



MOHAMED SATHAK A.J. ACADEMY OF ARCHITECTURE

34, Old Mahabalipuram Road, IT Highway, Egattur, Chennai 603 103
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B. ARCH - R-2013			
COURSE OUTCOMES (CO)			
FIRST SEMESTER B.ARCH			
S.NO	COURSE CODE AND COURSE NAME	COURSE OUTCOMES	
1	MA6153 MATHEMATICS	CO1	The aim of the course is to develop the skills of the students in architectural drawing.
		CO2	The students will be trained on the basis of the topics of Mathematics necessary for effective understanding of architecture subjects.
		CO3	At the end of the course, the students would have an understanding of the appropriate role of the mathematical concepts learnt.
2	AR6101 HISTORY OF ARCHITECTURE AND CULTURE - I	CO1	A detailed understanding of Western (Christian) architecture.
		CO2	An understanding about the spatial and stylistic qualities associated with church architecture
		CO3	An idea about Chennai Christian Architecture with the help of assignments.
		CO4	An Understanding of the architecture as an outcome of various social, political and economic upheavals, and as a response to the cultural and climate conditions.

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3	AR6102 THEORY ARCHITECTURE - I	CO1	A thorough understanding on the definition of architecture; elements of architectures of form and space.
		CO2	An exposure to the principles of architecture and applications of the same in buildings
4	AR6103 BUILDING MATERIALS - I	CO1	Students get sensitized about the need for using ecological materials to create an architecture which will adapt itself to the surrounding environment.
		CO2	In this process students learn about materials, properties, characteristics, methods of preservation, treatment and methods of construction and uses of materials.
5	AR6111 ARCHITECTURAL DRAWING - I	CO1	An understanding of the concepts of architectural drawing as well as representation skills are imparted.
		CO2	An understanding on the building representation in 2D and 3D among students in addition to preparation of measured drawing.
6	AR6112 ART STUDIO	CO1	The students are exposed to various mediums and techniques.
		CO2	Bold enough to handle the colours for the presentation sheets.
		CO3	The students are mastery in sketching and expression through forms.
		CO4	The skill and knowledge gained through the subject is most useful to their profession
7	AR6113 BASIC DESIGN	CO1	An understanding of the qualities of different elements as well as their composite fusions.
		CO2	. An ability to engage and combine the elements of design in spontaneous as well as intentional ways in order to create desired qualities and effects.


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SECOND SEMESTER

1	AR6201 MECHANICS OF STRUCTURES - I	CO1	Apply the concepts of action of forces on a body and should be able to apply the equilibrium concepts.
		CO2	Analyze any type of determinate trusses with different end conditions.
		CO3	To solve the sectional properties for any geometrical shapes.
		CO4	The concepts of elastic constants and its applications for various types of problems with a thorough understanding of stresses and strain.
2	AR6202 HISTORY OF ARCHITECTURE AND CULTURE - II	CO1	The students understood Indian architecture as a response to the political and socio-cultural conditions present in India at different points of time.
		CO2	The architectural responses were understood with respect to technology style and character
3	AR6203 THEORY OF ARCHITECTURE - II	CO1	An understanding the meaning of character and style of buildings with examples
		CO2	An exposure to students on ideologies and philosophies of architectures of contemporary architects through examples.
		CO3	An exposure to analysis and experience of architecture through case studies
4	AR6204 BUILDING MATERIALS - II	CO1	Students get sensitized about the use of Brick, Timber, Timber products, painting and application in building industry students learn about making and manufacturing process of brick, properties, methods of preservation and treatment, methods of construction and uses of brick,

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			timber, timber products and constituents of paints, preparation and surface application of paints.
5	AR6211 BUILDING CONSTRUCTION - I	CO1	Students learn about making buildings using mind, Bamboo, Straw bale, stone through drawing as well as doing literature or live case study. It is required that students submit a case study example to understand materials used in the building, method of construction etc. After this stage students are requested to submit drawing plates constructing the plan, Elevation and section along with sketches and details showing method of construction.
6	AR6212 ARCHITECTURAL DRAWING - II	CO1	The techniques and skills gained learned through this subject Architectural drawing II is very useful to their profession
		CO2	Able to construct the perspective drawings of the buildings and 3d views as well the documentation of buildings through drawings.
7	AR6213 ARCHITECTURAL DESIGN-I	CO1	The students shall understand the basic functional aspect of designing simple building type and its relevant spatial organization
		CO2	The students shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project
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THIRD SEMESTER			
1	AR6301 MECHANICS OF STRUCTURES - II	CO1	Apply the concepts of determining the techniques of finding the stresses
		CO2	Use the theory of simple bending theory to find the deflection in beams.


