-108	1	1	NO EXAM	0 0 0 2	CO1	Understand basic carpentry techniques.	2	1	0	0	0	0	0	0	0	0	0	2	3	2	2
						CO2	Knowledge of Joinery techniques and various model making techniques.	2	1	0	0	0	0	0	0	0	0	0	2	2	2	2
						CO 3	Understand methods using different materials.	2	1	0	0	0	0	0	0	0	0	0	2	2	3	1
						CO4	Tools used in carpentry.	2	1	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO 5	Model making techniques using different materials.	2	1	0	0	0	0	0	0	0	0	0	3	2	2	2
						CO 6	Methods of Preparations of Model	2	1	0	0	0	0	0	0	0	1	0	2	2	2	2
Architectural Design - II	BARC1-209	2	6	6	2 4 0 0	CO1	Enable to distinguish constraints in the Architectural design of a small scale building with reference to function, form and site.	3	2	0	1	0	0	0	0	0	0	0	0	2	3	1
						CO2	Employ learning's to relate the function and physical form with the surrounding site and environment.	3	1	0	2	0	0	0	0	0	0	0	0	2	3	1
						CO 3	Design space up to small residential and commercial spaces.	3	2	3	3	1	0	0	0	0	0	0	0	2	3	1

							Knowledge to relate site level vehicular movement with the built mass.	3	2	1	0	0	0	0	0	0	0	0	0	2	3	1
						CO 5	Understand about different type of parking lots and their design.	2	1	3	0	0	0	0	0	0	0	0	0	2	3	1
						CO 6	Understand the role of resident's behavior and expectations towards space design.	2	0	0	3	0	0	0	0	0	3	0	0	2	3	1
Building Construction - II	BARC1-210	2	5	3	2 3 0 0	CO1	Detailing of various components of structure	2	3	0	0	1	0	0	0	0	0	0	3	3	2	1
						CO2	Knowing about the detailing doors and windows	2	2	2	0	1	0	0	0	1	0	0	2	1	1	1
						CO 3	Knowing about the detailing types of roofs and floors.	2	2	2	0	1	0	0	0	0	0	1	2	1	2	2
						CO4	Knowledge about the sequence of activities for execution of the building	3	3	0	0	1	0	0	0	0	0	0	2	1	1	2
						CO 5	Understanding the types of the door and their implementations	2	2	0	0	1	0	0	2	0	0	0	2	1	2	1
						CO 6	Knowledge of the sectional details of various components	2	3	2	0	-	0	0	0	0	0	0	3	1	1	3
Architectural Drawing- **II** IIII	BARC1-211	2	5	3	2 3 0 0	CO1	Draw perspectives of various forms	3	0	2	0	0	0	0	0	0	0	0	1	2	3	1
						CO2	Sciography in plans and elevations.	3	0	1	0	0	0	0	0	0	0	0	1	3	3	1
						CO 3	Visualize and convert his/her thoughts and ideas of design into 3-D forms.	2	0	2	0	0	0	0	0	0	0	0	2	2	2	1
						CO4	Construction of interior perspectives	3	2	2	0	0	0	0	0	0	0	0	3	3	2	1

							Basic understanding of Orthographic projections.	2	0	2	0	0	0	0	0	0	0	0	2	2	2	1
						CO 6	Draw isometric views.	3	1	3	0	0	0	0	0	0	0	0	3	2	2	1
Visual Communication - II	BARC1-212	2	3	3	2 0 0 2	CO1	The fundamentals of sketches and perspectives.	3	0	3	0	0	0	0	0	0	0	0	3	3	2	1
						CO2	Writing styles in calligraphy.	0	0	1	0	0	0	0	0	0	0	0	1	3	2	1
						CO 3	Rendering of perspective views in all colour mediums.	2	0	2	0	0	0	0	0	0	0	0	2	2	2	1
						CO4	Sketching and rendering of various scenes.	3	0	1	0	0	0	0	0	0	0	0	3	2	2	1
						CO 5	Outdoor free hand sketching of trees, shrubs, simple buildings, human figures.	3	0	-	0	0	0	0	0	0	0	0	3	1	2	1
						CO 6	Use of various colouring mediums i.e., pencil colours, oil pastels, crayons and water colours etc.	3	0	2	0	0	0	0	0	0	0	0	3	2	2	1
Theory of Design	BARC1-213	2	2	3	2 0 0 0	CO1	Understand the relationship between configuration of form and space.	3	0	1	2	0	0	0	0	0	0	0	0	1	3	1
						CO2	Knowledge to appreciate the quality of architectural spaces.	3	0	0	3	0	0	0	0	0	1	0	2	2	3	1
						CO 3	Employ skills to articulate building forms and surrounding spaces.	3	0	3	0	0	0	1	0	0	2	0	0	2	3	1
						CO4	Design for the provision of opening, circulation spaces within the built mass.	3	2	3	0	1	0	3	0	0	0	0	0	2	3	1
						CO 5	Distinguish between regular and irregular forms through collision and articulation	3	3	3	0	1	0	0	0	2	0	0	0	2	3	1
						CO 6	Understand the visual properties of forms.	3	1	0	3	0	0	0	0	0	2	0	0	2	3	1

		2	2	3			Understand the concept of stress and strain	2	2	3	2	0	0	0	0	0	0	0	1	1	2	1
						CO2	Understand the concept of shear stress and bending moment and determine it for various types of beams.	2	2	3	2	0	0	0	0	0	0	0	1	2	2	3
						CO 3	An ability to get confidence to analyze and design masonry structure.	1	1	3	0	0	0	0	0	0	0	0	1	2	3	3
						CO4	An ability to understand and analyze the design concept.	2	1	3	2	0	0	0	0	0	0	0	0	2	3	3
						CO 5	An ability to apply theoretical knowledge to solve practical problems.	1	0	3	0	0	0	0	0	0	0	0	0	2	3	2
						CO 6	Understanding about the strength and behavior of masonry structures	2	0	3	0	0	0	0	0	0	0	0	1	2	2	3
Building science and technology - II	BARC1-215	2	1	3	1 0 0 0	CO1	Understanding the basic behavior of soil w.r.t, foundations.	0	1	0	2	0	0	1	0	0	3	0	0	1	1	2
						CO2	Knowledge about of various finishes to be applied to building surface.	2	2	0	0	1	0	0	0	0	2	0	0	3	1	1
						CO 3	Understanding of Materials and finishes available in the market under different trade names to study their properties, uses etc.	2	1	0	1	0	0	0	0	0	0	2	1	3	1	2
						CO4	Understanding of the market price of different materials.	0	1	0	1	2	0	0	0	0	0	0	2	1	1	1
						CO 5	Understanding of characteristics of soil.	0	1	0	2	0	1	0	0	0	0	2	0	1	2	2
						CO 6	Knowledge of all classification of surface finishes.	1	2	0	1	2	0	0	0	0	0	0	2	2	2	1

