

MANIPAL SCHOOL

OF ARCHITECTURE AND PLANNING

MANIPAL (A constituent unit of MAHE, Manipal)

SEMESTER : I

ARC4501 : ARCHITECTURAL DESIGN AND DETAILING-I

After completion of this course the student will be able to:

CO1: Demonstrate the use of freehand drawing and lettering for design communication.

CO2: Apply the elements of design in a composition.

CO3: Analyze the principles of design in a composition.

CO4: Appraise an object/product/space from a design perspective.

CO5: Design a space based on the understanding of the design study process.

ARC4503 : BUILDING MATERIALS & CONSTRUCTION SYSTEMS-I

After completion of this course the student will be able to:

CO1: Classify the various building components present in a building.

CO2: Outline the applications of building construction methods using mud as a material.

CO3: Identify the use of stone, clay and brick as building material.

CO4: Apply the construction details with stone and brick masonry.

CO5: Classify the types of lintels and arches and their construction techniques.

ARC4505 : ARCHITECTURAL GRAPHICS

After completion of this course the student will be able to:

CO1: Illustrate the significance of drafting techniques in architectural drawings.

CO2: Demonstrate the use of architectural lettering, annotations, and scales.

CO3: Develop surfaces and three-dimensional objects with the help of orthographic projections.

CO4: Experiment with different types of views of simple and complex forms.

CO5: Organize presentation drawings showing sciography.

COURSE OUTCOMES

Bachelor of Architecture

ARC4507 : VISUAL ARTS AND MODEL MAKING STUDIO

After completion of this course the student will be able to:

CO1: Illustrate the visual art fundamentals through drawing, composition techniques and spatial relationships.

CO2: Make use of rendering techniques with different medium and its application.

CO3: Analyze the concepts expressing ideas through two- & three-dimensional visuals.

CO4: Appraise model representation possibilities utilize diverse model-building methods.

CO5: Create models of built form incorporating different materials and techniques.

ARC4509 : THEORY OF ARCHITECTURE

After completion of this course the student will be able to:

CO1: Demonstrate a comprehensive understanding of foundational concepts and historical developments in architectural theory.

CO2: Relate various theoretical frameworks to analyze architectural typologies.

CO3: Outline the application of aesthetics and design principles in architectural works.

CO4: Develop architectural forms within their contextual settings.

CO5: Organize debates on aesthetic principles and theoretical perspectives and emerging trends within the field of architecture.

ARC4511 : ENVIRONMENTAL SCIENCE

After completion of this course the student will be able to:

CO1: Define the fundamentals of environmental science, ecosystems and natural resources.

CO2: Explain the importance of biodiversity and its conservation.

CO3: Classify the characteristics of environmental pollution with waste management.

CO4: Identify the contemporary and emerging environmental issues of local, regional, and global level.

CO5: Make use of the modern architectural theories towards ensuring environment compatibility in design.



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SEMESTER : II

ARC4502 : ARCHITECTURAL DESIGN AND DETAILING-II

After completion of this course the student will be able to:

CO 1: Illustrate and infer required learnings from the relevant literature and studies.

CO 2: Outline the client's requirements in design program through client brief with respect to the context and statutory requirements.

CO 3: Analyze the form and structure through explorations in geometry and understanding of site conditions and site analysis and applicable rules, norms and regulations.

CO 4: Appraise design solutions through design development considering the structure as load bearing based on form, function, space planning, user perception.

CO 5: Compile the final design proposal in the form of portfolio and models.

ARC4504 : BUILDING MATERIALS AND CONSTRUCTION SYSTEMS-II

After completion of this course the student will be able to:

CO1: Classify the various timber components present in a building.

CO2: Demonstrate the applications of building construction methods using timber as an opening.

CO3: Organize the knowledge about the use of timber in stairs and flooring.

CO4: Analyze the construction details of timber roof.

CO5: Examine the application of Bamboo in various components and their construction techniques.

