Bachelor of Architecture

B. Arch Semester - I

Course Code	Course Title
ARC-101	Architectural Design-I

Course Outcomes

CO1: Ability to assemble simple spatial elements in articulated constructs and visually represent them through hand-made 2D drawings and models.
CO2: Introduce fundamentals of design and development of design vocabulary, to nurture design thinking and to enable them to apply the same thought process in developing three-dimensional compositions.
CO3: To introduce models as tools for conceptualisation, organisation and furthering of design thought process.

ARC-102	Building Material and Construction Technology I

Course Outcomes

CO1: Basic all cons. Material case study, and understanding of their properties.
CO2: Basic understanding of construction equipments and learn the way of using it on site.
CO3: Analyze, troubleshoot of load bearing and frame structure ,pad footing and implement solutions in the field based on knowledge and experience.
CO4: Demonstrate fundamental knowledge of walls , floor , opening the systems and processes used to construct the building, including an understanding of industry terminology.

Course Code	Course Title
ARC-103	Structural Design and Systems I

Course Outcomes

CO1: Develop insight of the basic fundamental aspects of the Applied Engineering and Structural Mechanics for the Architecture Educations.
CO2: Impart knowledge of various types of Forces, Force System, Equilibrium and Resultant.
CO3: To impart understand the flexural Elements such as Beam and Truss its application and type of analytical studies.
CO4: To understand analysis of indeterminate structures and adopt an appropriate structural analysis technique.
CO5: To develop the analytical technique which will development preliminary knowledge of different building structural systems.
CO6: To develop utilize the Structural Mechanics problem solving techniques in the analysis and design of the Structural Design of the Building system.

ARC-104	Architectural Graphics Skills I

Course Outcomes

CO1: Efficient in drawing, which is seen as a communication tool in the practice of architecture just like language.
CO2: Familiarize with a range of techniques of expression beginning with manual drawing.
CO3: Learn drafting, lettering and rendering techniques.
CO4: Visualize of geometrical forms.
CO5: Develop appropriate graphic skills and technical drawings which is helpful to explain the contents of a design.

ARC-105	History of Culture I

Course Code	Course Title
	Course Outcomes CO1 Understand evolution of human civilization and human settlements. CO2 Understand the influence of geographical location, socio-cultural, religious, political systems, people's beliefs, climate and other factors on architecture CO3 Know about the development of civilization, its architectural implications in terms of time, space, form and structure. CO4 Develop an outlook on settlement patterns of ancient civilization and comparing same in modern societies
ARC-106	Climatology and Environmental Studies
	Course Outcomes CO1: Theoretically understand design with climate as the basic parameter of design. CO2: Prepare design strategies for different climatic regions. CO3: Analyze, troubleshoot, and implement solutions with climate as the basic parameter of design. CO4: Utilize modern as well as traditional techniques to derive a climate responsive design.
ARI-107	Communication Skills
	Course Outcomes CO1: Demonstrate understandings of English Language CO2: Interpret the basic structure, grammar, vocabulary, speech construction CO3: Develop Understanding of Keywords in Architecture CO4: Build art of presentation in basic writing and public speaking with focus on meaning, interpretation, accent, rhythm, etc. of the keywords in Architecture. CO5: Adapt skills of listening, reading, understanding, speaking, writing & translation in English

Course Code	Course Title
ARE-108	Elective I I. Traditional and Contemporary Crafts II. Sculpture and Ceramic Workshop

Course Outcomes

I. Traditional and Contemporary Crafts

CO1: The outcome will let students to understand how the craft of selected region has evolved over the period of time.

CO2: To understand its significance in the cultural growth of their community.

CO3: To understand the interrelationship between arts and community

II. Sculpture and Ceramic Workshop

CO1: The outcome will let students to learn the technical process of making sculptures using different materials