		2	1	3			The predominantly pictorial nature of an Architect's language.	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO2	The physical-mechanical essence of the subject matter.	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO 3	The orientation of all Architectural efforts to Form and Space.	3	2	1	0	0	0	0	0	0	0	0	2	1	1	3
						CO4	Learn various load distribution systems	1	2	3	0	0	0	0	0	0	0	0	0	1	1	2
						CO 5	Learn various structure Systems	1	2	0	0	0	0	2	1	0	0	0	1	1	1	2
Architectural Design - III	BARC1-317	3	6	12	2 4 0 0	CO1	Distinguish and appreciate the constraints of the site in the evolution of design for small building projects.	2	1	3	2	0	0	0	0	0	0	0	0	2	3	1
						CO2	Knowledge to handle the flow of masses in buildings like primary school, dispensary, convenience shopping etc.	3	2	1	2	0	0	0	0	0	0	0	0	2	3	1
						CO 3	Employ barrier free design for buildings and adopt Universal Design.	3	1	0	2	1	3	1	0	0	0	0	3	3	3	2
						CO4	Understand climate responsive architecture.	3	2	2	2	3	2	3	2	0	0	0	3	3	2	2
						CO 5	Design of spaces which are under the preview of urban regulatory controls.	3	3	2	0	1	0	0	0	0	0	0	0	3	2	1
						CO 6	Understand the role of design development stages in the final outcome.	2	1	3	0	0	0	0	1	0	0	0	0	1	3	1

		3	6	12			Understanding the process of RCC construction.	1	2	0	1	0	0	0	2	0	0	0	3	1	1	2
						CO2	Understanding the components of a building, skills and equipment used in shaping them with the help of basic construction details.	2	2	1	1	0	0	0	0	0	0	2	0	2	1	2
						CO 3	Understanding the details of the R.C.C. construction.	1	2	1	1	1	0	0	0	0	0	0	3	1	3	1
						CO4	Detailing out various R.C.C construction details.	2	1	1	2	2	0	0	2	0	0	0	2	1	1	2
						CO 5	Knowledge of the concept of retaining walls	1	1	0	0	0	0	1	0	0	0	2	2	1	1	1
						CO 6	Understanding the various types of Foundations in R.C.C. and their applications.	1	2	0	2	0	0	0	0	0	0	0	2	1	2	1
History of Architecture- II	BARC1-320	3	2	3	2000	CO1	Understanding basic chronology of historical development in the field of Architecture & civilization.	2	0	0	0	0	0	0	0	0	1	0	1	1	1	2
						CO2	Acquainting themselves with the key historical buildings of various periods of Architectural history & their characteristic features.	2	1	1	0	0	0	0	1	0	1	0	1	1	1	2
						CO 3	Developing understanding of sketching & understanding of historical buildings, historical analyses & measured drawings.	2	1	1	0	0	0	0	1	0	1	0	1	1	1	1
						CO4	Developing understanding of Early Christian , Byzantine, Romanesque & Gothic Architecture	2	1	1	0	0	0	0	1	0	1	0	1	2	1	1

							Developing understanding of Renaissance Architecture of Italy.	2	1	1	0	0	0	0	1	0	1	0	1	2	1	2
						CO 6	Developing understanding of Islamic Architecture	2	1	1	0	0	0	0	1	0	1	0	1	1	1	2
Structure Design - II	BARC1-321	3	2	3	1 0 1 0	CO1	Learn the basic knowledge of concrete structure	3	0	0	0	0	0	0	0	0	0	0	1	1	1	2
						CO2	Identify analyze and compute the design load on typical concrete structures.	2	0	2	0	0	0	0	0	0	0	0	0	2	2	2
						CO 3	Identify the different failure modes of columns, beam and slab along their design strength.	2	1	3	0	0	0	0	0	0	0	0	0	3	3	3
						CO4	Design and select the most suitable section and size for column, beam and slab using modern methods, tools and techniques.	2	2	3	0	2	0	0	0	0	0	0	0	3	3	3
						CO 5	Analyze the data & give solution of the problems with sustainable development	2	3	1	0	0	0	2	0	0	0	0	0	3	3	3
						CO 6	Apply relevant Indian Standard Codal provisions to ensure safety & serviceability of structural concrete elements for design developments & learning.	2	0	3	0	0	0	0	0	0	0	0	2	3	3	3

		3	2	3			Carry out preliminary surveying in the fields before start of construction	2	1	1	1	0	0	0	0	0	0	0	0	1	2	3
						CO2	Taking accurate measurements, field booking, plotting and adjustment of traverse use various conventional instruments involved in surveying with respect to utility.	0	2	0	0	2	0	0	0	0	0	0	0	1	2	2
						CO 3	Precisely plan a survey for application such as height of the building undertake measurement and plotting	0	1	2	1	2	1	0	0	0	0	0	0	2	1	3
Building science and technology - III	**BARC1-323**	3	2	3	2 0 0 0	CO1	Application of the concepts of climatology in architectural design projects.	0	2	0	1	0	0	1	0	0	1	0	3	1	2	1
						CO2	Application of the design principles so as to achieve energy conservation in buildings through passive techniques.	0	2	0	2	0	0	0	0	0	0	0	2	1	1	3
						CO 3	Application of the concepts of Bio-climatic chart	0	1	0	2	0	0	0	0	1	1	0	2	2	1	1
						CO4	Application of the concepts of architecture into the design.	1	1	0	2	1	0	2	0	0	0	0	1	2	2	3
						CO 5	Understanding the concept of Thermal Comfort	1	1	0	2	0	0	0	0	0	0	0	2	1	1	2
						CO 6	Knowledge about the flow of heat through buildings	1	2	0	1	1	0	1	0	0	0	1	0	1	3	1

		3	2				Auto Cad as a Computer Aided Drafting Technique.	1	1	2	0	0	0	0	0	0	0	0	2	3	2	1
						CO2	Basic commands like copy, paste, stretch, offset, move fillet, extend, trim and other 2D commands.	1	2	2	0	0	0	0	0	0	0	0	2	3	2	1
						CO 3	Drawing the basic Plans, Sections, and Elevations.	2	0	2	0	0	0	0	0	0	0	0	2	3	2	1
						CO4	Auto Cad and Units.	0	0	0	0	1	0	0	0	0	0	0	1	2	2	1
						CO 5	Advanced rendering Photoshop and in other 2D Software.	0	0	0	0	2	0	0	0	0	0	0	2	2	1	1
						CO 6	3-D Modelling of Multiple Building in a Single Site, Camera View of the Buildings.	2	0	2	0	2	0	0	0	0	0	0	3	2	1	1
Architectural Design - IV	BARC1-425	4	6	12	2 3 0 0	CO1	Understand the significance of contextual factors in architecture through design of climate responsive architecture.	3	2	0	3	2	0	2	0	0	0	0	0	1	3	2
						CO2	Knowledge about vernacular and rural architecture spread across north India.	2	1	0	3	0	0	1	1	2	0	0	3	1	1	3
						CO 3	Knowledge through educational tour to historical sites, one shall have an in depth knowledge of regional architecture.	2	1	0	3	0	0	1	0	3	0	0	2	1	1	2
						CO4	Understand about the influence of social and cultural environment on architectural design.	2	0	0	3	0	0	2	1	0	2	0	3	2	2	2