ARC4506 : DIGITAL APPLICATIONS-I

After completion of this course the student will be able to:

CO1: Outline the significance of essential skills in 2D drafting.

CO2: Develop 2D architectural drawings using Auto CAD.

CO3: Construct 3D model with the help of Sketch up modelling.

CO4: Analyze different types of 3D models from 2D drawings.

CO5: Examine different types of rendering techniques using photoshop.

ARC4508 : SITE PLANNING AND LANDSCAPE DESIGN STUDIO

After completion of this course the student will be able to:

CO1: Outline the various concepts of landscape design.

CO2: Illustrate the landscape components.

CO3: Identify the various site planning principles.

CO4: Analyze landscape services and sustainable practices.

CO5: Compare the works of renowned landscape architects.

ARC4510 : SOCIETY, CULTURE AND BUILT ENVIRONMENT

After completion of this course the student will be able to:

CO1: Define society and culture and its implications in human settlement studies.

CO2: Outline the integral relationship between sociology and architecture.

CO3: Demonstrate the correlation between cosmological models and architectural form.

CO4: Identify the various social and cultural issues relating to architectural history.

CO5: Apply the transformations through time and across cultures.

ARC4512 : CLIMATE RESPONSIVE DESIGN

After completion of this course the student will be able to:

CO1: Classify the different parameters of climate.

CO2: Outline climate as per Koppen's climate classification.

CO3: Illustrate thermal comfort and design shading devices.

CO4: Identify passive design strategies.

CO5: Compare case examples of climate responsive design for climatic zones.

COURSE OUTCOMES

Bachelor of Architecture



COURSE OUTCOMES

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SEMESTER : III

ARC5001 : ARCHITECTURAL DESIGN AND DETAILING-III

After completion of this course the student will be able to:

CO1: Illustrate and infer required learnings from the relevant case, literature studies and the use of loadbearing as a construction technique through comparative case studies.

CO2: Outline the client's requirements in design program through client brief with respect to the context and statutory requirements.

CO3: Analyze the form and structure through explorations in geometry and understanding of site conditions and site analysis and applicable rules, norms and regulations.

CO4: Appraise design solutions based on form, function, space planning, user perception.

CO5: Compile detailed design through effective graphical, physical models and verbal communication and representation skills.

ARC5003 : BUILDING MATERIALS AND CONSTRUCTION SYSTEMS-III

After completion of this course the student will be able to:

CO1: Demonstrate the understanding of the basics of RCC as construction material, its types, properties.

CO2: Illustrate the application of RCC and precast as a building material.

CO3: Identify the advantages of using RCC and precast as construction material compared to other materials.

CO4: Examine RCC and precast as an efficient building material in architectural design.

CO5: Analyze the detailing of RCC and practical application.

ARC5005 : DIGITAL APPLICATIONS-II

After completion of this course the student will be able to:

CO1: Demonstrate the significance of 3D Modelling in architectural drawings.

CO2: Illustrate different commands and features to build a BIM model.

CO3: Choose simple animations and walkthroughs in Revit.

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CO4: Make use of basic parametric Revit Families for the BIM Model.

CO5: Develop different types of presentation drawings through the application of virtual reality.

ARC5007 : GEODETIC SURVEY AND LEVELLING

After completion of this course the student will be able to:

CO1: Illustrate the different principles of surveying and the various instruments used for surveying and leveling.

CO2: Explain the various methods of leveling and contouring to solve simple design problems.

CO3: Identify the characteristics and uses of theodolite survey.

CO4: Make use of the characteristics of modern surveying equipment.

CO5: Utilize the principles of GPS surveying, Lidar and UAV surveys, and geomatics engineering techniques.

ARC5009 : STRUCTURES-I

After completion of this course the student will be able to:

CO1: Define the various force systems and describe the fundamentals of mechanics.

CO2: Explain the concept of the resultant and equilibrant of forces.