CO2: Effective usage of materials to create art work

CO3: Developing creative skills of students

B. Arch. Semester - II

Course Code	Course Title
ARC-201	Architectural Design Studio II

Course Code	Course Title
	Course Outcomes CO1 Understanding and application of the correlation between the space they measured and anthropometry. CO2: Understanding and application of proportions and its relation with anthropometry to evolve a design tool bringing aesthetics and functionality. CO3: Design a simple enclosed space using their own understanding of space through analysis, observations and imagination.
ARC-202	Building Material and Construction Technology II
	Course Outcomes CO1: understand the different type of shallow foundation in detail and their construction methodology. CO2: Basic learning of different type of staircase and their designing principle. CO3: understanding by case study and literature study the various type of opening in the building and their strategy of placement and fixing details, and technical drawings. CO4: Demonstrate fundamental knowledge different wooden joinery and their use.
ARC-203	Structural Design and Systems II
	Course Outcomes CO1: Develop insight of the basic fundamental aspects of the Structural Analysis for the Architecture Educations. CO2: Impart knowledge of Simple Stress & Strain. CO3: To impart understanding of the flexural Elements such as Beam its application such as Shear force & Bending moment diagram for Determinate Beams. CO4: To develop analytical skills related for Indeterminate Plane Frame & Arches and adopt an appropriate structural analysis technique. CO5: To develop knowledge of different building structural elements and systems.

Course Code	Course Title
	CO6: To develop skills to utilize the Structural Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.
ARC-204	Architectural Graphics Skills II
	Course Outcomes CO1 Understanding the proficiency in drawing, which is seen as a primary communication tool in the practice of architecture just like language. CO2 Understanding the perspective of the buildings. CO3 Demonstrate an understanding of furniture, people and accessories in one and two point projected perspective drawing. CO4 Articulate an understanding of volumetric drawings used in interior design.
ARC-205	History of Culture II
	Course Outcomes CO1: Understand the reasons of emergence, growth and termination of prevailing architectural periods. CO2: Analytical understandings on origin of Classical antiquity phase (Greek and roman) and also to understand the evolution of form and spaces CO3: To understand the importance of historical, geographical, religious, social, building materials and construction techniques, climatic conditions in moulding architecture spaces and structures CO4: To understand the culture and indigenous architecture of Chinese, Japanese and pre-Columbian civilizations.
ARC-206	Surveying and Leveling

Course Code	Course Title
	Course Outcomes CO1: Understanding the importance of Surveying in aim, objectives, and types of surveying methods and application, and different instruments used for Surveying. CO2: Understanding the method of Chain and compass survey, traversing map Survey of cluster of buildings map. CO3: Assessment of data to be used in formation of the total research profile CO4: Understanding the method of Leveling: using dumpy level and automatic level. CO5: Understanding the method of Contour survey and plotting of contour maps.
ARI-207	Photography **Course Outcomes** CO1: To learn photography, types and nature of different types of light sources and their effects. CO2: Significance of objects and its compositions. CO3: Different types of cameras, lenses, filters and equipment along with the involved technicalities. CO4: Applications, importance and inter relationship of shutter speed, aperture, field of depth and light meter CO5: Practice in context of architectural objects and environments.
ARE-208	Elective II I. Communication Skills II. Performing Arts **Course Outcomes** **Elective II (Communication Skills)** CO1: The outcome will let students to have improved interactive skills CO2: Making students capable to present themselves on various platforms CO3: Overall communication skill development of the students to face interviews, group discussions and meetings

Course Code	Course Title
	Elective II (Performing Arts) CO1: The outcome will let students learn the various types of performing arts and its significance in the region CO2: Developing the sensitive response to the performing arts in response to its historical and cultural context CO3: Developing an understanding of relation between Performing arts and architecture

B. Arch. Semester - III

Course Code	Course Title
ARC-301	Architectural Design Studio III **Course Outcomes** CO1: Ability to identify user needs and translate them into a program and thereafter use the program to manifest them in a design in terms of space, materials and construction methodology that is appropriate in a particular context. CO2: Demonstrate knowledge of designing residence integrating with the technical and environmental aspects. CO3: Understanding the requirements of different user group, their needs, lifestyle, culture and social status as well before developing liveable spaces. CO4: Develop the ability to respond to site characteristics like topography, microclimate and building orientation in development of the design of a residence.
ARC-302	Building Material and Construction Technology III