							Employ learning's from detailed study of a vernacular settlement in documentation process.	2	0	0	3	0	0	1	0	2	1	0	3	1	2	3
						CO 6	Distinguish between different physical planning and other geomorphic factors.	0	1	0	3	0	0	2	0	0	0	0	0	1	1	2
Building Construction - IV	BARC1-426	4	5	3	2 2 0 2	CO1	Understanding the Timber components of a building.	1	2	0	0	2	0	0	0	0	1	0	1	1	2	1
						CO2	Understanding the traditional/Contemporary construction methods of a single storied building in timber.	2	1	1	0	1	0	0	0	0	2	0	2	1	1	3
						CO 3	Understanding the various timber roof structures.	2	2	0	0	2	0	0	0	0	0	3	3	2	1	1
						CO4	Knowledge of the details of the various in timber construction components	1	2	2	0	2	0	0	0	0	1	0	0	2	2	1
						CO 5	Understanding the implementations of sliding and folding timber doors	1	1	0	0	0	0	0	1	0	0	2	2	2	1	1
						CO 6	Having the knowledge about the usage of cladding with Timber and Timber products in Interior and Exterior	2	2	0	0	1	0	0	0	1	0	1	1	1	2	3
Building [illegible]	BARC1-427	4	2	3	2 0 0 0	CO1	Understanding the importance and role of water supply.	1	2	0	0	2	0	0	0	0	2	0	2	1	1	1

							Understanding the importance sanitation services in Buildings.	0	2	0	2	1	0	0	0	0	0	0	3	1	2	1
						CO 3	Understanding the solid waste management system in buildings.	1	1	1	1	2	0	0	0	0	2	0	1	1	2	3
						CO4	Understanding the infrastructure of the building	1	1	0	2	0	0	0	0	0	2	2	2	2	1	1
						CO 5	Understanding the water requirements depending on the building type	2	2	0	0	1	0	0	0	0	0	0	3	1	2	3
						CO 6	Knowledge about the various types of water distribution system	1	2	2	0	1	0	0	0	0	0	0	3	3	3	1
Visual Communication - IV	BARC1-428	4	2	NO EXAM	1 0 0 2	CO1	Draw perspectives of small design projects.	3	1	2	0	0	0	0	0	2	0	0	3	2	3	2
						CO2	Draft and render his/her small design projects into 3-D forms.	1	0	1	0	0	0	0	0	0	0	0	1	3	3	2
						CO 3	Show Sciography through Computer Aided Techniques.	1	0	1	0	1	0	0	0	0	0	0	1	2	2	2
						CO4	V-ray and Any other Software.	1	0	0	0	2	0	0	0	0	0	0	2	3	2	3
						CO 5	3-D Modelling on 3-D Max.	2	0	0	0	2	0	0	0	0	0	0	2	2	2	2
						CO 6	3-D Modelling on Google Sketch Up.	2	0	0	0	2	0	0	0	0	0	0	2	3	1	1
Structure Design - III	BARC1-429	4	2	3	1 0 1 0	CO1	Learn the basic knowledge of steel structure	3	1	2	0	0	0	0	0	2	0	0	3	2	3	2

							Identify analyze and compute the design load on typical steel structures.	1	0	1	0	0	0	0	0	0	0	0	1	3	3	2
						CO 3	Identify the different failure modes of connections, tension members, compression members, beams & compute their design strength.	1	0	1	0	1	0	0	0	0	0	0	1	2	2	2
						CO4	Design & select the most suitable section and size for tension, compression members & beams using modern methods, tools & techniques.	1	0	0	0	2	0	0	0	0	0	0	2	3	2	3
						CO 5	Analyze the data & give solution of the problems with sustainable development	2	0	0	0	2	0	0	0	0	0	0	2	2	2	2
						CO 6	Apply relevant Indian Standard Codal provisions to ensure safety & serviceability of structural steel elements for design developments and learning.	2	0	0	0	2	0	0	0	0	0	0	2	3	1	1
Design Philosophies - I	BARC1-430	4	2	3	1 0 1 0	CO1	Understanding the basic concepts of designing the buildings done in 20th-Century Architecture.	3	1	2	0	0	0	0	0	0	0	0	3	3	3	2
						CO2	Developing conceptual and perceptual skills of students to appreciate the basic principles	0	2	2	0	0	0	0	0	0	0	0	2	2	2	1
						CO 3	Developing philosophy of design used in 20th century movements and assesses their contributions.	2	0	2	0	0	0	0	0	0	0	0	2	2	2	1

							Understanding the basic concepts of Chicago School of Architecture, Art Nouveau Architecture & New York School of Skyscraper Architecture.	2	0	0	0	0	0	0	0	0	0	0	2	2	2	2
						CO 5	Understanding the basic concepts of Early Modernist Architecture to International Style of Modern Architecture of Architecture	3	2	1	0	0	0	0	0	0	0	0	3	3	2	3
						CO 6	Understanding the basic concepts of Great masters	3	1	2	0	0	0	0	0	0	0	0	3	3	2	1
Structure System - II	BARC1-431	4	1	NO EXAM	1 0 0 0	CO1	Emphasis shall be laid on learning by doing by making of 3-D models to give the students an idea of different spatial experience.	2	3	3	0	0	0	0	0	2	0	0	2	1	1	3
						CO2	The predominantly pictorial nature of an Architect's language.	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO 3	The physical-mechanical essence of the subject matter.	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO4	The orientation of all Architectural efforts to Form and Space.	3	2	1	0	0	0	0	0	0	0	0	2	1	1	3
						CO 5	Learn various forms of structure system	1	0	2	0	0	0	2	0	0	0	0	2	1	1	2
						CO 6	Learn various type of temporary structure systems which one is durable and constructed in less time	1	0	2	0	0	0	2	0	0	0	0	2	1	2	3

		4	1				Understand the traditional construction techniques used in forts, palaces, religious structures in North India	3	2	3	3	0	0	2	0	0	0	0	0	1	1	3
						CO2	Understand the planning concepts of traditional Indian cities	3	2	3	2	0	0	0	0	0	0	0	0	1	1	3
						CO 3	Awareness of various design principles as employed in historical monuments	3	0	2	0	0	0	3	0	0	0	0	0	1	1	2
						CO4	Socially responsible	0	0	0	0	0	2	0	3	0	0	0	1	1	2	1
						CO 5	Learn team work.	0	0	0	0	0	0	0	0	3	2	0	1	1	3	1
						CO 6	Learn cultural values of the visited area.	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1
Architectural Design - V	BARC1-533	5	6	18	2 3 0 2	CO1	Understand and appreciate the concept of Structure and services in the Architectural design of a medium scale building with reference to function, form and site.	3	3	0	2	0	0	0	0	0	0	0	0	2	3	2
						CO2	Design basic building services in a multi storied residential and commercial building.	2	3	0	0	0	0	0	0	1	0	1	0	1	3	2
						CO 3	Employ computational tools and techniques for the design of multi storied buildings.	2	2	0	0	3	0	0	0	1	0	0	0	2	3	2
						CO4	Knowledge about site planning and also be able to understand the possible impact of multi storied building at urban level.	2	2	3	3	3	1	2	1	1	0	0	1	1	3	2

