



# MEENAKSHI COLLEGE OF ENGINEERING

No-12, Vembuli Amman Koil Street, West K.K Nagar,  
Chennai - 600 078

Department of Architecture  
B.Arch REGULATION-2017

## COURSE OUTCOMES

**Course Name :** AR8101- History Of Architecture And Culture I

<b>CO1</b>	An understanding about the spatial and stylistic qualities associated with architecture.
<b>CO2</b>	An Understanding of architecture as an outcome of various social, political and economic upheavals, and as a response to the cultural and context.

**Course Name :** MA8102 - Mathematics

<b>CO1</b>	The Aim of the course is to develop the skills of the students in Architecture. The students will be trained on the basis of topics of the mathematics necessary for the effective understanding of architecture subjects. Able to understand the mathematical properties of geometric figures and objects.
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**Course Name :** AR8121-Architectural Drawing I

<b>CO1</b>	Understanding on the concepts of architectural drawing as well as representation skills.
<b>CO2</b>	Understanding of various attributes of geometric forms and skill in their creation and dissection.

**Course Name :** HS8121- Communication English

<b>CO1</b>	Explain the basic use of language in humans
<b>CO2</b>	Apply skill and confidence in everyday requirements of the English language
<b>CO3</b>	Relate Language comprehension through reading and writing
<b>CO4</b>	Assess language as expression and cognitive role of language in constructing reality

**Course Name :** AR8111 - Art Studio

<b>CO1</b>	The students are exposed to various mediums, techniques and tools.
<b>CO2</b>	The students gain mastery in sketching, visualizing and expression through manual drawing.
<b>CO3</b>	Sensitized to culture, craft and context.
<b>CO4</b>	Skill Development in Handling Materials and in Making Products.



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## COURSE OUTCOMES

**Course Name :** AR8112 - Basic Design

CO1	An understanding of the qualities of different elements as well as their composite fusion
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.
CO3	Development of required skills-observation /analysis /abstractions/interpretation /representation/expressions through models and drawings
CO4	Understanding by making

**Course Name :** AR8201 - Theory Of Architecture

CO1	A thorough understanding on the definition of architecture; elements of architectures of form.
CO2	An exposure to the principles of architecture and applications of the same in buildings and spaces.
CO3	An understanding the meaning of character and style of buildings with examples.
CO4	An exposure to students on ideologies and philosophies of architectures of contemporary.
CO5	An exposure to analysis and experience of architecture through case studies and architects through examples.

**Course Name :** AR8202 - 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	Students are taught basic geometric properties and the behavior of materials under effect of forces.

**Course Name :** AR8221 - Architectural Drawing II

CO1	Ability to recognize and name components of a building
CO2	Ability to measure and draw components of a building.

**Course Name :** AR8222 - Building Materials And Construction I



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## COURSE OUTCOMES

CO1	Students learn the construction details using naturally occurring building materials such as stone , bamboo, mud and lime through drawing as well as doing a literature or live case study. Students are to submit drawing plates comprising of technical plan, elevation and section.
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**Course Name :** AR8211 - Model Making And Architectural Delineation

CO1	Exploration of conventional and less conventional techniques of representation in an attempt to creative visualization and to understand drawings as vehicles of thinking.
CO2	Versatility in making models ranging from study to presentation and in varying scales and materials.
CO4	An understanding of diagrams and models as a mode of thought and analysis
CO5	Ability to project thoughts towards the future through diagrams and models.

**Course Name :** AR8212 - Architectural Design I

CO1	The student shall understand the basic functional aspect of designing simple building type and its relevant spatial organization.
CO2	The student shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project.

**Course Name :** AR8301- History Of Architecture And Culture II

CO1	An understanding of the diversity of architecture in India and sensitivity towards its syncretic aspects.
CO2	Ability to appreciate particular cultural, symbolic, spatial and material qualities in architecture and cities as givers of meaning and continuity.
CO3	Ability to appreciate universal qualities of architecture and their effects.

**Course Name :** AR8302 - Mechanics Of Structures II

CO1	Ability to apply the concepts/techniques of finding stresses.
CO2	Ability to use simple bending theory to find deflection in beams.
CO3	Ability to analyse and solve different types of columns.
CO4	Ability to analyse the different types of indeterminate beams.



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## COURSE OUTCOMES

**Course Name :** AR8321- Building Materials And Construction II

CO1	Knowledge of properties and construction methods of brick, clay products and timber products.
CO2	Ability to design and detail structural and non structural components of simple buildings using the above materials.
CO3	Ability to integrate knowledge of properties and construction methods of basic building materials in the design of simple projects.

**Course Name :** AR8322 - Site Surveying And Planning

CO1	Understanding the different survey instrument purpose and functions in surveying.
CO2	Sensitivity towards aspects of site at macro and micro contexts
CO3	Ability to exploit potential of site to design the built environment.

