



**Pimpri Chinchwad Education Trust's  
S.B. Patil college of Architecture & Design**



**Year & Div.: Second Year - A & B AY: 2020-21**

Subject	Course Outcome		
	CO No.	Statement	
<b>ARC201 Architectural Design II 2201917[SV]</b>	CO 1	ARC201.1	Socio-Cultural Aspects: To introduce students to socio-cultural aspects like lifestyle, culture, traditions, and their effect on architectural design etc.
	CO 2	ARC201.2	Aesthetics: To understand the Aesthetic aspects of Design (visual and experiential) along with spatial attributes (scale and proportions, volume, texture, light and shadows, etc.) and formal characteristics. (Profile, base, corner, termination).
	CO 3	ARC201.3	Climate: To understand the Climatic aspects those have a bearing on architectural design and address climatic concerns like adequate light, ventilation, protection from rain, insulation, shading, heat gain, through passive strategies.
	CO 4	ARC201.4	Building Services: To understand the spatial and structural implications of basic services involved in building design.
	CO 5	ARC201.5	Site : To understand the site and its context, both immediate and wider, in order to enable students to take decisions of zoning, circulation within site, distribution of built and open spaces, activity relationships and adjacencies, and views.
	CO 6	ARC201.6	Universal Design: To understand the concept and principles of universal design.
	CO 7	ARC201.7	Precedent Studies: To introduce the students to learn from case, referral, live studies - process of observation, analysis, documentation and deriving inferences.
<b>ARC202 BCM III 2201918 [P]&amp; 2201919 [SV]</b>	CO 1	ARC202.1	To understand different types of soils and their bearing capacities
	CO 2	ARC202.2	To understand Concept of bulb of pressure and its significance for site investigation
	CO 3	ARC202.3	to understand Composition of cement, properties, grades of cement& various types of cement and their uses
	CO 4	ARC202.4	Understand Reinforced Cement Concrete Construction up to plinth.
	CO 5	ARC202.5	Construction of columns, beams for various types of end condition
	CO 6	ARC202.6	Understand non-timber windows with materials like Steel-framed, aluminum, UPVC and their construction details
	CO 7	ARC202.7	To understand various types of flooring material available in market and their application with rates

<b>ARC203 TOS III 2201920[P]</b>	CO 1	ARC203.1	Understand and analysis the concept of Fixed Beam as a statically in-determinate structure and Concept of Negative Bending Moment at supports.
	CO 2	ARC203.2	Understand Loads acting on a Structure, design philosophies and explain the behavior of reinforced concrete section under flexure.
	CO 3	ARC203.3	Analyze and design Primary Wooden Flexural Member subjected to shear and deflection using Working State Method as per guidelines given in Indian Standard Code.
	CO 4	ARC203.4	Understand the Concrete as structural Material and he concept of Limit State Design Methodology.
	CO 5	ARC203.5	Analyze and Design one way, two way and Cantilever reinforced concrete slabs using Limit State Method as per guidelines given in Indian Standard Code.
	CO 6	ARC203.6	Analyze and design Simply Supported reinforced concrete Beam section subjected to flexure using Limit State Method as per guidelines given in Indian Standard Code.
	CO 7	ARC203.7	Analyze and design Short reinforced concrete Columns section subjected to gravity loads using Limit State Method as per guidelines given in Indian Standard Code.
<b>ARC204 Computer Aided Drawing and Graphics 2201921[SS]</b>	CO 1	ARC204.1	Students will know presentation techniques & rendering techniques
	CO 2	ARC204.2	Students will know the background and basics of AutoCAD
	CO 3	ARC204.3	Students will know how to use DRAW commands in AutoCAD
	CO 4	ARC204.4	Students will know how to use MODIFY commands in AutoCAD
	CO 5	ARC204.5	Students will know how to use Annotations & layers command in AutoCAD
	CO 6	ARC204.6	Students will know how to draft orthographic solids in AUTOCAD
	CO 7	ARC204.7	Students will know how to use presentation techniques in AUTOCAD
<b>ARC205 HOAC III 2201922[SS]</b>	CO 1	ARC205.1	Students will know the various column orders typical house plan in details
	CO 2	ARC205.2	Students will get to know about the emergence of Town Planning Water drain system
	CO 3	ARC205.3	Student will get to know the emergence of churches and their terminologies
	CO 4	ARC205.4	Students will get to know about Monasteries & castles
	CO 5	ARC205.5	Students will know the various elements used for facade