							Distinguish between the space designs requirements for the differently able.	3	3	0	1	0	2	0	2	0	0	0	3	2	3	3
						CO 6	Understand the role of behavioral aspects in space planning for user's satisfaction.	2	0	0	3	0	0	0	3	0	0	0	1	2	3	1
Building Construction - V	BARC1-534	5	5	3	2 2 0 2	CO1	Helping students to draw the construction details of structural Steel.	2	2	2	0	1	0	0	0	1	1	0	3	1	1	2
						CO2	Knowledge about Aluminum and its uses in various building elements including industrial buildings	2	1	0	0	1	0	0	1	0	0	0	2	1	1	3
						CO 3	Understanding the Construction of various types of doors in Steel & Aluminum	1	1	1	1	2	0	0	0	0	0	2	2	1	2	1
						CO4	Understanding the construction of windows in Steel & Aluminum	2	1	0	0	2	0	0	0	0	0	0	2	2	1	2
						CO 5	Understanding the details of mezzanine floors.	1	0	1	0	0	0	0	0	0	0	0	1	2	1	1
						CO 6	Understanding the implementations of light weight partitions	1	1	0	0	0	0	1	0	0	0	0	2	1	2	3
On site construction Training	BARC1-535	4	1	NO EXAM	0 0 0 0	CO1	Understand process of planning, progress and management of construction process.	1	3	1	0	0	0	3	0	0	0	3	3	3	2	1
						CO2	Learn about the building materials and technologies used in construction	0	0	0	0	3	0	0	0	0	0	0	3	3	2	2
						CO 3	Learn the role of various team members in construction.	0	0	0	0	0	3	0	0	3	1	0	2	2	3	1
						CO4	Understand how to solve problems on the construction site.	0	3	0	2	0	0	0	3	0	0	0	3	2	3	1

							Become socially responsible.	0	0	0	0	0	0	0	3	0	0	0	2	2	2	1
						CO 6	Enhance and learn how to communicate with clients and learn local vocabulary	0	0	0	0	0	0	0	1	2	3	0	2	2	1	1
Landscape Architecture	BARC1-536	5	2	3	2000	CO1	Understanding the role & importance of landscape in Architecture	1	0	1	0	0	0	2	0	0	0	0	0	2	1	2
						CO2	Understanding the elements of Landscape and their role.	1	0	1	0	0	0	2	0	0	0	0	1	1	1	1
						CO 3	Identifying plant characteristics of various types of Trees, Shrubs, Cacti Bushes and Creepers	1	0		0	0	0	2	0	0	0	0	1	2	1	2
						CO4	Understanding Historical development, Design Principles, salient features & elements of various garden styles	1	0	2	0	0	0	1	0	0	0	0	1	2	1	2
						CO 5	Studying and analyzing site in relation to landscape design	1	1	2	0	0	0	1	0	0	0	0	1	2	1	2
Building science and Technology - V	BARC1-537	5	2	3	2000	CO1	Understanding the importance and role of Electrical Layouts.	0	1	1	2	1	0	0	0	0	0	0	2	1	1	3
						CO2	Understanding the importance of Fire Safety in the building	0	2	2	0	1	0	0	0	0	0	0	1	1	2	1
						CO 3	Understanding the importance of Acoustics in Buildings.	1	1	3	2	1	0	0	0	0	0	0	3	1	1	2
						CO4	Understanding the importance of services in the building.	2	1	0	1	1	0	0	0	0	0	0	1	1	1	1
						CO 5	Detailing out the various layout plans of the building	1	1	0	1	2	0	0	0	0	0	0	2	2	1	1

							Understanding basic chronology of historical development as per the of syllabus.	2	0	0	0	0	0	0	0	0	0	0	2	3	3	2
						CO2	Acquainting themselves with the key historical buildings of various periods of Architectural history and their characteristic features.	3	0	2	0	0	0	0	0	0	0	0	3	3	1	1
		5	2	3		CO 3	Understanding the importance of the development of world Architecture from Neo classical style up to Industrial revolution	3	0	1	0	0	0	0	0	0	0	0	3	2	2	2
						CO4	Understanding the importance of the development of Rajput Architecture in India.	2	0	0	0	0	0	0	0	0	0	0	3	2	2	1
						CO 5	Understanding the importance of the development of Sikh Architecture in India	2	0	0	0	0	0	0	0	0	0	0	2	2	1	1
						CO 6	Understanding the importance of the development of Colonial Architecture in India	2	0	0	0	0	0	0	0	0	0	0	2	2	1	1
Tall Buildings	BARC1-539	5	2	3	1 0 1 0	CO1	Understanding the need of High rise buildings in Urban context & the issues related with tall buildings	0	0	0	0	0	1	1	0	0	0	0	1	2	1	2
						CO2	Understanding the planning, design, structure, and construction in high rise buildings.	1	0	2	0	0	0	0	0	1	0	0	1	1	1	2
						CO 3	Studying and understanding High rise buildings as per the norms and Standards prescribed in NBC/ Bye-Laws	0	0	2	0	0	1	1	0	0	1	0	1	1	2	1

							Understanding the concepts of Energy Efficiency & sustainability in tall buildings.	0	0	0	0	0	1	2	0	0	0	0	1	2	1	2
						CO 5	Understanding the mechanical & other building services of High rise buildings	0	0	2	0	2	0	1	0	0	0	0	1	3	1	3
						CO 6	Understanding the circulation & fire safety in tall buildings	0	0	1	1	1	0	1	0	0	0	0	1	3	1	3
Design Philosophies - II	BARC1-540	5	2	3	1 0 1 0	CO1	Understanding the approach of Master architects towards design of buildings in India.	2	3	3	0	0	0	0	0	2	0	0	2	1	1	3
						CO2	Understanding about the various aspects of Architectural design as employed by Master Architects	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO 3	Understanding about buildings designed by Master Architects	2	3	0	0	0	0	0	0	0	0	0	2	1	1	1
						CO4	Understanding the Post-Independence influence of Modern Masters in India	3	2	1	0	0	0	0	0	0	0	0	2	1	1	3
						CO 5	Understanding the Indian Modern Architects- philosophy and works in India & abroad	1	0	2	0	0	0	2	0	0	0	0	2	1	1	2
						CO 6	Understanding the philosophy of Architects who incorporated Regionalism, Technological advancements & Cost Effectiveness in Indian Architecture	1	0	2	0	0	0	2	0	0	0	0	2	1	2	3

		6	6	18			One shall be able to understand and appreciate the constraints of combining varying structural spans in complex building typologies and interweaving them with structure, site and architectural form and expressions.	3	3	0	0	2	0	0	0	1	0	2	0	2	3	1
						CO2	Understand and appreciate the interrelationship between form and scale	3	1	2	0	0	0	0	0	0	0	0	0	2	3	1
						CO 3	Employ natural elements like Light, Sound, & Shadow, water, landscape in the design projects related to art, craft, performing art, museum, & exhibition spaces.	3	2	0	3	3	0	0	0	0	3	0	1	2	3	3
						CO4	Design the concept of mixed use spaces.	3	2	3	2	0	0	1	0	3	0	0	0	2	3	1
						CO 5	Distinguish between the projects located in urban and non-urban areas.	3	2	0	3	0	0	2	0	0	0	0	1	2	2	1
						CO 6	Knowledge of digital techniques for assessment and redefining of design.	2	2	0	0	3	0	0	0	0	0	0	0	2	3	3