CO3: Outline the different types of loads and calculate the support reactions.

CO4: Identify the concept of centroid and moment of inertia and their applications in architectural projects.

CO5: Develop the various structural forms, systems, and loads and their applications in architectural design.

ARC5011 : HISTORY OF ARCHITECTURE-I

After completion of this course the student will be able to:

CO1: List the different Architectural components of Indian temple styles and their significant features.

CO2: Illustrate the built environment, construction techniques, and materials used in temples.

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COURSE OUTCOMES

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CO3: Explain the physical characteristics in connection with geographical and geological aspects.

CO4: Identify the importance of typological temple evolution in Indian architecture. influenced by socio-political, cultural factors, and regional influences.

CO5: Organize the significance of each architectural style in the overall design and their historical evolution.

ARC5013 : BUILDING SERVICES-I

After completion of this course the student will be able to:

CO1: List different freshwater sources. collection, and treatment methods.

CO2: Outline different principles of water supply and distribution systems.

CO3: Classify different sanitation systems.

CO4: Identify appropriate rainwater harvesting systems.

CO5: Choose different types of solid waste disposal & management.

SEMESTER : IV

ARC5002 : ARCHITECTURAL DESIGN AND **DETAILING-IV**

After completion of this course the student will be able to:

CO1: Outline issues and concerns about context of different climatic zones through comparative case studies.

CO2: Make use of the required learnings towards formulation of design program through including analysis of data climatic an considerations, relevant literature and case studies.

CO3: Analyze the form and structure through explorations in geometry and understanding of site conditions and site analysis and applicable rules, norms and regulations.

CO4: Justify the built form through explorations and understanding of materials, construction techniques, site and climatic conditions and propose design solutions towards optimizing building forms and configurations for specific climatic conditions.

CO5: Compile detailed design through effective graphical, physical models and verbal communication and representation skills.

Bachelor of Architecture

ARC5004 : BUILDING MATERIALS AND **CONSTRUCTION SYSTEMS-IV**

After completion of this course the student will be able to:

CO1: Outline steel as building material for construction, its type, and properties.

CO2: Classify the frame connection details with steel.

CO3: Identify the applications of building construction methods using steel as a roofing system.

CO4: Make use of steel as building material in the façade system, staircase and opening.

CO5: Categorize the various types of prefab components and their different construction techniques.

ARC5006 : DIGITAL APPLICATIONS-III

After completion of this course the student will be able to:

CO1: Outline the significance of core structures and workflows of parametric modelling.

CO2: Demonstrate elementary algorithms to model complex forms and relationships using geometric concepts and parametric tools.

CO3: Outline prediction methods in parametric models to enhance the functional objectives of buildings.

CO4: Choose parametric models for daylight performance through simulation.

CO5: Develop parametric models for heat and energy performance through simulation.

ARC5008 : FUNDAMENTALS OF SUSTAINABLE DESIGN

After completion of this course the student will be able to:

CO1: Outline the relevance of Sustainable approach in architectural design.

CO2: Illustrate the relationship between traditional architecture and sustainable design.

CO3: Identify the role of Green Buildings in sustainable design.

CO4: Make use of sustainable approaches for architectural designs.

CO5: Utilize techniques for stakeholder engagement and participatory design processes.

COURSE OUTCOMES

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ARC5010 : STRUCTURES-II

After completion of this course the student will be able to:

CO1: Define the various types of beams and describe the fundamentals of shear force and bending moment for different types of beams.

CO2: Explain the concepts of simple bending and shear stress.

CO3: Outline the concept of deflection of the beam for various loading and support conditions.

CO4: Apply the concept of columns and compare the behaviour of short columns under axial and eccentric load.

CO5: Identify the various types of stress and behaviour of the building materials under tension and compression.

ARC5012 : HISTORY OF ARCHITECTURE-II

After completion of this course the student will be able to:

CO1: List the architectural components from Islamic/Maratha/Rajput Architecture and their significant features.