Course Code	Course Title
	Course Outcomes CO1: presentation of different type of roof according to the understanding of their selection depends up on the various factors like, location, material, workmanship available etc. Prepare the presentation and model. CO2: demonstration of different type of floor and its selection and construction mythology. CO3: understanding by case study diff. Rcc element their construction method and their behaviour in different conditions. Understanding through model making. CO4: fundaments idea of shuttering by presentation, and their right way of using it and how it's connected to the construction quality.
ARC-303	Structural Design and Systems III **Course Outcomes** CO1: Develop insight of the basic fundamental aspects of the Advanced Structural Analysis for the Architecture Educations. CO2: Train students in a way that after the successful completion of the course student should have knowledge of Bending stress, Shear stress and Direct & Bending stress in Beams. CO3: Impart knowledge of flexural Elements such as Beam its application such as Shear force & Bending moment diagram for Indeterminate Beams (Moment distribution method). CO4: To understand analysis of Deflection of Beams and adopt an appropriate structural analysis technique and the behaviour of the structural elements. CO5: To develop the analytical technique in the area of Compression elements such Analysis of Column of area which will development knowledge of different building structural elements and systems. CO6: To utilize the Advanced Structural Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.
ARC-304	Architectural Graphics Skills III

Course Code	Course Title

Course Outcomes

CO1: Understanding the proficiency in drawing, this is seen as a primary communication tool in the practice of architecture just like language.
CO2: Understanding the perspective of the buildings.
CO3: Demonstrate an understanding of furniture, people and accessories in one and two point projected perspective drawing.
CO4: Articulate an understanding of volumetric drawings used in interior design.
CO5: To Introduce students and initiate into theory and practice of Computer Applications in Architecture.
CO6: To teach graphic applications specially 2Dimensional for fast and attractive presentation of theme and ideas.
CO7: To teach utilization of knowledge of 3D modelling and its application in design.

ARC-305 History of Culture III

Course Outcomes

CO1: Understand the reasons of emergence, growth of various art moments/genres and their relevance in architecture.
CO2: Analytical understandings on theories of design to be able to translate creative thinking of space.
CO3: Understanding the rise and spread of Renaissance, which marks an absolutely important phase in the World history
CO4: Impacts of Industrialization on society.

ARC-306 History of Architecture I

Course Outcomes

CO1: Understanding the need of subject and architectural elements of space-making and their implications
CO2: Understanding architecture of ancient Greco-roman world, Indus valley and also to understand the evolution of form and spaces through various models.

Course Code	Course Title
	CO3: To understand the importance of historical, geographical, religious, social, building materials and construction techniques, climatic conditions in moulding architecture spaces and structures.
ARC-307	Building Services and Equipment I **Course Outcomes** CO1: Learn elementary building services of electrical services. CO2: Familiarize with a range of electrical accessories and its design consideration CO3: Learn illumination schemes. CO4: Familiarize with wiring systems and design consideration of lighting schemes. CO5: Implicate electrical services in Design.
ARE-308	Elective III I. History of Arts and Literature II. Advanced Graphics **Course Outcomes** **Elective III (History of Arts and Literature)** CO1: The outcome will let students to learn various types of arts in different eras. CO2: Students will learn various works in European and Asian Art which were shaped by the dynamics of a number of forces - individuals, economic, social, and political and cross cultural influences. CO3: Students will develop an understanding of how art and literature influences architecture of the region. **Elective III (Advance Graphics))** CO1: Analyse and utilize design processes and strategy from concept to delivery to creatively solve communication problems.

Course Code	Course Title

CO2: The outcome will let students to learn good techniques for presentations.
CO3: Development of basic visual problem solving and conceptual development skills and awareness.

B. Arch. Semester - IV

Course Code	Course Title
ARC-401	Architectural Design Studio IV

Course Outcomes

CO1: Identification of the cultural factors of space making such as notion of privacy and territoriality, family structure and hierarchy, gender roles, occupational associations.
CO2: Traditional values and their continuity etc., interpretations of socio-cultural factors in the built form in terms of spatial organization, orientation, open, semi open and closed.
CO3: Spaces correlation scales and proportions etc., climate and topography, local construction system and use of materials, bye laws.

ARC-402	Building Material and Construction Technology IV

Course Outcomes

CO1: by applying different analysis methodology understand the different soil properties and their behaviour while getting use for construction of acting as base for building. Also understand by field visit how the foundation for the building will be designed according to the soil properties.