		6	5	3			Knowledge about the drafting techniques of construction drawings	1	1	0	2	1	0	0	0	0	0	0	3	1	2	1
						CO2	Knowledge about the Joinery Details	2	1	1	0	0	0	0	0	0	0	0	2	2	1	1
						CO 3	Knowledge about the plumbing details	1	1	1	0	0	0	0	0	0	0	0	2	1	2	1
						CO4	Knowledge about the electrical details	2	1	1	0	0	0	0	0	0	0	0	2	1	1	3
						CO 5	Understanding of working drawings.	1	2	2	0	0	0	0	0	0	0	2	1	1	2	3
						CO 6	Understanding of Extension, Expansion and Construction Joints, their details and treatment	1	1	0	2	0	0	2	0	0	0	0	1	2	1	1
Building science and Technology - VI	BARC1-643	6	2	3	2 0 0 0	CO1	Understanding the use and application of various advanced building services for the design assignments.	0	2	0	0	2	1	1	0	0	0	1	0	1	1	3
						CO2	Understanding the Heating and Air-conditioning Systems	1	2	0	1	1	1	0	1	0	1	1	0	2	2	2
						CO 3	Understanding the Mechanical Transportation Systems	0	2	0	1	1	1	0	0	2	2	0	0	1	1	1
						CO4	Understanding the concepts of comfort cooling systems & their working	0	2	0	2	0	2	0	0	1	0	1	2	1	1	1
						CO 5	Knowledge of Natural and Artificial Ventilation	1	2	0	1	1	0	0	0	0	1	0	1	3	1	1
						CO 6	Understanding the concept of intelligent buildings	1	1	1	1	0	0	0	0	0	1	0	1	1	1	2

		6	2	3			Understanding and appreciating the discipline of Interior design & its relation with Architectural Design.	2	0	2	0	0	0	0	0	0	0	0	1	2	1	2
						CO2	Understanding principles of Interior Design and their application in the context of buildings	1	0	2	0	0	0	0	0	0	1	0	1	2	1	2
						CO 3	Understanding various color schemes, lighting, textures, etc. in Interior design	1	0	0	0	1	0	0	0	0	0	0	1	2	1	2
						CO4	Understanding the materials & techniques used in Interior design	1	0	0	0	1	0	0	0	0	0	0	1	3	1	2
						CO 5	Understanding the modern trends in the field of Interior design	1	0	2	0	0	0	0	0	0	1	0	1	3	1	2
						CO 6	Designing the interior of small & medium sized projects	1	0	2	0	0	0	0	0	2	0	0	1	3	1	2
Estimating & Costing	BARC1-645	6	2	3	1 0 0 2	CO1	Understanding the process of preparing estimates	1	2	0	0	1	1	0	0	1	1	1	1	2	3	1
						CO2	Understanding types of Estimates and their calculations	1	2	0	1	2	1	0	0	2	1	2	2	2	3	1
						CO 3	Preparing Analysis of rates of material and labor required for various items of work.	1	3	0	1	1	1	0	0	2	1	1	2	2	3	1
						CO4	Understanding Tenders, their type, Process, Scrutiny and Selection of Contractors, Pre-Qualification and Registration of Contractor.	1	2	0	1	1	1	0	0	1	1	0	2	2	2	1
						CO 5	Understanding and calculation of Valuation	1	2	0	1	1	1	0	0	1	1	0	1	2	2	1
						CO 6	Preparing specifications for various items of work	1	2	0	1	1	1	0	0	2	1	0	1	2	2	1

							Understanding the approach of eminent architects towards designing of buildings.	3	0	2	0	2	0	3	0	0	0	0	2	1	1	3
						CO2	Understanding Structural Expressionism (High-Tech Architecture)	3	0	2	1	3	0	3	0	0	0	0	0	1	1	3
						CO 3	Understanding theories of Deconstructivism	3	0	2	1	3	0	2	0	0	0	0	0	1	1	3
		6	2	3		CO4	Understanding of Theoretical issues in contemporary architecture	3	0	2	1	3	0	3	0	0	0	0	0	1	1	3
						CO 5	Understanding theories of Neo Futurism	3	0	2	1	3	0	3	0	0	0	0	0	1	1	3
						CO 6	Understanding the theories of Program, Function and Philosophies used in Contemporary architecture	3	0	2	1	3	0	3	0	0	0	0	0	1	1	3
Architecture Legislation	BARC1-647	6	2	3	2000	CO1	Understand the Legal Framework in Architectural Practice.	2	0	0	0	0	3	0	2	0	0	0	0	3	3	1
						CO2	Knowledge to appreciate architectural design approaches adopted by master architects & planners.	3	0	0	3	0	0	0	0	0	2	0	0	2	3	1
						CO 3	Understand the importance of Preservation & Conservation of Heritage Buildings & their regulations.	3	0	0	2	0	3	0	0	0	0	0	0	2	2	1
						CO4	Knowledge of nation level building norms & standards through National Building Code, Indian Standard Codes, Local Building Bye-Laws, Disability Act etc.	2	0	0	2	0	3	0	0	0	0	0	3	3	3	1

							Distinguish between building norms of various Urban Local Bodies.	2	0	0	3	0	2	0	0	0	0	0	0	2	2	1
						CO 6	Design of development controls.	3	3	0	3	0	2	2	2	3	0	0	0	2	2	1
Architectural Design - VII	BARC1-748	7	8	NO EXAM	2 5 0 2	CO1	Understand and appreciate the with complex functional, circulation and safety requirements.	3	2	0	3	0	0	0	1	2	0	0	1	3	3	2
						CO2	Design public building while incorporating the requirements being set for Universal design.	3	3	0	0	0	0	0	2	2	0	0	0	3	3	2
						CO 3	Distinguish the impact of public building on urban surroundings and vice versa.	3	2	3	3	2	0	2	0	1	0	0	0	2	2	1
						CO4	Knowledge about the services required by public buildings which may include Fire safety, Solid Waste management, Water supply and sanitation, Air Conditioning, Gas Supplies etc.	3	2	0	3	3	1	0	0	0	0	2	3	3	3	2
						CO 5	Employ the outcome from library and Proto type studies for project designing.	2	0	0	3	0	0	0	0	2	1	0	0	2	2	1
						CO 6	Design physical models for volumetric studies.	2	0	0	3	0	0	0	0	3	2	0	0	1	3	2