CO2: Illustrate the built environment, construction techniques, and materials used in used in Islamic/Maratha/Rajput Architecture.

CO3: Explain the physical characteristics in connection with geographical and geological aspects.

CO4: Identify the importance of typological evolution in Islamic/Maratha/Rajput architecture, influenced by socio-political, cultural factors, and regional influences.

CO5: Organize the significance of each architectural style in the overall design and their historical evolution.

ARC5014 : BUILDING SERVICES-II

After completion of this course the student will be able to:

CO1: Relate basic knowledge of Mechanical ventilation and techniques of air conditioning.

CO2: Explain the working principles of various mechanical systems of air conditioning.

CO3: Outline various components of a typical electrification system for a building.

CO4: Make use of the relevant standards for quantification and representation of electrical system for a building.

CO5: Select various literatures, case studies/site visits for understanding HVAC and Electrification in a building.

SEMESTER : V

ARC5501 : ARCHITECTURAL DESIGN AND DETAILING - V

After completion of this course the student will be able to:

CO1: Demonstrate knowledge of concepts in green building assessment systems.

CO2: Identify and analyze the site context and the best practices through case studies & literature related to the project.

CO3: Examine sustainable design solutions from site planning to final design and indoor environment.

CO4: Evaluate the design through energy optimization using building energy simulation tools.

CO5: Design and detailing the built form and communicate through a comprehensive design portfolio with an analysis of project feasibility through sustainable approach.

ARC5503 : DIGITAL APPLICATIONS-IV

After completion of this course the student will be able to:

CO1: Illustrate the performance of the building based upon different parameters.

CO2: Explain the knowledge of Building Energy codes in building components.

CO3: Summarize integrated design approach related to the code compliance.

CO4: Apply energy simulation software for early design decisions with respect to ventilation, lighting, etc.

CO5: Develop the building design with respect to benchmark values of the different applicable codes like ECBC, NBC, BIS SP 41, etc.

ARC5505 : WORKING DRAWING-I

After completion of this course the student will be able to:

CO1: Demonstrate the understanding of drawing Set-out marking, Centre line & Beam Layout.

CO2: Illustrate the understanding of drawing Excavation and Plinth Layout.

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CO3: Build Floor Plans – Ground Floor, First Floor, Terrace Floor.

CO 4: Develop Sections and elevations.

CO 5: Apply the understanding of drawing staircase details.

ARC5507 : STRUCTURES-III

After completion of this course the student will be able to:

CO1: Explain the understanding of simple numerical problems on fixed beams.

CO2: Illustrate the knowledge to solve simple numerical problems on continuous beams.

CO3: Apply and solve simple numerical problems on Portal frames.

CO4: Make use of fundamental principles of soil mechanics and explain the basics of earthquake-resistant structures.

CO5: Develop the concept of wind-resistant structures.

ARC5511 : HISTORY OF ARCHITECTURE-III

After completion of this course the student will be able to:

CO1: List the architectural components from Early Christian to Christian Architecture with respect to its major features.

CO2: Illustrate the built environment, construction techniques, and materials used in Christian Architecture.

CO3: Explain the physical characteristics in connection with geographical and geological aspects.

CO4: Identify the importance of typological evolution in Christian Architecture, influenced by socio-political, cultural factors, and regional influences.

CO5: Organize the significance of each architectural component in the overall design and their historical evolution.

ARC5513 : BUILDING SERVICES-III

After completion of this course the student will be able to:

CO1: Explain the behaviour of sound and understand the acoustic properties of materials.

CO2: Illustrate the different built spaces with different end-user acoustical requirements.

COURSE OUTCOMES

Bachelor of Architecture

CO3: Outline requirements for an acceptable illumination system for various building functions. CO4: Identify the requirements and arrangements for the building's mechanical transport, fire safety, and firefighting systems. CO5: Make use of the relevant building code/

regulations for compliance in design and detailing.