Course Code	Course Title
	CO2: study through case study and presentation about deep foundation like raft, pile, caissons & cofferdams, and understand their construction methodology and technicality, also study their structural behaviour and failure also. CO3: study of retaining wall by presentation and demonstration, its design principle, purpose, selection and construction method. CO4: study of Shoring, shuttering, scaffolding & underpinning by presentation and demonstration, its design principle, purpose, selection and construction method. CO5: Study through presentation and case study about the different temporary structure designed in the world and their limits and benefits. Also how to chose the right structure for the right solution by making hypothetical site conditions and by making model test the same structure in different natural forces.
ARC-403	Structural Design and Systems IV
	Course Outcomes CO1: Develop insight of the basic fundamental aspects of the R.C.C. Structural Design for the Architecture Educations. CO2: Train students in a way that after the successful completion of the course student should have knowledge of Introduction to IS code for Plain & Reinforced Concrete and various types of Methods of R.C.C. Design. CO3: Impart knowledge of flexural Elements such as Beam its application such as Analysis & design of Singly reinforced sections using Limit state method. CO4: To understand the Analysis & design of Slabs and adopt an appropriate structural analysis technique and the behaviour of the structural elements for the design approach of the element. CO5: To develop the analytical and Structural designing technique in the area Load bearing structure subjected to gravity & seismic load which will development knowledge of different building structural elements and systems. CO6: To utilize the R.C.C. Structural Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.
ARC-404	Architectural Graphics Skills IV

Course Code	Course Title

Course Outcomes

CO1 Understanding the proficiency in drawing, which is seen as a primary communication tool in the practice of architecture just like language.
CO2 Understanding the perspective of the buildings.
CO3 Demonstrate an understanding of furniture, people and accessories in one and two point projected perspective drawing.
CO4 Articulate an understanding of volumetric drawings used in interior design.
CO5 To Introduce students and initiate into theory and practice of Computer Applications in Architecture.
CO6 To teach graphic applications specially 2Dimensional for fast and attractive presentation of theme and ideas.
CO7 To teach utilization of knowledge of 3D modelling and its application in design.

ARC-405 History of Architecture II

Course Outcomes

CO1: Understand the reasons of emergence, growth and termination of various architectural periods build upon each other.
CO2: Analytical understanding on evolution of various construction techniques through lectures and models.
CO3: Understanding various elements of space making forming various building typologies like Churches, Temples, Forts.

ARC-406 Building Services and Equipments II

Course Outcomes

CO1: To know about the Sources of water supply, Quality and Quantity, Treatment, Conveyance, Distribution and Storage, size of overhead tank and underground tank based on the occupancy in different type of buildings as per NBC.
CO2: To understand Pipes-types, sizes and materials along with their joining details & Domestic hot and cold water

Course Code	Course Title
	supply systems with market survey. CO3: To Understand Basic principles of sanitation, collection and conveyance of waste matter from buildings, Quantity and quality of refuse, working and installation of sewers and sewer appurtenances. CO4: To know Drainage systems, gradients used in laying drains and sewers, self-cleansing and non-scouring velocities for drain pipes, Rain water harvesting types and methods and its calculation. CO5: To know calculation of shaft size as per NBC norms and preparing design layout and details as per the NBC Standards.
ARI-407	Interior Design **Course Outcomes** CO1: Understanding character of Interior Spaces & Human psychology. CO2: Learning about relationship between Architecture & Interior Design. CO3: Learning Elements of Interior Design CO4: Study of various types of interior design materials available in the market.
ARE-408	Elective IV I. Sustainable Architecture (PSA) II. Traditional Architecture **Course Outcomes** **Elective IV (Sustainable Architecture)** CO1: The outcome will let students to understand the importance of sustainability in current scenario CO2: Students will learn resource conservation and optimization and their role as a designer in achieving sustainability CO3: Learning of technical details of construction for creating sustainable architecture

Course Code	Course Title
	Elective IV (Traditional Architecture) CO1: The outcome will let students to understand the domestic architecture & typology of built form. CO2: Study of traditional built form as, climate, site, building material & technology along with behavioural studies. CO3: Students will learn local construction techniques

B. Arch. Semester - V

Course Code	Course Title
ARC-501	Architectural Design Studio V **Course Outcomes** CO1: Develop and transform design intent to a technically sound plan and Communicate the architectural vision of a given project to the contractors through a set of drawings and documents CO2: Prepare the Submission Drawings and the techniques for preparation of Good For Construction drawings which will be easily readable by construction team, for the construction of a Residential structure
ARC-502	Building Materials and Construction Technology V **Course Outcomes** CO1: Understanding through case study the basic principle of pre stressed concrete component and study the further detail technicality on field. Also understand the structural behaviour of the same. CO2: study through case study and presentation about large span structure, particular demand of architectural