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		CO3	Analyze and solve the different types of columns.
		CO4	Analyze the different types of indeterminate beams.
2	AR6302 HISTORY OF ARCHITECTURE AND CULTURE - III	CO1	A detailed understanding of Western (Christian) architecture.
		CO2	An idea about Chennai Christian Architecture with the help of assignments.
		CO3	An Understanding of the architecture as an outcome of various social, political and economic upheavals, and as a response to the cultural and climate conditions.
		CO4	An understanding about the spatial and stylistic qualities associated with church architecture
4	AR6303 CLIMATE AND BUILT ENVIRONMENT	CO1	Understanding of Thermal balance in Human beings
		CO2	Designing Climate responsive structure
		CO3	Conceptual understanding of Air flow in Buildings
5	AR6304 BUILDING MATERIALS - III	CO1	This subject helps the students to understand the properties characteristics. Strength, manufacturing process of various construction materials. Which in turn helps them to choose the suitable materials according to the context – In response to the surroundings.
6	AR6311 COMPUTER AIDED VISUALISATION	CO1	The students benefit by learning software which helps them to better visualize complicated forms and also helps in producing photo realistic images of those 3D forms.
7	AR6312 BUILDING CONSTRUCTION - II	CO1	An Understanding of Brick and clay products and timber in methods of construction and in detailing.
		CO2	An Understanding of Testing Procedures, Quality assurance and workmanship is imparted.

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8	AR6313 ARCHITECTURAL DESIGN - II	CO1	The characteristics of the site, importance of site planning and built form/open space relationship has been understood. User group responses were ascertained through case-studies. Presentation of concepts was enabled through 2D drawings, sketches of models.
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FOURTH SEMESTER			
1	AR6401 DESIGN OF STRUCTURES - I	CO1	Design the timber beams and columns by applying the codal provisions.
		CO2	Able to design the steel joints for maximum efficiency and strength.
		CO3	Tension members and compression members are designed for various conditions by applying the codal provisions.
		CO4	Different types of laterally unsupported & supported beams to be designed for various conditions.
2	AR6402 HISTORY OF ARCHITECTURE AND CULTURE - IV	CO1	Various criticisms against modernism
		CO2	The conditions associated with post modernity in terms of cultural, political conditions etc.
		CO3	An understanding of various postmodern directions in architecture
		CO4	Architectural responses as reactions to changing cultural paradigms An understanding of post independent Indian architecture
3	AR6403 ENVIRONMENTAL SCIENCE	CO1	Students are sensitized on the need for natural resource management, and sustainable lifestyles

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		CO2	2. Students appreciate the value of the ecosystem and the need and methods for conserving the same.
		CO3	3. Students understand how pollution and hazards can be mitigated.
4	AR6404 BUILDING MATERIALS - IV	CO1	An Understanding of ferrous and Non-ferrous metals in terms of its properties, manufacture and their applications in architectural construction.
		CO2	The students are made to be aware of plastics and its applications in the building industry as well as light roofing materials, adhesives, Sealants and fillers apart from flooring finishes.
5	AR6411 BUILDING SERVICES - I	CO1	Students have a thorough understanding of how water and wastewater are managed, in residential units, small campuses and for a large city.
		CO2	2. Students are aware of the principles and best practices for Solid waste management in residential units, small campuses and for a large city.
6	AR6412 BUILDING CONSTRUCTION - III	CO1	The students understood how Reinforced Cement Concrete could be used for the various components of a building as well as in waterproofing and insulation and protection systems.
		CO2	The role of advanced construction systems that have been developed by research institutes throughout the country were also explored. Quality assurance and testing methods, after looking at the basics and research explorations associated with the materials were looked at.
7	AR6413 ARCHITECTURAL DESIGN - III	CO1	Students' ability to understand the concept of community and settlement evolution and the built environment as influenced by Socio-economic, Cultural, Environmental and Technical factors.