			treatment
	CO 6	ARC205.6	Students will know details regarding sculpted stories on structures and painted ceilings
	CO 7	ARC205.7	
<b>ARC206 Building Services I 2201923 [P] &amp; 2201924 [SS]</b>	CO 1	ARC206.1	Students will understand the Plumbing scope in the MEP services integration.
	CO 2	ARC206.2	Students will know the systems for hot and cold water supply in building premises.
	CO 3	ARC206.3	Students will know the systems for Sewage, salvage, Storm water & and its disposal within or from building premises to main.
	CO 4	ARC206.4	Students will inculcate integration of plumbing services required in architectural design.
	CO 5	ARC206.5	Students will understand the rain water harvesting system and storm water management.
	CO 6	ARC206.6	Students will understand the functioning of bio gas plant.
	CO 7	ARC206.7	Students will understand the drawings of plumbing systems layout , market case studies, etc.
<b>ARC207 Climatology 2201925 [SS]</b>	CO 1	ARC207.1	Students will understand earth sun relationship & climate occurrence
	CO 2	ARC207.2	Students will come to know the scale of climate at global as well as regional level
	CO 3	ARC207.3	Students will understand different climate zones & their classification
	CO 4	ARC207.4	Students will learn the variables that will govern the built spaces
	CO 5	ARC207.5	Students will learn various strategies for thermal comfort in buildings
	CO 6	ARC207.6	Students will come to know various tools to study sun movement & how to use them for bringing comfort in buildings
	CO 7	ARC207.7	
<b>ARC208 AD III 2201926 [SV]</b>	CO 1	ARC208.1	To understand Architectural Design as a process of generating design brief
	CO 2	ARC208.2	To introduce students to socio-cultural aspects like lifestyle, culture, traditions, and their effect on architectural design
	CO 3	ARC208.3	To understand the Aesthetic aspects of Design (visual and experiential) along with spatial attributes (scale and proportions, volume, texture, light and shadows, etc.) and formal characteristics. (Profile, base, corner, termination).
	CO 4	ARC208.4	To understand the Climatic aspects those have a bearing on architectural design and address climatic concerns like adequate light, ventilation, protection from rain, insulation, shading, heat

			gain, through passive strategies.
	CO 5	ARC208.5	To understand the spatial and structural implications of basic services involved in building design.
	CO 6	ARC208.6	To understand the concept and principles of universal design.
	CO 7	ARC208.7	To introduce the students to learn from case, referral, live studies - process of observation, analysis, documentation and deriving inferences.
<b>ARC209 BCM IV 2201927 [P]&amp; 2201928 [SV]</b>	CO 1	ARC209.1	To Understand various Types of special concrete and lab tests.
	CO 2	ARC209.2	To gain knowledge about Damp and waterproofing material and its application in construction.
	CO 3	ARC209.3	Waterproofing requirement and understanding of various materials available in the market
	CO 4	ARC209.4	To understand R.C.C structural details for balcony slabs, canopies
	CO 5	ARC209.5	To understand various types of elevators and its working, civil work required for the installation and various brands available in the market
	CO 6	ARC209.6	Understand working and installation of Sliding, sliding-folding doors. Its joineries,
	CO 7	ARC209.7	To gain knowledge about glass as a material its uses and various types. Availability in market and prices.
<b>ARC210 TOS IV 2201929 [P]</b>	CO 1	ARC210.1	Analyze and Design Cantilever slab as overhanging reinforced concrete slabs using Limit State Method as per guidelines given in Indian Standard Code.
	CO 2	ARC210.2	Analyze and design R.C.C. Cantilever Beams to support Balcony Slabs subjected to flexure using Limit State Method as per guidelines given in Indian Standard Code.
	CO 3	ARC210.3	Understand basic concepts of Reinforced, Balanced and Over Reinforced Sections and Analyze a Given Beam with Strain Diagrams
	CO 4	ARC210.4	Analyze and Design of Dog Legged Staircase with Beams at Various Positions using Limit State Method as per guidelines given in Indian Standard Code.
	CO 5	ARC210.5	Analyze and Design of One Way Continuous Slabs - 3 equal spans using I.S.456 Coefficients.
	CO 6	ARC210.6	Understand and apply the basic concepts of Steel Structures.
	CO 7	ARC210.7	Understand Plastic Design and Analyze and Design structural members in steel Structures by using LSM.
<b>ARC211</b>	CO 1	ARC211.1	Students will learn about the multidisciplinary nature of environmental studies