Course Code	Course Title
	design and according to that suggest the right solution by using the right type of structure. CO3: study of modular unit construction by presentation and demonstration, its design principle, purpose, selection and construction method according to the site demand. more focusing on the joinery detail and weather effect and how it act when external natural load apply on it. CO4: Case study and site visit for space frame structure to understand the basic of it and concept of making it, it will be compiled in presentation format for further study and application for model making. CO5: Study through presentation and case study about the shell structure designed in the world and their limits and benefits. Also how to chose the right structure for the right solution. CO6: perform the demonstration how tensile structure work and how it fail and what are the solution for particular problems , by making model of different tensile structure , all kind of analysis done according to different site conditions.
ARC-503	Structural Design and Systems V
	Course Outcomes CO1: Develop insight of the basic fundamental aspects of the Steel Structural Design for the Architecture Educations. CO2: Impart knowledge of Introduction to IS code for Steel Structure and various types of Methods of R.C.C. Design. CO3 To impart understand the Roofing Elements such as Simple Roof Truss its application such as Analysis & design of Simple Roof Truss using Limit state method. CO4: To understand Analysis of Members subjected to Axial Tensile load, Members subjected to transverse load & axial Compressive load and adopt an appropriate structural analysis technique and the behaviour of the structural elements for the design approach of the element. CO5: To develop the analytical and Structural designing technique in the Design of Footing which will development knowledge of different building structural elements and systems. CO6: To develop utilize the R.C.C. Structural Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.

Course Code	Course Title
ARC-504	Building Services and Equipments III

Course Outcomes

CO1: Demonstrate an understanding of building construction as it relates to firefighter safety, building codes, fire prevention, code inspection, and firefighting strategy.
CO2: Understand the basic fundamentals of mechanical systems.
CO3: Understanding the concept of Fire and methods used as fire-fighting.
CO4: Understanding of working of Lift and escalator as a mechanical device.
CO5: Develop an understanding of local codes in reference to the topics of this course.
CO6: Understand standard measurement methods that are used in building acoustics and Analyze acoustic properties of typically used materials for design consideration.
CO7: Select appropriate building constructions for the solution of practical noise problems and evaluate their performance.
CO8: Make basic room acoustic measurements and determine the various indicators used for auditorium acoustics.
CO9: Learn various ideologies and context of designs thereby developing their own theories and applying the same knowledge in their own design skills.

ARC-505	History of Architecture III

Course Outcomes

CO1: Understanding architectural features of all periods of Renaissance
CO2: Dismantling the buildings and reading their scale and proportions through sketching and proportionate drawings.
CO3: Understanding the role and importance of architectural elements of Islamic monuments ,acting as solar passive features
CO4: Understanding the role of structures while making models of selected monuments.
CO5: Driving them towards better design in future by incorporating various elements of Classical Antiquity.

Course Code	Course Title
ARC-506	Estimation Costing and Specifications

Course Outcomes

CO1: Write specifications in terms of contract documents and execution purpose for building construction.
CO2: Understand various types of estimation used in the profession and prepare approximate and detailed estimates of building projects.
CO3: Develop understanding of mode of measurement and qualitative aspects in terms of material strength and workmanship

ARI-507	Research & Methodology

Course Outcomes

CO1: formulate a research problem for a given architectural domain.
CO2: analyse the available literature for given research problem.
CO3: develop technical writing and presentation skills.
CO4: comprehend concepts related to patents, trademark and copyright.

ARE-508	Elective V I. Furniture and Product Design II. Garden Landscape and Street Furniture

Course Outcomes

Elective V (Furniture and Product Design)
CO1: Students will learn to design products which are creative and functional for usage
CO2: Developing concept and applying innovative skills
CO3: Designing in totality and thinking at micro level

Course Code	Course Title
	Elective V (Garden landscape and street furniture) CO1: Students will learn garden landscape and street furniture design which are creative and functional for usage CO2: Developing concept and applying innovative skills CO3: Designing in totality and thinking at micro level

B. Arch. Semester - VI

Course Code	Course Title
ARC-601	Architectural Design Studio VI **Course Outcomes** CO1: To foster an understanding required to handle large scale building projects like campuses and multi-utility building complexes. CO2: Understanding design as a function of specific agendas of complex building services, building sciences, building bye-laws in accordance to Master Plan of city and structural systems. CO3: Integrating aspects of Sustainability in design and Site planning as essential components of the projects. CO4: Incorporating active methods for achieving sustainability like Water Harvesting, Waste management, Solar and Wind Energy beside others for achieving a smaller carbon footprint of the project.
ARC-602	Building Materials and Construction Technology VI