							Knowledge about the latest trends/ methods of construction.	1	1	2	0	0	0	0	0	0	0	0	3	2	1	1
						CO2	Knowledge about the Prefabricated and precast building construction and details.	2	0	0	1	0	0	0	0	2	2	2	2	1	1	3
		7	5			CO 3	Knowledge about the Tubular construction system and details.	1	2	1	2	1	0	0	0	0	1	0	2	2	2	2
						CO4	Knowledge about the drafting techniques of the latest methods of construction	1	1	1	1	2	0	0	0	0	2	0	1	2	1	1
						CO 5	Understanding of modular construction	1	1	0	0	0	0	0	0	0	0	2	2	3	1	2
						CO 6	Knowledge about the structural & non-structural cladding	2	2	0	0	0	0	2	0	0	2	1	1	1	2	1
		7	2	3		CO1	Understanding various aspects, issues and considerations affecting housing problems & their solutions for India	0	0	0	0	0	2	0	0	1	0	0	1	2	1	2
						CO2	Understanding the housing need, shortage & cost components of Housing	0	0	0	0	0	2	0	0	0	1	0	1	1	1	2
						CO 3	Understanding Housing policies in India & the role of financial institutions.	0	0	0	0	0	1	0	0	1	0	0	1	1	2	1
						CO4	Understanding the affordable housing & various typologies related to housing in Indian context.	0	0	0	0	0	2	1	0	0	0	1	1	2	1	2
Housing	BARC1-750				2000																	

							Enable to carry out need assessment of targeted housing stock in urban areas & strategies for alternative housing typologies in development of urban areas.	0	0	0	0	0	2	0	0	0	0	0	1	3	1	3
						CO 6	Understanding housing surveys & analyze the survey	0	0	0	0	0	1	0	0	2	0	0	1	3	1	3
Construction Management	BARC1-751	7	2	3	2000	CO1	Handling and managing the project efficiently	0	1	0	0	2	0	0	0	0	2	2	2	2	1	1
						CO2	Understanding the Construction stages, Construction team, Equipment Management	1	2	0	2	0	1	0	0	0	0	1	2	2	2	3
						CO 3	Understanding the Quality and Safety- Objectives, Issues, Organizing for Quality and Safety	0	1	0	0	0	1	0	1	0	1	2	2	1	1	3
						CO4	Understanding the costing of the project at various stages	0	2	0	2	2	0	0	0	0	2	1	1	2	1	2
						CO 5	Understanding the role of an architect in the society	1	1	0	2	2	0	0	0	0	3	2	3	1	2	1
						CO 6	Understanding the importance of project management and team work	0	1	0	-	2	0	0	0	0	1	3	3	2	1	1
Town Planning	BARC1-752	7	2	3	2000	CO1	Understanding the importance and role of Town Planning in the Historical and Modern Context.	1	0	1	0	0	1	0	0	0	0	0	1	2	1	2
						CO2	Understanding Human Settlements - Classification based on Road Pattern, Form, space, use & Population.	1	0	1	0	0	1	0	0	0	0	0	1	1	1	2

							Understanding Planning Concepts- Garden City, Linear City, Industrial City and Sustainable City, Compact city and TOD	1	0	1	0	0	1	2	0	0	0	0	1	1	2	1
						CO4	Evaluating the pattern of growth in Indian cities & their problems	1	0	1	1	0	1	0	0	2	1	0	1	2	1	2
						CO 5	Understanding new approaches of town planning such as smart cities, green cities, & development plans	1	0	1	0	0	1	2	0	0	1	0	1	3	1	3
						CO 6	Understanding the role of development authorities in the growth of cities	1	0	1	0	0	1	2	0	0	1	1	1	3	1	3
Educational Tour - II	BARC1-753	7	1	NO EXAM	0 0 0 0	CO1	Understand the construction techniques used in historic and modern structures in India	3	0	0	2	0	0	0	0	1	3	0	0	2	1	1
						CO2	Understand the urban design of Indian cities	3	0	0	2	0	0	0	0	0	0	0	0	1	1	3
						CO 3	Awareness of various modern buildings designed by contemporary architects of India.	1	1	3	2	0	0	0	0	0	0	0	0	1	1	2
						CO4	Understand development pattern of the city.	2	0	2	2	0	0	3	0	0	0	0	0	1	1	3
						CO 5	Understand the form and the skyline of the city.	2	0	2	1	0	0	1	0	0	0	0	0	1	1	3
						CO 6	Understand the different land marks and nodes of the visited city.	2	0	2	1	0	0	2	0	0	0	0	0	1	1	3

		7	1				Understand the Legal Framework in Architectural Practice.	2	0	0	0	0	3	0	2	0	0	0	0	3	3	1
						CO2	Knowledge to appreciate architectural design approaches adopted by master architects & planners.	3	0	0	3	0	0	0	0	0	2	0	0	2	3	1
						CO 3	Understand the importance of Preservation & Conservation of Heritage Buildings & their regulations.	3	0	0	2	0	3	0	0	0	0	0	0	2	2	1
						CO4	Knowledge of nation level building norms & standards through National Building Code, Indian Standard Codes, Local Building Bye-Laws, Disability Act etc.	2	0	0	2	0	3	0	0	0	0	0	3	3	3	1
						CO 5	Distinguish between building norms of various Urban Local Bodies.	2	0	0	3	0	2	0	0	0	0	0	0	2	2	1
						CO 6	Design of development controls.	3	3	0	3	0	2	2	2	3	0	0	0	2	2	1
Lighting & Illumination	BARC1-761	7	2	3	1 0 1 0	CO1	Understanding the principles of visual performance and photometric terms	1	0	1	0	0	0	1	0	0	0	0	1	2	1	2
						CO2	Understanding Color Specification with Munsel & CIE system along with additive & subtractive colour mixing.	1	0	1	0	0	0	0	0	0	0	0	1	1	1	2
						CO 3	Understanding of lighting principles and different electric lamps along with their properties	1	0	2	0	0	0	1	0	0	0	0	1	1	2	1
						CO4	Understanding luminaries' properties and illumination schemes.	1	0	2	0	0	0	1	0	0	0	0	1	2	1	2

							Calculating illumination due to daylight using daylight factor, day lighting practices and integration with electric lighting	1	0	1	2	0	0	1	0	0	0	0	1	3	1	3
						CO 6	Calculating quantitative lighting design of a simple space manually using lumen method	1	0	1	2	1	0	0	0	0	0	1	1	3	1	3
Disaster Management for Buildings	BARC1-762	7	2	3	1 0 1 0	CO1	Understanding the various Pre & Post-disaster design & management measures to make buildings safe against Earthquakes.	1	2	0	1	0	2	0	1	0	2	1	1	1	1	2
						CO2	Understanding the General requirements, principles and measures for making safe building design against Fire, Floods, Cyclones, Landslide, Tsunami Avalanche, etc.	1	1	0	2	0	0	2	1	0	1	1	0	1	1	2
						CO 3	Understanding the Special construction techniques to make buildings safe against earthquakes	1	1	1	1	0	0	0	2	0	2	0	0	2	3	1
						CO4	Understanding the concept of disaster mitigation	0	1	0	1	2	0	0	2	0	0	0	0	1	1	2
						CO 5	Understanding the role of architects in creating safe buildings	1	1	1	0	0	0	1	0	2	0	2	2	1	2	3
						CO 6	Understanding the various Pre & Post-disaster design & management measures to make buildings safe against Earthquakes.	1	2	0	1	0	2	0	1	0	2	1	1	1	1	2

