



Details of Certificate Courses for Academic Year 2022-23

Course Code	BARE121 ELECTIVES SR		
Course Name	Sketching & Rendering		
Course Instructor	Ar. Meghana Patil, Ar. Anuj Gudekar, Ar. Shraddha Palande		
Year of Studies	1st Year B. Arch	Semester	I
Max. no. of Students	90	Duration	12 Weeks
Course Content	Architectural sketching & rendering is the process of creating two-dimensional and three-dimensional images of a proposed architectural design. The aim of this course is to make students aware about the various hand rendering techniques which can be used to enhance the presentation of the architectural drawings.		
Expected Outcomes	Students are expected to render the given architectural sketch/design in various mediums of rendering taught in the studio.		
Assessment Procedure	Progressive weekly assessment for each kind of rendering technique taught		
Course Code	BARE221 ELECTIVES AB		
Course Name	AutoCAD Basics		
Course Instructor	Ar. Gargi Karve		
Year of Studies	1st Year B. Arch	Semester	II
Max. no. of Students	90	Duration	12 Weeks
Course Content	The Electives is intended to introduce for the first time, a software - AutoCAD which performs as a drafting aid to Architect & designers in their academic and professional life. Not only the interface and commands are part of the subject, but also methodologies of optimizing time and precision which is important to be developed from the beginning are an essential part of the syllabus.		
Expected Outcomes	The students at the end of the course are expected to be able to use the software in design and other subjects and develop their skills during the course.		
Assessment Procedure	Assessment in stages of understanding of various commands of the software		


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Course Code	BARE321 ELECTIVES AS		
Course Name	Architectural Softwares- AutoCAD and SketchUP		
Course Instructor	Ar. Deepa Desai, Ar. Ninad Sansare		
Year of Studies	2nd Year B. Arch	Semester	III
Max. no. of Students	85	Duration	14 Weeks
Course Content			
Learning architectural softwares is an essential skill set for contemporary architectural practices. Learning AutoCAD for the complex architectural drafting and SketchUP for the digital 3D form modulation enhances the creative ability of architectural students to understand space. This course aims to study basic and advanced commands for AutoCAD and SketchUP.			
Expected Outcomes			
Students are expected to produce computer aided 2D and 3D drawings for a small residential house designed in their previous semester.			
Assessment Procedure			
Progressive weekly assessment for small assignments to understand various commands in AutoCAD and SetchUp. Larger stage markings dealing with drafting of previous years design on the software in 2D and 3D			
Course Code	BARE421 ELECTIVES RB		
Course Name	Revit Basics		
Course Instructor	Ar. Gargi Karve		
Year of Studies	2nd Year B. Arch	Semester	IV
Max. no. of Students	85	Duration	14 Weeks
Course Content			
The construction industry has moved from computational designs to BIM. The course is designed to expose the students to Revit, a BIM software and use it in subjects such as Design & Working Drawing. The interface, basic commands and process of modelling are part of the Electives program.			
Expected Outcomes			
It is imperative that students after completion of S.Y.B.Arch start preparing for the professional world. Learning how to draft and model in Revit during this course and practising the same in other subjects for the next semesters, the students are expected to cultivate their knowledge in the software and implement the same during their professional career.			
Assessment Procedure			
Progressive weekly marking for understanding various software commands. Latter markings for tranferring the previous years design on the software and understanding application of all commands and functions			


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Course Code	BARE521 ELECTIVES RR		
Course Name	Revit & Rhino		
Course Instructor	Ar. Gargi Karve		
Year of Studies	3rdYear B. Arch	Semester	V
Max. no. of Students	90	Duration	16 Weeks
Course Content	Along with continuing learning more commands in Revit, introduction to Parametric architecture through Rhino and Grasshopper is the essence of this course. The Subject allows students to explore forms using Rhino and basics of Grasshopper coding.		
Expected Outcomes	The students are expected to design and create unique forms using Rhino and should able to draft the details using Revit. Both the software will help them elevate their design, drafting and Graphics skills.		
Assessment Procedure	Progressive weekly marking for understanding various software commands related to form creation. Latter markings for designing of form oriented functional objects		


Course Code	BARE621 ELECTIVES GI		
Course Name	GIS Basics		
Course Instructor	Rama Shivalkar		
Year of Studies	3rdYear B. Arch	Semester	VI
Max. no. of Students	90	Duration	16 Weeks
Course Content	A geographic information system (GIS) is a system that creates, manages, analyzes, and maps all types of data. GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there). In this course students will learn how to use basic functions of GIS for architectural and urban mapping.		
Expected Outcomes	Students are expected to produce maps of a given area by using GIS software.		
Assessment Procedure	After the identification of an area, progressive weekly markings for the understanding of each aspect of detailing in mapping		