PROFESSIONAL ELECTIVES-I ARC5515.1 : CREATIVE PHOTOGRAPHY

After completion of this course the student will be able to:

CO1: Show fundamental photography principles: composition rules, exposure settings, and lighting techniques

CO2: Identify the importance of Light & shade & Exposure in Photography.

CO3: Analyze photography skills, principles and light techniques in different thematic photography.

CO4: Evaluate photographic compositions, concepts, elements, symbols, metaphor for the artistic expression.

CO5: Create a unique body of work by integrating diverse elements into themed photographic narratives.

PROFESSIONAL ELECTIVES-I & II ARC5515.2 : ARCHITECTURAL JOURNALISM

After completion of this course the student will be able to:

CO1: Demonstrate various integral aspects of journalism.

CO2: Identify the purpose and significance of journalism in architecture.

CO3: Discover a method and develop techniques of different kinds of narratives.

CO4: Determine the publishing process involved in architectural journalism.

CO5: Construct the importance of emerging media and the role of ethics.

PROFESSIONAL ELECTIVES-I ARC5515.3 : VASTUVIDYA

After completion of this course the student will be able to:

CO1: Explain traditional architecture in India with respect to context-relevance and Vastushastra.

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CO2: Outline the basics of Vastuvidya and the science behind it.

CO3: Illustrate the technological and social aspects of Vastuvidya towards modern design regulations.

CO4: Make use of Vastuvidya in planning and design of towns and building construction.

CO5: Apply the Vastuvidya concepts for planning at urban and residential scales.

ARC5515.4 : CULTURAL STUDIES

After completion of this course the student will be able to:

CO1: Outline the understanding of culture and its key elements.

CO2: Explain symbiotic relationship between culture and society.

CO3: Classify the various approaches to cultural studies.

CO4: Identify the impact of cultural beliefs on the built environment

CO5: Make use of cultural influences on the built environment through architectural design.

ARC5515.5 : INTERIOR ILLUMINATION

After completion of this course the student will be able to:

CO 1: Define the fundamentals of Lighting, Lighting Terminology and Concepts and principles.

CO 2: List the techniques, various technologies, and materials for the designing of lighting systems.

CO 3: Classify various components of lighting based on purpose and function of interior spaces.

CO 4: Develop the knowledge of lighting design to achieve energy efficiency and sustainability.

CO 5: Choose the design strategies for various lighting techniques in interior spaces.

SEMESTER : VI

ARC5502 : ARCHITECTURAL DESIGN AND **DETAILING - VI**

After completion of this course the student will be able to:

CO1: Demonstrate the understanding of principles of design of Public Buildings addressing the project and contextual requirements.

CO2: Make use of literature and case studies the influence of historical, socio - cultural aspects into shaping of public buildings.

CO3: Analyze site context and inter relationship of building and surroundings.

CO4: Appraise principles of sustainability and functional aspects of public building design.

CO5: Develop integrated holistic building design including use of appropriate building systems, construction techniques and services at site and building level communicating through а comprehensive design portfolio.

ARC5504 : WORKING DRAWING-II

After completion of this course the student will be able to:

CO1: Demonstrate detailed Plumbing layout for Toilet, and kitchen.

CO2: Illustrate an electrical layout for all the floors of the project.

CO3: Outline grill design, Door details, and Window details.

CO4: Develop a detailed interior of any room from the project.

CO5: Organize the site related details, sanction drawing and process of approval at the Urban local body.

ARC5506 : RESEARCH TECHNIQUES

After completion of this course the student will be able to:

CO1: Demonstrate a clear understanding of the objectives and significance of research in the field of architecture.

CO2: Explain the concept of a research problem and its role in the research process.

CO3: Outline the significance of various components within the research design and their implications for research outcomes.

CO4: Identify the select appropriate sampling techniques for quantitative research and gualitative research based on research objectives and constraints.