Course Code	Course Title
	Course Outcomes CO1: how does building integrated system work and what are the design criteria for the same. Understanding the different typology to of this kind of system by doing case study. CO2: study through different model exercise, about how natural forces act on built form. CO3- in continuation to that designs a construction system and makes an analysis in reference to different forces applicable on that particular example of building.
ARC-603	Structural Design and Systems VI
	Course Outcomes CO1: Develop insight of the basic fundamental aspects of the Steel Structural Design for the Architecture Educations. CO2: Impart knowledge of Behavioural study of Typical structures both the R.C.C. & Steel Structures. CO3:To understand the R.C.C. Compression & Tensile Elements such as R.C.C. Column & Footing and Doubly reinforced section its application such as Analysis & Design of RCC Column & RCC Footing and Doubly reinforced section using Limit state method. CO4: To understand Analysis of Members subjected to Connections in steel structure & Plate Girder & Castellated Girder and adopt an appropriate structural analysis technique and the behaviour of the structural elements for the design approach of the element. CO5: To develop the analytical and Structural designing technique in the RCC Water Tank which will development knowledge of different building structural elements and systems. CO6: To develop utilize the R.C.C. Structural Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.
ARC-604	History of Architecture IV

Course Code	Course Title

Course Outcomes

CO1: Know about the phase of development of skyscrapers through various discoveries of lifts and other material innovation.
CO2: Know the development in the modern period with emphasis on the underlying parameters, philosophy, intentions and expressions of associated periods/architects/ movements as a response to the context of time, location and aspirations.
CO3: Understand the building type and its architectural style through many case-studies.
CO4: Understand the colonial legacy through literature case-studies and sketches.
CO5: Refine their observation and understand the role of architect, making architecture.

ARC-605 Landscape Design

Course Outcomes

CO1: Introduction of Garden history, types, evolution till present form
CO2: Basic Learning about Landform, grading, contour, Conservation of resources
CO3: Learning Visual relationship. Spatial definition, Housing and landscape
CO4: Basic learning of Plants identification and planting design
CO5: Learning Professional practice & project management

ARI-606 Basics of Construction Management

Course Outcomes

CO1: Learnt different management techniques suitable for planning and constructional projects.
CO2: The course of a work from the start to the finish to analyses before the commencement of the project.
CO3: Learnt how to manage different construction activity with their time and calculation of time management.

Course Code	Course Title
ARI-607	Housing and Community Planning

Course Outcomes

CO1: Basic Learning about Housing Theories & Policies
CO2: Basic Learning about Concepts of Housing typologies
CO3: Learning about housing problems in urban and rural sectors, impact of urbanization on housing need, demand and supply.
CO4: Learning about Cost Effective Housing.
CO5: Methods and Techniques of Housing Surveys.

ARE-608 Elective V
I. Architecture Journalism
II. Art in Architecture

Course Outcomes

Elective VI (Architecture Journalism)
CO1: Understanding key texts related to architectural journalism and developing an understanding of the work of architectural journalists
CO2: Understanding the works of contemporary architectural journalists and to develop an ability to critically appraise selected individual works
CO3: Researching on latest construction techniques, building materials, services, analysis of building structures, etc.

Elective – VI (Art in Architecture)
CO1: Study of evolution of various styles of art and architecture. Exploring meaning of terms art, culture, society and architecture and it's inter- relationship.
CO2: To study Vernacular and traditional Architecture of identified region in terms of grouping, dwelling designs, materials & construction techniques used.

Course Code	Course Title

CO3: Interpretation of vernacular and traditional architecture in terms of its Functional aspects, Cultural aspects, Socio political aspects, Climatic considerations, Construction methods and techniques, Materials.
CO4: Reinterpretation of vernacular and traditional architecture in Modern construction and Multi-cultural society.

B. Arch. Semester - VII

Course Code	Course Title
ARC-701	Architectural Design Studio VII

Course Outcomes

CO1: Understanding design as a process of problem identification, space standards, formulation of requirements, evolution of design criteria and development of design of buildings in urban context, phasing and development.
CO2: Understanding relationship of buildings amongst themselves and with a given environment.
CO3: Incorporating the agenda of building bye laws, structure, site planning and landscape and services within existing context.