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		CO2	Ability to provide a sensitive approach to the design of the built environment taking into account the above mentioned factors.
FIFTH SEMESTER			
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1	AR6501 DESIGN OF STRUCTURES - II	CO1	Understand the different concepts of WSM and LSD methods using the codal provisions.
		CO2	RC beams and slabs to be designed by applying the above concepts.
		CO3	Dog legged staircase design using LSD.
2	AR6502 HISTORY OF ARCHITECTURE AND CULTURE - V	CO1	The condition of modernity and its impact on architecture has been introduced. The evolution of modern architecture from specific aspects of modernity like Industrialisation, Urbanisation etc and its post-world war II trajectories were studied. An overall understanding of the architectural developments of colonial India was obtained.
3	AR6511 BUILDING SERVICES- II	CO1	The students understand the basics of Electricity and wiring system
		CO2	The students are exposed to Fundamentals of Lighting and Lighting design
		CO3	An Understanding of Vertical transportation system in a building
4	AR6512 SITE ANALYSIS AND PLANNING	CO1	The contextual importance of site analysis can be understood based on the various site factors with respect to the study area.
		CO2	A first hand understanding of site drawings for Landscape Architecture and Urban design is studied.

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		CO3	Various scientific and analytic site analysis techniques are understood.
		CO4	A methodological approach for preparation of master plans for small scale and large scale projects can be understood.
5	AR6513 BUILDING CONSTRUCTION - IV	CO1	The students are able to understand in detail the method of construction of various building components using steel, aluminum and plastic.
		CO2	This also helps the student to understand the different construction practices adapted for the various components specific to the material in which it is made.
6	AR6514 ARCHITECTURAL DESIGN - IV	CO1	Understanding DCR and its applications
			Understanding Campus Planning
			Sensitive to Socio-Economic aspects
			An orientation to Computer Aided Drafting
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SIXTH SEMESTER			
S.No	SUBJECT NAME & CODE	COURSE OUTCOME	
1	AR6601 DESIGN OF STRUCTURES - III	CO1	Understand the different concepts in designing footings and columns and Masonry walls using LSD methods.
		CO2	Concepts of Prestressed concrete and applying them in real cases.
2	AR6602 HISTORY OF ARCHITECTURE	CO1	The context for the critique of modern architecture and the evolution of new approaches were introduced.

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	AND CULTURE - VI	CO2	The different postmodern directions in architecture were studied in detail.
		CO3	The trajectory of Architecture in post-colonial India was understood.
3	AR6611 BUILDING SERVICES - III	CO1	The students are exposed to various air conditioning systems and their applications.
		CO2	They are also exposed to various design issues in the distribution system.
		CO3	An understanding of fire safety, fire fighting, fire prevention and installations in buildings including codal requirements.
		CO4	The students are exposed to fundamentals of a acoustics and its applications in buildings
4	AR6612 ARCHITECTURAL DESIGN DEVELOPMENT	CO1	An understanding of the principles of detailing as applicable to various situations in Indian context.
		CO2	The students are also exposed to various materials, furniture, fittings and the equipment that are needed in buildings.
		CO3	The students are also exposed to detailing both newly designed buildings and also as well as in additions and alterations to existing buildings.
5	AR6613 ARCHITECTURAL DESIGN - V	CO1	An ability to understand issues in buildings with respect to density, services and energy consumption as well as make the right choices in design situations involving these issues.
		CO2	Understand Green Building concepts and basic principles of sustainable built environment
		CO3	Incorporate services Integration Understand context based programme & design

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SEVENTH SEMESTER

1	AR6781 PRACTICAL TRAINING - I	CO1	Students undertake their practical training in India
		CO2	Students learn to work on multiple projects in an office and learn all aspects relating to making of a building starting from Concept Development, Scheme Development, Presentation, Working Drawings, Specifications, Estimation etc. and through site visits students get exposed to practical aspects of making a building and other aspects like client meetings, project planning, project management time management which they are not exposed to in the college.