CO5: Develop a clear and concise research report, ensuring that each section serves its intended purpose and flows logically from one to the next.



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ARC5508 : HOUSING AND ECONOMICS

After completion of this course the student will be able to:

CO1: Outline different attributes and parameters related to housing.

CO2: Illustrate the housing issues, challenges in Indian context and the role of different related institutions.

CO3: Demonstrate the legislative framework related to housing policies, regulations, strategies and schemes at state and national level.

CO4: Identify concepts, issues and aspects related to housing economics.

CO5: Analyse the role of housing finance, evolution and the institution in India.

ARC5510 : HISTORY OF ARCHITECTURE-IV

After completion of this course the student will be able to:

CO1: List the architectural components of contemporary and transitional architecture during the industrial revolution worldwide and in India with respect to its major features.

CO2: Illustrate the built environment, construction techniques and materials used during Industrial revolution and contemporary architecture period.

CO3: Explain the physical characteristics of Contemporary architecture in connection with geographical and geological aspects.

CO4: Identify the importance of typological evolution in contemporary architecture, influenced by socio-political, cultural factors and regional influences.

CO5: Organise the significance of each architectural component during Contemporary period in the overall design and their historical evolution.

ARC5512 : ESTIMATION AND SPECIFICATION

After completion of this course the student will be able to:

CO1: Demonstrate Specification of materials, workmanship & Specification writing.

CO2: Outline the methods of estimation and measurement units

CO3: Make use of detailed and abstract estimate of buildings.

COURSE OUTCOMES

Bachelor of Architecture

CO4: Identify costing of material, labor, etc. & rate analysis.

CO5: Utilize the knowledge of tendering procedures and contracts.

SEMESTER : VII

ARC6001 : ARCHITECTURAL DESIGN AND DETAILING - VII

After completion of this course the student will be able to:

CO1: Explain context-oriented design, innovative approaches in housing design.

CO2: Identify case studies and conduct surveys for stakeholder perceptions.

CO3: Theme a master plan with various site parameters, design program and sustainability. CO4: Recommend the detailed layout of individual units/towers and their services.

CO5: Formulate the building control regulations, costing and sustainable features of the design.

ARC6003 : DISSERTATION

After completion of this course the student will be able to:

CO1: Demonstrate the research through a systematic enquiry into a chosen topic, with the help of appropriate methodology for literature review, data collection, and analysis.

CO2: Develop the various facts and scope of research in architecture and/or allied courses.

CO3: Analyse the collected data with appropriate analytical techniques.

CO4: Justify a stand or decision, based on the analysis with findings and results.

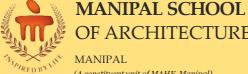
CO5: Develop an original research paper.

ARC6005 : PROJECT MANAGEMENT

After completion of this course the student will be able to:

CO1: Demonstrate knowledge and understanding of project management principles.

CO2: Illustrate project management principles and techniques in planning, scheduling, monitoring and controlling of projects. OF ARCHITECTURE AND PLANNING



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COURSE OUTCOMES

Bachelor of Architecture

CO3: Choose project management tools and techniques for efficient delivery of projects.

CO4: Identify precedence network technique for various phases of construction projects.

CO5: Plan the time and cost management while maintaining project scope and quality.

ARC6007 : URBAN DESIGN THEORY

After completion of this course the student will be able to:

CO1: Define urban design as a discipline, its function, scope, and objectives in shaping the cities.

CO2: Understand morphological the development of various typologies of urban areas.

CO3: Interpret various methods and techniques for analyzing Urban areas.

CO4: Utilize people-centric aspects and design approaches in an urban area.

CO5: Choose the case studies and urban design interventions for best practices in sustainable design.

SEMESTER : VIII

ARC6002 : ARCHITECTURAL DESIGN AND **DETAILING - VIII**

After completion of this course the student will be able to:

CO1: Interpret the city in terms of its spatial characteristics.