<b>Environmental Science 2201930 [SS]</b>	CO 2	ARC211.2	To introduce students to Natural resources; their significance in conserving environment.
	CO 3	ARC211.3	Students will learn about Ecosystems; their definitions, functions & roles.
	CO 4	ARC211.4	Students will learn about Biodiversity; its definitions, concepts & significance.
	CO 5	ARC211.5	Students will learn about types of Pollution; their causes, effects & prevention measures.
	CO 6	ARC211.6	Students will learn about various Environmental Acts, Policies & Legislations; relation between Environment & Human health, Rights & education.
	CO 7	ARC211.7	Students will learn about Green Buildings; its concept, various green building rating systems & what Environmental clearance for construction projects is.
<b>ARC212 HOAC IV 2201931 [SS]</b>	CO 1	ARC212.1	Students will understand the Industrial revolution and the resulting architecture of eighteenth, and nineteenth century in Europe with the help of various structures
	CO 2	ARC212.2	Students will understand Revival architecture in Europe and America with the help of various Architects & structures
	CO 3	ARC212.3	Students will understand Colonial Architecture in India with the help of various structures
	CO 4	ARC212.4	Students will understand Early Modern movements
	CO 5	ARC212.5	Students will understand Modernism, International style, and influence of Bauhaus with the help of various Architects & structures
	CO 6	ARC212.6	Students will understand Post-independence Architecture in India till 1990 with the help of various Architects & structures
	CO 7	ARC212.7	Students will understand Post liberalization Architecture in India with the help of various Architects & structures
<b>ARC213 Building Services II 2201932 [P] &amp; 2201933 [SS]</b>	CO 1	ARC213.1	Students will understand the scope of solid waste management in the MEP services integration.
	CO 2	ARC213.2	Students will know the systems for natural and artificial lighting in the building and site premises
	CO 3	ARC213.3	Students will understand the systems for waste collection, segregation, transportation and its disposal within or from building premises to the disposal facility.
	CO 4	ARC213.4	Students will inculcate the process of integration of daylight in their architectural design.
	CO 5	ARC213.5	Students will be able to provide electrical lighting design for their architectural projects.
	CO 6	ARC213.6	Students will be able to provide solutions towards sustainable lighting design using energy efficient fixtures and renewable

			sources of energy
	CO 7	ARC213.7	Students will understand the drawings related to lighting design and electrical layouts , market survey and case studies, etc.
<b>ARC214 Site Survey &amp; Analysis 2201934 [SS]</b>	CO 1	ARC214.1	To introduce students to the various factors related to Site Survey and Analysis relevant to Architectural Site Planning
	CO 2	ARC214.2	Understanding the concept of surveying & leveling & to understand the different surveying equipment
	CO 3	ARC214.3	Students will understand various instruments used to take directional & angular measurements. They will also understand the process to use these instruments.
	CO 4	ARC214.4	Understanding the method of plane table survey & method of orientation
	CO 5	ARC214.5	Understanding the meaning of contouring, characteristics of contours to know the nature of ground.
	CO 6	ARC214.6	Students will understand the implementation surveying in the site of their design project.
	CO 7	ARC214.7	

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