ARC-702	Building Materials and Construction Technology VII

Course Outcomes

CO1: Case study on different sustainable buildings with different sustainable techniques .study their concept and working methods, study IGBC guidelines and its requirements. And come up with different sustainable solution for different regions.

Course Code	Course Title
	CO2: study different tall building, their construction system, and how its work. Different tall building system CO3- case study of different hi tech construction material and technology or system to use it. Its benefits and defects.
ARC-703	Advanced Structural Design and Systems
	Course Outcomes CO1: Develop insight of the basic fundamental aspects of the Advanced Structural Systems for the Architecture Educations. CO2: Impart knowledge of Skyscrapers, various types of tensile structure- cable stayed, suspension cable, cable nets, membrane and Space frame. CO3: To understand Tall Structure such as Basic structural plans at various levels, sectional elevations, along with dimensions, size & cross section of structural members, various types of loads acting on the structural system such Lateral load, resisting system, gravity load, transfer system, structural components and its materials, Super and Sub Structure system (foundation details), any other advanced systems system. CO4: To understand Analysis and Design concepts of Tensile Members and adopt an appropriate structural analysis technique and the behaviour of the structural elements for the design approach of the element. CO5: To develop the analytical and Structural designing technique in the Space Frame Structure System which will development knowledge of advanced structural elements systems. CO6: To utilize the different types of Advances Structural design and System which can defer depending upon case base and then Analysis problem solving techniques in the analysis and design of the Structural Design of the Building system.
ARC-704	Advanced Services
	Course Outcomes CO1: Understand water supply & Plumbing systems in high rise building complexes and complex structures. CO2: Know sanitation and Waste disposal systems in high rise building complexes and complex structures.

Course Code	Course Title
	CO3: Understand mechanical & Communication systems in high rise building structures. CO4: Know acoustics Design parameters for determining the acoustical behaviour of spaces. CO5: Understand Fire protection and prevention systems in high rise building complexes and complex structures.
ARC-705	Research Skills and Project Introduction
	Course Outcomes CO1: Perspective on research framework &methods in architectural planning and design which can be quantitative, qualitative as well as techniques in visual, special and contextual evaluation. CO2: Identification of the investigation to be done in research, methodology in sequence to achieve to acquire desired results. CO3: Assessment of data to be used in formation of the total research profile CO4: Knowledge Data collection methods like reference books, internet resource, monographs, microfilms, tables and charts and statistical data. CO5: Concluding part of research comprising of the data case study for final presentation in presentable format through similar case studies.
ARI-706	Urban and Regional Planning
	Course Outcomes CO1: To understand the urban morphology. CO2: Be able to interpret the urban forms of the past and present. CO3: Demonstrate an understanding of the various bio-physical, historical, political-economic, and social-cultural layers of the city, and work with these to form a consciously designed intervention. CO4: Synthesise general theoretical models, analytical approaches to urban issues and contexts, technical knowledge, stakeholder interests and ethical frameworks, and individual vision into an integrated urban planning proposition. CO5: Demonstrate high quality communication, representation and visual skills appropriate to urban planning

Course Code	Course Title
	projects, including written, verbal, graphical and model-based presentation. CO6: Aspects of sectoral elements of regional planning.
ARE-707	Elective VII I. Disaster Management II. Intelligent Buildings **Course Outcomes** **Elective VII (Disaster Management)** CO1: Students will learn the process of mitigation in the case of disaster CO2: To prepare the structural framework for disaster management CO3: To understand the principles and concepts of recovery **Elective VII (Intelligent Buildings)** CO1: Students will learn the use of advance technologies to save energy in the design of buildings CO2: Understanding the concept of intelligent buildings, smart buildings CO3: Understanding the concept of energy saving and energy generating mechanism

B. Arch. Semester - VIII

Course Code	Course Title
ARC-801	**Professional Training** (For semester VII compulsory training of 17 weeks required under a COA registered Architect in India or equivalent in foreign countries. Submission of 17 weeks work in form of a portfolio is mandatory along with Architect's certificate at the time of Viva voce, to continue the IX th semester Training) **Course Outcomes** CO1: Learn Practical aspect of Architecture profession. CO2: Learn various work, procedures etc. of the architecture profession CO3: Explore new material, technologies, building practices, etc. CO4: Understand the site features and way of construction with various technologies. CO5: Enhance the professional development skill to deal with the client, labour, vendor, etc. CO6: Know the environment of a well-established office that can be helpful for future purposes.