CO2: Organize the data collected from city/ neighbourhood visit in the form of maps, photographs, drawings/sketches. onsite various surveys etc.

CO3: Analyze the data through various mechanisms and with suitable graphical representations for developing the design program.

CO4: Recommend suitable design concepts based the design program.

Formulate CO5: the details and recommendations of the urban intervention.

ARC6004 : INTERIOR DESIGN AND DETAILING

After completion of this course the student will be able to:

CO1: Explain the basic elements and components of interior design.

CO2: Organize the data collected about the project outlining the project requirements and through literature and case studies.

CO3: Analyze the data towards developing the design program of the project undertaken.

CO4: Justify suitable design concepts based the design program.

CO5: Compile the final design proposal in the form of portfolio and models with necessary detailing.

ARC6006 : SETTLEMENT STUDIES

After completion of this course the student will be able to:

CO1: Explain the different types of settlements from different eras, their pattern and evolution in the Indian context.

CO2: Outline the application of various approaches and concepts of unit and mass housing development through case examples in the Indian context.

CO3: Build the skill of data collection through survey and analyses methods.

CO 4: Utilize the importance of land and housing economics as a development tool.

CO 5: Identify the governance and institutional set-up for implementation of strategies and policies.

ARC6008 : PROFESSIONAL PRACTICE AND **ETHICS**

After completion of this course the student will be able to:

CO1: Explain the fundamental concepts and terminology in architectural practice and understanding the roles of professional and statutory bodies.

CO2: Interpret the understanding on various architectural competitions.

CO3: Outline the knowledge of legal dimensions architectural practice, of specifically in relation Arbitration & Conciliation.



COURSE OUTCOMES

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CO4: Develop a comprehensive understanding of the office management aspects of the architectural profession through case-based learnings.

CO5: Make use of the concept and methods of valuation.

SEMESTER : IX

ARC6501 : PRACTICAL TRAINING

After completion of this course the student will be able to:

CO1: Outline the organizational structure, ethics and aspects of team-work to coordinate and execute various tasks assigned in an architect's office.

CO2: Demonstrate the role of an intern and documentation of the records related to the internship.

CO3: Make use of the various processes of design, recommend best practices and decision making through various tools for effective communication.

CO4: Appraise the project in a systematic method from its conception to post design stage.

CO5: Develop solutions for a given context and represent the architectural knowledge gained from the internship experience in the form of a Portfolio.

SEMESTER : X

ARC6502 : ARCHITECTURAL DESIGN THESIS

After completion of this course the student will be able to:

CO1: Outline the thesis topic in domains of the student interest.

CO2: Demonstrate the understanding through background study, literature study and analysis of case studies findings establishing the feasibility related to the topic.

CO3: Examine the proposal with the detailed design program detail including the standards, spatial requirements and other related norms and guidelines.

CO4: Appraise design proposal with form development, development of spaces, aesthetics, services, Landscape, sustainability, barrier-free and other related detailing etc. CO5: Design and detailing the built form and communicate through a comprehensive design portfolio with detail drawings, physical models etc.

ADVANCED ELECTIVES: TOWARDS MINOR SPECIALISATION

ARC6011.1 : INTERIOR DESIGN (ADVANCE ELECTIVE - I) (SEMESTER-VII)

After completion of this course the student will be able to:

CO1: Explain the aesthetic and functional aspects of interior design.

CO2: Illustrate human factors in interior design, including anthropometry and ergonomics existing day to day furniture.

CO3: Outline color schemes and lighting designs in interiors.

CO4: Choose the materials and its application in interior and furniture design.

CO5: Identify the role of accessories in Interiors.

ARC6012.1 : INTERIOR DESIGN (ADVANCE ELECTIVE - II) (SEMESTER-VIII)

After completion of this course the student will be able to:

CO1: Illustrate the associative aspects of interior spaces.