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Course Code	BARE721 ELECTIVES GL		
Course Name	Effective use of Glass in the Built Environment		
Course Instructor	Ar. Mridula Pillai, Ar. Anuj Gudekar		
Year of Studies	4th Year B. Arch	Semester	VII
Max. no. of Students	70	Duration	12 Weeks
Course Content			
<p>Understanding the manufacturing process of glass , so as to understand the embodied energy in its manufacture. Factors affecting the choice of Glass in the built environment through point of view of various stakeholders. Understand the Mechanical, Thermal & optical properties of glass. Understanding the Value Addition to the Glass- Tints, Coatings, fretting, toughening and lamination. Understanding the Glazing types. Energy Performance of Coated Glass for various Glazing type and comaprision with the ECBC standards. understanding the choice and assembly of glazing type through LBNL's Window software.</p>			
Expected Outcomes			
<p>Students are taught to choose the glazing type for various climatic conditions, based on the data available through the LBNL's Window software. Using the data set from the above mentioned exercise is further used to analyse the performance in an conventional building using the spreadsheet calculations. These calculations takes into an Window to Wall Ratio (WWR) for all the cardinal directions. In addition these parameters are isolated to check the change in the building performance for the cooling loads.</p>			
Assessment Procedure			
<p>Assessment of 3 set assignments - 1. Effect of change in gap in the U-value and optical properties of a glazing system 2. Creation of Glazing Systems and Window systems for 2 diverse climatic conditions 3. Calculation of change in Annual Space-conditioning load using spreadsheet for change in Glazing System and change in WWR</p>			
Course Code	BARE921 ELECTIVES AL		
Course Name	Advanced Landscape		
Course Instructor	Ar. Swanand Mahashabde		
Year of Studies	5th Year B. Arch	Semester	IX
Max. no. of Students	20	Duration	12 Weeks
Course Content			
<p>This elective introduces students to advanced theories and concepts in landscape design and landscape planning and encourages students to research on site and city related concerns.</p>			
Expected Outcomes			
<p>Students conduct individual and collaborative research on smaller topics along with analytical studies on maps and diagrams.</p>			
Assessment Procedure			
<p>Progressive assessment on chosen area o research and diagrammatic analysis on a weekly basis</p>			


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Course Code	BARE921 ELECTIVES CM		
Course Name	Introduction to Construction Management		
Course Instructor	Ar. Meghana Patil		
Year of Studies	5th Year B. Arch	Semester	IX
Max. no. of Students	20	Duration	16 Weeks
Course Content			
1. Roles and responsibilities of a construction manager 2. Project delivery methods, types of projects and scales of projects. 3. Management of money, time, men, material and machinery. 4. Learning about various planning techniques, PERT & Critical Path Method (CPM) 5. Risk evaluation, mitigation and management 6. Learning about bids, negotiations and tendering methods 7. The importance of avoiding and learning from mistakes. Impact of global and national policies on project planning and business			
Expected Outcomes			
Students form groups of 4-6 students each. Each group selects a small/medium-scale live architectural/ interior execution project for study. They are to identify all the discussed factors that a Construction manager deals with; within their projects and represent the information graphically. They shall analyze and present aspects of time, money, man management, material and machinery assessment.			
Assessment Procedure			
Assessment in stages -			
1. Identification of factors dealt with by a Construction Manager on site, and representation of information 2. Analysis and presentation of time as an aspect 2. Analysis and presentation of money as an aspect 2. Analysis and presentation of man-management as an aspect 2. Analysis and presentation of material and machinery as an aspect			
Course Code	BARE921 ELECTIVES ER		
Course Name	Earthquake Resistant Architecture and Passive design		
Course Instructor	Ar. Sachin Prabhu		
Year of Studies	5th Year B. Arch	Semester	IX
Max. no. of Students	20	Duration	12 Weeks
Course Content:			
Understanding of Earthquake, Why Earthquakes on planet Earth? Measurements of Earthquake shakings, Analysis of Last Century Earthquakes in India, Understanding effect of Earthquakes on buildings with respect to their strength. Design strategies to make Earthquake Resistant buildings. Load bearing structures in Bricks and Stones. Frame structures and different strategies to make them Earthquake Resistant Buildings. Passive Design: Understanding of making buildings less energy consuming at schematic and planning level. Understanding Sun-path and possible wind flows to gain more natural sunlight and winds (Air-circulation) inside the building. Zoning of the building and fragmentation (Scooping) of the building is done too achieve maximum day-light and cross ventilation.			
Expected Outcomes:			
Students are designing G+1 Bungalow in Load-bearing (Submission 1) and RCC (Submission 2) frame structures as Earthquake resistant structure. They are showing different Earthquake resistant remedies in plan, section, elevations and working details. By understanding sun-path and possible wind directions, same bungalow plan is zoned and scooped out (fragmented) to get more Day-light and cross ventilation. (Submission 3)			
Assessment Procedure			
3 assessments for the 3 mentioned submissions as given above			

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Course Code	BARE921 ELECTIVES HC		
Course Name	Heritage Conservation		
Course Instructor	Ar. Deepa Desai		
Year of Studies	5th Year B. Arch	Semester	IX
Max. no. of Students	20	Duration	12 Weeks
Course Content			
<ol style="list-style-type: none"> 1. Know your heritage 2. Introduction to Conservation 3. Vocabulary of Conservation Process 4. Role of a conservation architect 5. Heritage walk in or near the city of Mumbai 6. Framework of conservation 7. Guest Lecture on conservation practice 8. Decay and Material 9. Scale of conservation 10. Studio Interactions and Discussions 			
Expected Outcomes			
Students are expected to identify and document the existing heritage in Indian cities. Based on that they are expected to generate value assesment document and to generate representation drawing for the same.			
Assessment Procedure			
Assessment in stages for identification of heritage, value assesment document and representation drawing			


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