		8	20				Understand the practical approach towards designing of buildings.	3	0	3	0	0	0	2	0	0	0	0	3	3	2	1
						CO2	Understand the site management & office management	1	3	0	0	0	0	0	0	0	0	3	0	2	3	1
						CO 3	Get opportunity to design & execute buildings on site.	1	2	3	2	0	0	2	0	0	0	0	0	3	2	1
						CO4	Understand various construction details that apply on site.	2	0	0	0	3	0	0	0	0	0	0	3	3	2	1
						CO 5	Learn team work and become socially responsible	0	0	0	0	0	3	0	3	3	0	0	2	2	3	1
						CO 6	Enhance and learn how to communicate with clients and learn local vocabulary	0	0	0	0	0	2	0	0	2	3	0	2	2	3	1
Architectural Design - VIII	BARC1-956	9	8	NO EXAM	2 4 0 4	CO1	Understand & appreciate the concept of planning & other allied services required in the large scale building.	3	3	0	2	0	0	1	0	0	0	2	0	1	2	2
						CO2	Design an existing urban environment to identify its typical characteristics and problems.	2	3	0	3	2	0	1	0	0	0	0	0	1	2	1
						CO 3	Knowledge to relate human behavior with the environment and design spaces accordingly.	3	0	0	3	0	0	3	1	0	0	0	2	2	3	3
						CO4	Distinguish various types of circulation spaces which are required to segregate different set of spaces, which are part of a single building/ complex.	2	3	3	3	0	0	0	0	1	0	0	0	1	3	1

							Employ the learning's from historical context of the designated site	3	0	0	3	0	0	1	0	0	0	0	2	2	2	2
						CO 6	Employ the concepts urban development and ecologically sensitive control.	2	1	2	3	3	0	3	1	3	0	0	0	1	2	1
Research Methods & Dissertation Writing	BARC1-957	9	3	3	1 1 0 2	CO1	Analyze and write reports on fine arts literature	1	0	0	2	0	0	0	0	0	2	0	2	3	3	1
						CO2	Appraisal / evaluation, write reports on architectural projects.	1	0	0	0	0	0	0	0	0	1	0	1	2	2	1
						CO 3	Techniques of report and review writing, their application to architectural publications.	2	0	0	0	0	0	0	0	0	2	0	2	2	2	1
						CO4	Research methods, evaluation of results and its application.	0	0	0	1	0	0	0	0	0	1	0	1	2	2	2
						CO 5	Analyze and evaluate architectural projects etc. and also understand architectural research with special emphasis on India.	2	0	0	0	0	0	0	0	0	2	0	2	3	2	2
						CO 6	Architectural Research on various projects.	2	0	0	2	0	0	0	0	0	0	0	2	3	3	2
Urban Design	BARC1-958	9	2	3	1 0 0 2	CO1	Understanding the importance & role of Urban Design in the Historical & Modern Context & be able to interpret the urban forms of the past & present	1	0	2	0	0	0	0	0	0	0	0	1	2	2	2
						CO2	Understanding the elements of Urban design & determinants of Urban Form	1	0	2	0	0	0	0	0	0	0	0	1	2	2	2
						CO 3	Understanding the Urban Spaces typology & design principles	1	0	2	0	0	0	0	0	0	0	0	1	2	2	1
						CO4	Understanding the Urban development controls & Legal framework	1	0	1	0	0	0	0	0	0	2	0	1	2	1	2

							Understanding the process of Landscape design &its application in Architectural Design solutions through examples from historical and contemporary gardens	0	0	1	0	0	0	2	0	0	0	0	1	3	1	3
						CO 6	Understanding landscape design in terms of elements of landscape such as earth, rock, water & vegetation, in the context of their environmental aspects & concerns.	0	0	0	0	0	0	0	0	0	0	0	0	3	1	3
Landscape Design	BARC1-963	9	2	3	1 0 0 2	CO1	Understanding contour/mapping and various methods of documentation of physical features, topography and landscape elements.	1	0	1	0	0	1	1	0	0	0	0	1	2	2	2
						CO2	Understanding & analyzing site in relation to landscape design in order to take site planning decisions	1	0	1	0	0	1	1	0	0	0	0	1	2	2	2
						CO 3	Understanding contour/mapping and various methods of documentation of physical features, topography and landscape elements.	0	0	1	1	0	1	1	0	0	0	0	1	2	2	1
						CO4	Understanding and analyzing site in relation to landscape design in order to take site planning decisions	1	0	1	0	0	0	1	0	0	0	0	1	2	1	2
						CO 5	Understanding environmental impact assessment and Natural environmental policies of India	0	0	0	0	0	1	2	0	0	1	0	1	3	1	3
						CO 6	Enable to design and detail landscape projects	2	0	2	0	0	0	1	0	0	0	0	1	3	1	3

		9	2	3			Understanding the Role and importance of the building maintenance in built environment.	1	1	0	0	0	0	2	1	0	0	0	3	1	2	1
						CO2	Understanding the Diagnostic Techniques	0	2	0	2	0	0	0	1	1	1	0	0	2	2	3
						CO 3	Understanding the Prevention measures/Defects due to poor design and construction	1	1	1	1	0	2	0	2	0	0	2	0	1	1	1
						CO4	Knowledge about the various defects in Buildings	0	2	0	2	0	0	0	1	0	1	0	0	2	2	1
						CO 5	Understanding of treatment methods/Repair materials	1	2	0	0	0	0	0	2	0	0	0	2	1	1	2
						CO 6	Knowledge about the maintenance of the building both economic and social significance	1	1	1	0	0	0	0	2	0	0	0	0	3	1	2
Sikh Architecture	BARC1-966	9	2	3	1 0 0 2	CO1	Understanding the development of Sikh architecture in the form of Gurdwaras, Forts and Palaces in various regions of Punjab.	2	0	0	0	0	0	0	0	1	1	1	1	1	0	2
						CO2	Understanding Contemporary examples of Sikh Gurdwaras built in late 20th and 21st Century	2	1	1	0	0	0	0	1	1	1	1	1	1	0	2
						CO 3	Understanding Evolution of Sacred Sikh Architecture – Salient features of a Gurdwara varieties of Arches, Domes, Capitals and other building elements	2	1	1	0	0	0	0	1	1	1	1	1	1	0	1
						CO4	Understanding of Sikh Architecture in Historical, Religious, social and environmental context	2	1	1	0	0	0	0	1	1	1	1	1	1	0	2
						CO 5	Understanding the design of Khalsa Heritage Memorial complex at Anandpur Sahib	2	1	1	0	0	0	0	1	1	1	1	1	1	0	1

							Understanding the Landscape elements developed under Sikh rulers in prominent cities like Amritsar, Patiala, Nabha, Kapurthala, Gobindgarh, Anandpur Sahib	2	1	1	0	0	0	0	1	1	1	1	1	1	0	1
Architecture Model Making	BARC1-967	9	2	NO EXAM	1 0 0 2	CO1	Prepare models of Architectural projects	2	1	2	0	2	0	0	0	0	0	0	2	3	3	1
						CO2	Develop their own preferred technique for the model making	2	0	0	0	2	0	0	0	0	0	0	2	2	2	2
						CO 3	Develop quick study models for developing a design idea.	1	0	0	0	1	0	0	0	0	0	0	1	2	2	2
						CO4	Develop detailed models of buildings	1	0	2	0	0	0	0	0	0	0	0	2	2	3	1
						CO 5	Do Presentation models of single building or group of buildings.	1	0	0	0	0	0	0	0	2	0	0	2	2	2	1
						CO 6	Learn different materials used in models.	2	0	0	0	0	0	0	0	0	0	0	2	1	1	1
Vernacular Architecture	BARC1-968	9	2	3	1 0 0 2	CO1	Understanding basic vernacular settlement development as per the syllabus.	3	0	2	2	0	0	3	2	0	0	0	2	1	1	3
						CO2	Acquainting themselves with the various vernacular settlements in Plains & Hills of Northern India.	3	0	3	3	1	0	3	2	1	0	0	2	1	1	3
						CO 3	Understanding the Settlement pattern, building material/ technology and socio–economic structure in a village of Punjab, Study & analysis of spatial organization	3	0	3	3	0	0	3	1	1	1	0	1	1	1	3