CO2: Explain the quality of spaces required for user feel and experience.

CO3: Outline the reasons for responses of human behavior in different spaces.

CO4: Identify the impact of design choices on the environment and the well-being of occupants.

CO5: Make use of the integration of smart technologies, digital interfaces, and automation in interior design.

ARC6504.1 : INTERIOR DESIGN (ADVANCE ELECTIVE - III) (SEMESTER-X)

After completion of this course the student will be able to:

CO 1: Explain the aesthetic and functional aspects of interior design.

CO 2: Identify human activity, perceptions and interpretations of space.

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CO 3: Analyze user behavior studies and the creation of holistic design concepts.

CO 4: Appraise space planning with volumetric and ergonomics study for integration.

CO 5: Design integrating individual spaces into cohesive thematic designs for diverse interior settings.

ARC6011.2 : LANDSCAPE DESIGN (ADVANCE ELECTIVE - I) (SEMESTER-VII)

After completion of this course the student will be able to:

CO1: Explain the historical influences on landscape architecture.

CO2: Outline design principles to create landscape compositions.

CO3: Illustrate the psychological and cultural factors shaping landscape design decisions.

CO4: Identify climate considerations into sustainable landscape designs.

CO5: Compare and contrast global landscape architects' philosophies and design techniques.

ARC6012.2 : LANDSCAPE DESIGN (ADVANCE ELECTIVE -II) (SEMESTER-VIII)

After completion of this course the student will be able to:

CO1: Illustrate principles of sustainability in landscape architecture design projects.

CO2: Outline the topography and landforms to determine natural drainage patterns.

CO3: Identify the use of indigenous plants and materials for sustainable landscape practices.

CO4: Make use of management strategies for rivers, lakes, and soil conservation.

CO5: Analyze landscape construction techniques and materials for sustainability.

ARC6504.2 : LANDSCAPE DESIGN (ADVANCE ELECTIVE -III) (SEMESTER-X)

After completion of this course the student will be able to:

CO1: Explain integrated design principles to enhance functionality and sustainability of outdoor spaces.

CO2: Identify the relationship between environmental conditions and design strategies for microclimate optimization.

CO3: Analyze site-specific factors and existing elements to inform design decisions

CO4: Evaluate effectively with stakeholders to develop and implement design projects.

CO5: Create innovative and immersive outdoor environments that engage users and promote cultural identity.

ARC6011.3 : SUSTAINABLE DESIGN (ADVANCE ELECTIVE - I) (SEMESTER-VII)

After completion of this course the student will be able to:

CO1: Explain Energy-efficient Design and Technologies.

CO2: Illustrate key factors influencing energy efficiency in buildings.

CO3: Identify Passive design strategies to achieve energy efficient buildings.

CO4: Make use of active design strategies (solar, wind, geothermal, etc.) to achieve energy efficient. buildings.

CO5: Analyze energy modelling and assess using analysis tools.

ARC6012.3 : SUSTAINABLE DESIGN (ADVANCE ELECTIVE - II) (SEMESTER-VIII)

After completion of this course the student will be able to:

CO1: Illustrate site selection and criteria for sustainable design.

CO2: Explain elements of Sustainable Site Planning.

CO3: Identify sustainable urban and rural planning principles for site planning.

CO4: Make use of rainwater harvesting and identify stormwater management strategies for site.

CO5: Analyze the role of landscaping for environmental sustainability.

ARC6504.3 : SUSTAINABLE DESIGN (ADVANCE ELECTIVE - III) (SEMESTER-X)

After completion of this course the student will be able to:

CO1: Explain Building Performance and Life Cycle Assessment.

CO2: Identify Life cycle assessment of building materials and systems.

CO3: Examine factors to improve Indoor environmental quality and occupant comfort.

CO4: Evaluate the role of commissioning and post-occupancy evaluation in building performance.

CO5: Develop model for high performance building assessment.