**Course Name :** AR8323 - Climate And Built Environment

CO1	Understanding the heat balance in human beings.
CO2	Ability to understand material effects in buildings.
CO3	Ability to conceptually design buildings considering the effect of sun and wind on buildings.
CO4	Ability to understand basic climatic effects and considerations and incorporate it design

**Course Name :** AR8311 - Architectural Design II

CO1	Ability to collect, assimilate and integrate knowledge in a holistic manner.
CO2	Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment.
CO3	Ability to observe and analyse changes in the above.
CO4	Ability to project future transformations and give possible/ appropriate ways to address issues, if any.
CO5	Sensitivity in design approach in community oriented projects with respect to context, collective values and needs.



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## COURSE OUTCOMES

**Course Name :** AR8401 - Design Of Structures I

CO1	Ability to design timber beams and columns by applying the code provisions
CO2	Ability to design steel joints for maximum efficiency and strength
CO3	Ability to design steel tension and compression members for different end conditions by applying code provisions
CO4	Ability to design different types of laterally unsupported & supported beams for different conditions.

**Course Name :** AR8402 - Environmental Science For The Built Environment

CO1	Sensitivity towards the environment as a totally and knowledge about its importance
CO2	An understand of the role of public awareness and participation with respect to environmental issues , apart from laws.

**Course Name :** AR8421 - Building Materials And Construction III

CO1	Knowledge of properties of ferrous and non ferrous metals as materials for buildings.
CO2	An understanding of possibilities of steel as an important building construction material.
CO3	Ability to design and detail structural and non structural components of simple buildings using metals.
CO4	Ability to use metal innovatively in building projects.

**Course Name :** AR8422 - Building Services I

CO1	Understanding of water Supply, sewage, drainage and waste systems in buildings
CO2	Ability to conceptually plan/design the above code for a given context
CO3	Awareness of sustainable principles and best principles

**Course Name :** AR8423 - Computer-Aided Visualization

CO1	Ability to express using digital tools in the realm of visual composition, drafting , 3D VISUALIZATION and rendering
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## COURSE OUTCOMES

**Course Name :** AR8411 - Architectural Design III

<b>CO1</b>	An understanding of the fundamental possibilities of architectural form and space in relation to human experience and use within the context of the immediate living environment.
<b>CO2</b>	An understanding to create meaningful built environment in the context of small scale projects that involve simple function and experience.

**Course Name :** AR8501 - Design Of Structures II

<b>CO1</b>	Ability to understand the different concepts of WSM and LSD methods using the code provisions.
<b>CO2</b>	Ability to design RCC beams and slabs by applying the above concepts.
<b>CO3</b>	Ability to design RCC dog legged staircase design using LSD.

**Course Name :** AR8502 - History Of Architecture And Culture III

<b>CO1</b>	An understanding of modernity as a fundamental transformation in Western society that spread across the world and the resultant architectural production..
<b>CO2</b>	An insight into the development of modern architecture.
<b>CO3</b>	An understanding of architecture in India under influence of colonialism and colonial modernity.

**Course Name :** AR8521 - Building Materials And Construction IV

<b>CO1</b>	Ability to use concrete as a versatile material in different contexts.
<b>CO2</b>	An understanding of the concepts of concrete as a building construction material.
<b>CO3</b>	Ability to design and detail specific components in concrete where there is scope for architectural design
<b>CO4</b>	Ability to use concrete innovatively in simple projects.

**Course Name :** AR8522 - Building Services II

<b>CO1</b>	Knowledge of basics of electrical
<b>CO2</b>	Ability to design buildings satisfying electrical
<b>CO3</b>	Ability to design basic electrical



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## COURSE OUTCOMES

**Course Name :** AR8511 - Architectural Design IV

CO1	Ability to understand the nature, needs and ways of contemporary urban society as well as relate the existing built environment as a reflection of this.
CO2	Ability to draw from this understanding and identify issues/ challenges involving contemporary urban life and the built environment.
CO3	Ability to give appropriate/ innovative design solutions in the above context.

**Course Name :** AR8601 - Design Of Structures III

CO1	An understanding of the different concepts in designing footings and columns and masonry walls using LSD methods.
CO2	An understanding of the concepts and applications of prestressed concrete.

**Course Name :** AR8602 - History Of Contemporary Architecture

CO1	An awareness of the spread and varied later directions of modern architecture across the world.
CO2	An understanding of architectural production from the 1960s as driven by large scale changes across the world.
CO3	Familiarity with contemporary forces and directions in architecture across the world.
CO4	An understanding of post independence architecture in India contemporaneous with the rest of the world, along with its own particular influences.

**Course Name :** AR8621 - Building Materials And Construction V

CO1	Knowledge of glass, plastics, paints and finishes in building construction.
CO2	Familiarity with advanced materials and construction techniques.
CO3	Ability to use advanced materials and construction techniques in innovative ways.