EIGHTH SEMESTER

1	AR6881 PRACTICAL TRAINING - II	CO1	Students take up internships in any from India or abroad and learn all aspects of making a building as specified in AR8032. In addition to this, students also learn about modern methods of construction using the latest technology and how to handle large scale projects incorporating project planning, project management, etc.
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NINTH SEMESTER

1	AR6901 SPECIFICATION S AND ESTIMATION	CO1	Students learn the art of building construction through specification writing. Students learn to work out the approximate estimate, detailed estimate for small scale building projects and low cost housing
2	AR6902 HUMAN SETTLEMENTS PLANNING	CO1	To explore the students about the dynamics of Urban Form and various Human Settlements pattern
		CO2	2. To understand the interrelationship between Human Settlements structure and Social Dynamics

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3	AR6903 PROFESSIONAL PRACTICE AND ETHICS	CO1	Understand the role of professional and statutory bodies
		CO2	Understand the provisions in Architects Act 1972
		CO3	Understand code of conduct Understand the process and role of an architect in project execution.
4	AR6911 URBAN DESIGN	CO1	The students understood the role of Urban design as a discipline, and its role in understanding and interpreting a city.
		CO2	Various reading methods were explored, to understand the historical as well as present urban form.
		CO3	They also looked at addressing urban design issues in terms of awareness creation as well as with possible ways to address them.
5	AR6912 ARCHITECTURAL DESIGN - VI	CO1	The students looked at various components and aspects associated with the urban environment in terms of physical infrastructure, socio-cultural aspects, gender issues etc. and looked at ways to address them through their designs. Mapping and diagramming techniques were explored in the design process to help explore the design process better.
TENTH SEMESTER			
1	AR6081 THESIS	CO1	A comprehensive understanding in handling a major Architectural independently
SEMESTER - V ELECTIVE - I			
1	AR6001 ART APPRECIATION	CO1	Students are able to appreciate the art forms and analyse the same and resize the concept in their architecture profession.
		CO2	Gathered information across the world art and the use of art in architecture and its use

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		CO3	Gathered, sound knowledge on how to art can be effectively used in to architecture and Interior Design
2	AR6002 ENERGY EFFICIENT ARCHITECTURE	CO1	The students are exposed to alternative sources of energy and are exposed to passive design considerations
		CO2	An understanding on daylighting and natural ventilation in design in addition to the future trends in creating sustainable built environment
3	AR6003 THEORY OF DESIGN	CO1	An ability to think about architecture
SEMESTER VI - ELECTIVE - II & ELECTIVE - III			
4	AR6004 EVOLUTION OF HUMAN SETTLEMENTS	CO1	The students were able to understand the factors which determinants formation of settlements from prehistoric to the contemporary era.
		CO2	The students understood the expressions of settlements in terms of cultural, social, economic and political context of a region.
		CO3	An understanding of how globalization transformed contemporary settlements.
		CO4	The students were able to understand how sustainability is important in the future of any settlement.
5	AR6005 INTERIOR DESIGN	CO1	An understanding of interior design as an interdisciplinary as well as allied field related to architecture.
6	AR6006 STRUCTURE AND ARCHITECTURE	CO1	The student will understand and familiarize the concepts of structural design and its impact/ functional dimension in the architectural design of the historic and contemporary buildings.

ARCHITECTURE

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		CO2	2. The student will be acquainted with the architectural expression, its relation between form and structure through relevant case studies.
7	AR6007 VERNACULAR ARCHITECTURE	CO1	An Understanding on the study of Indian vernacular architecture as a process and also to provide and overview of various approaches and concepts
		CO2	. An exposure to various vernacular architectural forms in various regions
		CO3	An understanding on the impact of colonial rule on vernacular architecture in India.
8	AR6008 EARTHQUAKE RESISTANT ARCHITECTURE	CO1	Students ability to understand the formation and causes of Earthquakes and factors to be considered in the Design of buildings and services to resist Earthquakes.
9	AR6009 LANDSCAPE AND ECOLOGY	CO1	Understanding of the scope of landscape architecture in the subject
		CO2	ii) Basic understanding of elements of landscape
		CO3	iii) Understanding of impact of human activities on the environment and the role of architect in mitigating it
10	GE6083 DISASTER MANAGEMENT	CO1	Differentiate the types of disasters, causes and their impact on environment and society
		CO2	Assess vulnerability and various methods of risk reduction measures as well as mitigation.
		CO3	Draw the hazard and vulnerability profile of India, Scenarios in the Indian context, Disaster damage assessment and management.

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