B. Arch. Semester - IX

Course Code	Course Title
ARC-901	Architectural Design Studio IX (Research Thesis)

Course Code	Course Title
	Course Outcomes CO1: Systematically abstract, analyze, synthesize and interpret existing literature. CO2: Develops a specialized knowledge in a subject area which maybe an extension to the prescribed coursework. CO3: Builds his his/her capacity to work independently and methodically in a variety of intellectually demanding contexts.
ARC-902	Professional Training **Course Outcomes** CO1: Familiarity with the procedures for tendering, arbitration, valuation of works and real estate and aspects of international practice. Proficiency in preparation of projects proposals and presentations for procuring projects.
ARC-903	Universal Design **Course Outcomes** CO1: Development of sensitivity and understanding of architectural design elements for creating barrier free built environments. CO2: Understanding of different types of accessibility and material for disabled persons. CO3: Knowledge of different signages and planning concepts for disabled persons.
ARE-904	Elective I. Building Science **Course Outcomes** CO1: To study human heat balance and comfort. CO2: To familiarize students with the design and settings for buildings for daylight and factors that influence temperature.

Course Code	Course Title

CO3: To inform about the air pattern around buildings and the effect of wind on design and siting of buildings
CO4: To expose the students to the various design strategies for building in different types of climatic zones.

II. Social Science and Architecture

Course Outcomes

CO1: Comprehend what have been the major issues in the development of architectural design in socio- cultural context.
CO2: Illustrate the place specific nature of architectural design.
CO3: Appraise about architecture and its relationship to its historical, political, social, economic, technological contexts.

III. Humanities and Architecture

Course Outcomes

CO1:Comprehend what have been the major issues in the development of architectural design in socio- cultural context
CO2: Illustrate the place specific nature of architectural design
CO3: Appraise about architecture and its relationship to its historical, political, social, economic, technological contexts.

IV. Art and Design

Course Outcomes

CO1: To develop presentation skills, visual expression and representation, imaginative thinking and creativity through hands on working with various mediums and materials.
CO2:To familiarize the students with the various mediums and techniques of art through which artistic expression can be achieved
CO3: To familiarize students with the grammar of art by involving them in a series of free hand exercises both indoor and outdoor to understand form, proportion, scale, etc

Course Code	Course Title

CO4: Involving them in a series of exercises which will help them experiment with form and volume.
CO5: To involve students in a series of exercises which will look at graphic and abstract representations of art.

B. Arch. Semester - X

Course Code	Course Title
ARC-1001	Architectural Design Studio X (Design Thesis)

Course Outcomes

CO1: To prepare a student to independently handle and present all aspects of an architectural design, from its evolution to final solution in totality. ·
CO2: To understand the importance of the evolutionary stages of a design process and various techniques required for a successful presentation of an architectural design.
CO3: To develop in students the ability to handle specific aspects / thrust area of design relevant to the topic.

ARC-1002	Professional Practice

Course Outcomes

Familiarity with the procedures for tendering, arbitration, valuation of works and real estate and aspects of international practice. Proficiency in preparation of projects proposals and presentations for procuring projects.

Course Code	Course Title
ARE-1003	Elective VIII I. Architectural Conservation II. Urban Design

Course Outcomes

Elective – VIII (Architectural Conservation)

CO1: Understand conservation, its history and role of various bodies in India.

CO2: Appreciation and Identification of Values related to Heritage and Culture – their interpretations towards conservation, to choose the degrees of intervention.

CO3: The Degrees of intervention would help them to take a very sound approach towards anything in future, thereby making a sustainable living.

CO4: The students might now get an idea about the role of various conservation bodies in protecting the heritage by understanding history of ASI and Conservation Legislation in India. Anyway that would draw an attention towards new places, also some of the endangered sites and thus boost tourism

CO5: They would now draw awareness towards society to protect their heritage and can avoid any harm /any tourists harming the world heritage sites.

CO6: Create an appreciation towards art and aesthetics in architecture, which would in a way draw a complete vision towards Architecture.

Elective – VIII (Urban Design)

CO1: To understand the general morphology of urban space. CO2: Understand the scope and nature of urban design as a discipline.

CO3: Introduce the components of a city and their interdependent roles, evolution of historic urban form and interpret the city in different ways and layers.

CO4: Research and analyse information relevant to developing urban design interventions and propositions.