							Understanding the Approach and works of architects Laurie Baker, Hassan Fathy	3	0	2	3	1	0	3	1	2	1	0	2	1	1	3
						CO 5	Understanding vernacular settlements in different parts of India as well as abroad.	3	0	2	3	0	0	3	0	1	1	0	1	1	1	3
						CO 6	Understanding the Role & importance of social, cultural, political, economic, climatic, technological factors	3	0	2	3	1	0	3	2	0	0	0	1	1	1	3
Architectural Design - IX	BARC1-X59	10	15	NO EXAM	10 0 0 10	CO1	Design projects of any scale independently.	3	3	3	3	2	1	1	1	2	0	1	0	3	3	1
						CO2	Employ skills to present his/her work in front of a panel and defend it.	3	2	0	0	2	0	0	0	1	3	0	0	3	3	3
						CO 3	Knowledge to write a report pertaining to a large scale architectural project.	0	2	0	0	0	0	0	0	1	3	0	3	1	1	3
						CO4	Understand different digital and physical skills to present his/her work for Project execution.	0	0	0	0	3	0	0	0	0	2	0	0	2	2	2
						CO 5	Distinguish details to be developed for site planning, structure, services and other aspects.	3	3	0	0	0	0	1	0	0	0	2	0	2	3	1
						CO 6	Understand the design requirements as specified in client's and architect's briefs.	2	0	0	3	0	2	1	1	3	3	0	0	1	3	1
Professional Practice	BARC1-X60	10	2	3	1 0 1 0	CO1	Understand the various acts and regulations related to Architectural profession in India.	2	0	0	3	0	2	0	0	0	0	0	3	3	3	1
						CO2	Knowledge about the Code of Conduct which is framed by Council of Architecture, India.	2	2	0	0	0	3	0	3	0	0	0	3	3	3	1

							Distinguish different legal matters which are associated with professional practice, dispute, competitions, tenders and contracts etc.	3	0	0	3	0	2	0	0	0	0	0	0	2	3	1
						CO4	Knowledge about the associated areas like office management, teamwork, human resource, environment and social responsibility.	2	0	0	0	0	0	0	0	3	0	3	0	3	3	1
						CO 5	Design Tender and Contract document.	3	0	0	0	0	2	0	3	3	2	0	0	2	3	1
						CO 6	Distinguish between the responsibilities of architect, client, contractor.	3	3	0	0	0	3	0	0	2	0	2	0	3	3	1
		10	2	3		CO1	Understanding energy sources, global scenario and energy consumption	0	0	0	0	0	1	2	0	0	1	0	1	2	1	2

Energy Efficient Building Automation
BARC1-X69

1 0 1 0

							Understanding study of different energy-efficient principles of a building and their various application techniques in different climatic zones prevailing in India including solar active and passive features.	1	0	1	0	0	1	2	0	0	1	0	1	2	2	2
						CO 3	Understanding principles for designing of large scale mechanical services	0	0	2	0	0	1	1	0	0	1	0	1	2	2	3
						CO4	Understanding Building Automation, control systems and monitoring	0	1	2	0	0	1	1	0	0	0	0	1	3	1	2
						CO 5	Learning the role of lighting and illumination related issues for energy efficiency	0	1	2	0	0	1	1	0	0	0	0	1	3	1	3
Architectural Journalism	BARC1-X71	10	2	3	1 0 1 0	CO1	Understanding theories and techniques in journalism	1	0	1	0	0	0	0	1	0	0	0	0	2	1	2
						CO2	Understanding contemporary journalism in Architecture act	1	0	1	0	0	0	0	1	0	1	0	1	2	1	2
						CO 3	Reporting, recording, analyzing and evaluating an architectural project	1	0	1	0	0	0	0	1	0	2	0	1	2	1	2
						CO4	Editing journalistic material related to built environment	1	0	1	0	0	1	0	1	0	2	0	1	3	1	2
						CO 5	Preparing research writings and thesis reports	1	0	1	0	0	0	0	1	0	2	0	1	3	1	3
						CO 6	Usage of skills of journalism to enhance documentation, analytical ability & develop effective architectural critique and specialized career option.	1	0	1	0	0	1	0	1	0	2	0	2	2	1	2

		10	2	3			Making the students aware to environment and ecology for Sustainable development	1	0	1	0	0	1	3	0	0	0	0	1	2	1	1
						CO2	Understanding the principles and concepts of Sustainable Architecture for the built environment.	1	0	1	0	0	0	3	0	0	1	0	1	2	2	2
						CO 3	Understanding about various renewable and non renewable energy sources and their importance for Sustainable development	0	0	1	0	0	0	2	0	0	1	0	1	2	2	3
						CO4	Understanding Sustainable construction materials and Indoor environment	0	0	0	0	0	1	2	0	0	1	0	1	3	1	2
						CO 5	Understanding various green building rating systems and ECBC code	0	0	0	0	0	1	2	0	0	1	0	1	3	1	2
						CO 6	Understanding assessment of Green buildings in various rating systems of India	0	1	1	0	0	1	2	0	0	1	0	1	3	1	2
Architectural Conservation BARC1-X74		10	2	3	1 0 1 0	CO1	Understanding the principle, objective, role of conservation and prepare the methodology to execute the conservation work.	3	0	0	2	0	2	1	0	2	0	3	1	1	2	3
						CO2	Understanding about Methods of studying and documenting historical monuments in the context of guidelines issued by UNESCO, INTACH.	3	0	0	3	0	2	1	1	3	0	2	1	1	1	3

							Understanding about Study of construction methods and structural analysis of various historical building styles e.g. Arches Domes, Vaults and Shikharas etc.	3	0	0	3	0	2	1	0	3	0	0	1	1	2	3
						CO4	Understanding finishes in historical buildings and effects of weathering/ pollution on historical buildings	2	0	0	3	0	2	1	0	0	0	0	0	1	2	3
						CO 5	Understanding the methods of saving monuments from vandalism	2	0	0	3	0	2	1	3	0	0	0	2	1	1	3
						CO 6	Understanding Role of Historic Building/Area/City in Present Context	3	0	0	3	0	2	1	1	0	0	0	1	1	1	3

Enter Correction levels 1, 2 or 3 as defined below:

1. Slight (Low) - upto 30% 2. Moderate (Medium) – above 30% and upto70% 3. Substantial (High) – above 70%

So on…….. (1st semester to last semester)