**Course Name :** AR8622 - Building Services III

CO1	Familiarity with different air conditioning systems, their context of use and basics of planning involved.
CO2	An understanding of fire safety, fire fighting, fire prevention and installations in buildings.
CO3	An understanding of mechanical transportation systems in a building.



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## COURSE OUTCOMES

**Course Name :** AR8611 - Architectural Design V

CO1	Ability to critically and sensitively understand and address issue of resources.
CO2	Ability to balance diverse aspects/concerns of buildings by making informed choices and innovative design in the context of buildings with intense or complex programmes.
CO3	Ability to apply knowledge intensively in realms such as sustainable built environment, services.

**Course Name :** AR8701 - Landscape Design

CO1	Awareness of the role of landscape design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping of outdoor environments.
CO2	Knowledge about the elements of landscape design and their scope.
CO3	Sensitivity towards evolution of different garden and landscape design across time and context.
CO4	An understanding of landscape design with respect to site planning and different functional typologies of spaces.

**Course Name :** AR8702 - Urban Design

CO1	Awareness of the evolution and characteristics of urban forms, their components and interdependencies.
CO2	Understanding of urbanism through theories, aspects, issues and solutions.
CO3	Knowledge of ways to look at and interpret urbanism today.

**Course Name :** AR8703 - Specification, Estimation And Valuation

CO1	An understanding of the art of building construction through specification writing.
CO2	Ability to work out the approximate estimate and detailed estimate for small scale building projects and low cost housing.
CO3	An understanding of valuation and budgeting.





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## COURSE OUTCOMES

**Course Name :** AR8721 - Architectural Design Detailing

CO1	An understanding of all the aspects that go into the making of a building through study of drawings related to construction.
CO2	Ability to resolve spatial concerns with technical aspects of a building.
CO3	Ability to design and detail components within a building.

**Course Name :** AR8711 - Architectural Design VI

CO1	Ability to understand the wider implication of design decisions and their interdependency with larger processes of society.
CO2	Ability to take creative, critical and informed decisions in the context of significant projects that could shape society in positive ways.

**Course Name :** AR8801 - Human Settlements Planning

CO1	Ability to understand morphology of settlements and their generating forces and characteristics.
CO2	An understanding of the role of planning processes in making positive changes to settlements.
CO3	Awareness of planning interventions with respect to the current world.

**Course Name :** AR8802 - Professional Practice And Ethics

CO1	Knowledge of the role of professional and statutory bodies.
CO2	An understanding of the provisions in Architects Act 1972.
CO3	An understanding of code of conduct.
CO4	Familiarity with the process and role of an architect in project execution.

**Course Name :** AR8803 - Urban Housing

CO1	Knowledge of various issues concerning housing & housing development in Indian & global context covering a cross section of income groups
CO2	Ability to appreciate socio-economic aspects in housing.
CO3	An understanding of housing standards, site planning principles, housing concepts and types.
CO4	An understanding of key issues in housing today.



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## COURSE OUTCOMES

**Course Name :** AR8811 - Architectural Design VII

CO1	Ability to perceive and design buildings as contributing to transforming the urban fabric.
CO2	Ability to bring inclusivity into the architectural design process.

**Course Name :** AR8009 - Steel architecture and design

CO1	An Understanding of steel as a structural , functional and aesthetic material in design and construction practice
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**Course Name :** AR8011 - Energy Efficient Architecture

CO1	Knowledge of alternative sources of energy and passive design considerations.
CO2	An understanding of day lighting and natural ventilation in design.
CO3	Familiarity with future trends in creating sustainable built environment.

**Course Name :** AR8010 - Contemporary Process in Architectural Design

CO1	Understanding of the effect of contemporary theories of media on contemporary Architectural design
CO2	Insight into contemporary design process/theories and their relation to computation.
CO3	Ability to understand specific aspects of contemporary processes appropriate to a Design Situation
CO4	Familiarity with architectural works derived from contemporary processes.

**Course Name :** AR 8015 - Dissertation

CO1	Ability to research deeply into a subject and develop a coherent line of thought based on point of view, observation, analysis and study.
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## COURSE OUTCOMES

CO2	Ability to look at architecture from an informed, analysed and well thought out critical perspective which would help strengthen the thesis process.
CO3	Demonstrate advanced critical thinking skills by analyzing complex architectural issues or problems

Course Name : AR8911 - Practical Training

CO1	Ability to understand the nuances of architectural practice.
CO2	An understanding about the total process that goes into the making of a building.
CO3	Ability to apply knowledge gained from internship to thesis project.

Course Name : AR 8017 - Construction And Project Management

CO1	Ability to understand a project from concept to commissioning, feasibility study and facility programme, design, construction to commissioning
CO2	Ability to apply project management techniques in achieving objectives of a project like client needs, quality, time & cost
CO3	An understanding of principles of management, construction scheduling, scope definition and team roles.

Course Name : AR8081 - Thesis

CO1	Skill, knowledge and expertise in the field of architectural design
CO2	Ability to handle a major architectural project independently through all stages .