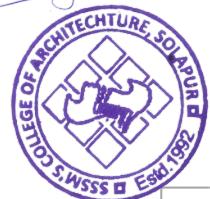




SSSMs COLLEGE OF ARCHITECTURE, SOLAPUR
NAAC
CRITERION-2 TEACHING LEARNING AND EVALUATION
INDEX
2.6.1 Programme Outcomes and course outcomes

Sr.no	Class/year	Learning Outcomes-(Pos) and (cos)	Page no
1	First year	Sem-I & Sem -II	
2	Second year	Sem-III & Sem -IV	
3	Third year	Sem-V & Sem -VI	
4	Fourth year	Sem-VII & Sem -VIII	
5	Fifth year	Sem-IX & Sem -X	

For,
Katyavale





SSSMs COLLEGE OF ARCHITECTURE, SOLAPUR

Course- Bachelor of Architecture

Syllabus pattern -CBCS (2019 PATTERN)

 YEAR & SEM- **B. ARCH 1ST YEAR SEM -I**
21 AR1 – 01: ARCHITECTURAL DESIGN- I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
01	01	01	ISE	ESE	ICA	ESE	
Practical/Studio P/S	-	07					
Total	08	08	--	--	100	150	250

Course Objective:

1. Introduction to Architecture, its scope, relation to the fields of Science & Technology, Mathematics, Philosophy, Religion, Sociology, Psychology, etc.
2. To introduce students
3. The concept of assembling of simple spatial elements in articulated concepts.
4. Design processes through storylines, enactment of acts, sketches and models.
5. The concepts of design process relationship between idea –concept, space and form for built unit with functional requirements.
6. Concept of scale, proportion, and principles of design and composition.

Course Outcome:

By the end of the course student should be able to:

1. Exhibit understanding of knowledge of create concept through story lines, enactment of acts, sketches and models.
2. Exhibit understanding of knowledge enough to read design and create and design using elements and principles of design.
3. Apply the concept of scale, proportion, and application of principles of design and composition.
4. Assemble simple spatial elements in articulated concepts and visually represent them through hand-made 2D drawings and models.




21 AR1-02 BUILDING CONSTRUCTION AND MATERIAL- I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	05	05	ISE	ESE	ICA	ESE	
Total	06	06	---	100	50	100	250

Course Objective:

1. To acquaint students with fundamental concept of basic building elements, their function and behaviour under various conditions with specific reference to load bearing construction.
2. To acquaint students with the principles of load bearing structures with respect to– foundation, plinth, wall using different materials suitable for load bearing construction.
3. To learn various components of simple load bearing structure.
4. To introduce student's various types of brick wall and bounds.
5. To study and understand properties and uses of basic building materials.

Course Outcome:

At the end of the course students should be able to:

1. Exhibit understanding of basic building elements, their function and behaviour under various conditions with specific reference to load bearing construction.
2. Apply principles of load bearing structures with respect to foundation, plinth, and wall using different materials suitable for load bearing construction.
3. Use various components of simple load bearing structure.
4. Apply the acquainted knowledge to use various types of brick wall and bounds.
5. Apply and exhibit understanding of various properties and uses of basic building materials




21AR1 – 03 THEORY OF STRUCTURE – I

Teaching Scheme Per week		Credit		Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total	
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE		
Total	02	02	30	70	--	--	100	

Course Objective:

- 1.To understand the concept of simple load-bearing and framed structure, different types of loads acting on the structure, the concept of force and its systems, the concept of Beams and determination of reaction, the concept of centroid and center of gravity.

Course Outcome:

By the end of term, the student should be able to

- 1.Exhibit understanding about loads and load transfer on various structural components,
- 2.Force and its properties,
- 3.Beams and determination of reaction of beams from given support and loading conditions, Centroid and center of gravity of compound sections




21 AR 1 – 04 HUMAN SETTLEMENT PLANNING

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To study the history and development of settlements planning, the concept of human need for shelter and co habitation through the history of human settlement, and their relevance to architecture.
2. The study of this in intended to understand the process of evolution and development of particular civilizations/settlements with respect to geographical, geological, climatic, social, religious, cultural influences on the architecture.

Course Outcome:

By the end of the course the students should be able to:

1. Develop understanding and get familiar to geographical, geological, climate, social, religious & cultural factors that influence the early society.
2. Develop understanding about human needs and co-habitation through the history of human settlement during ancient, medieval and modern period and understand relationship between man and environment.

For,
Kalyanika




21 AR 1 – 05 ARCHITECTURAL GRAPHICS AND DRAWING –I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio -	03	03	ISE	ESE	ICA	ESE	
P/S							
Total	04	04	--	--	100	--	100

Course Objective:

1. To learn and understand graphical language as tool for drawing as communication in Architecture.
2. To introduce student's method of dimensioning of geometrical diagrams of the basic geometrical shapes
3. To learn architectural lettering, lettering of various heights, using the right sizes for titles, nameplate,
4. written matters.
5. To learn to use different media, colour pencils etc.

Course Outcome:

By the end of the course students should be able to:

1. To apply fundamentals of graphical language as tool for drawing as communication in Architecture
2. To use relevant application of method of dimensioning of geometrical diagrams of the basic geometrical shapes
3. To use relevant application of Lettering of various heights, Architectural lettering, using the right sizes for titles, nameplate, written matters
4. To use relevant application of different media, colour pencils etc.
5. Student will be well equipped with knowledge of drafting and drawings with the help pencil and different media




21 AR 1 – 06 BASIC DESIGN AND VISUAL ARTS- I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 03	03	ISE	ESE	ICA	ESE	
Total	03	03	--	--	100	--	100

Course Objective:

1. To acquaint students to develop understanding and observation of the basic elements, principles of basic design
2. To learn various methods of designing and expression through various materials of 2D shapes.
3. To make students familiar with multi- sensory aspects of space forms and pattern.
4. To make students familiar with spatial relationships, positive and negative spaces.
5. To learn various texture through various colour and material collection.

Course Outcome:

By the end of the course student should be able;

1. To apply acquainted knowledge and understanding of the basic elements and principles of basic design.
2. To use relevant application of various methods of designing and expression through various materials of 2D and 3D forms
3. To exhibit understanding of multi- sensory aspects of space
4. To exhibit understanding of the concept of Positive and negative spaces and Spatial relationships.
5. To exhibit understanding of various texture through different material, colour, and material collection




21 AR 1 – 07 WORKSHOP – I

Teaching Scheme Per week		Credit		Examination Scheme				
Lecture/ week - L	--	--	--	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	03	03	ISE	ESE	ICA	ESE	
Total		03	03	--	--	50	--	50

Course Objective:

1. The main objective is to encourage student to explore various materials and model making technique
2. To learn various model making techniques using basic material expressing their design concepts and perception
3. To learn various methods to prepare models of basic design and abstraction of perceived images

Course Outcome:

By the end of the semester, students should be able to:

1. To exhibit understanding and explore various materials and model making technique
2. To use relevant methods to prepare various model making techniques using basic material expressing their design concepts and perception
3. To use various methods to prepare models of basic design and abstraction of perceived images. prepare conceptual and final models for the design and technology process
4. To apply and use knowledge enough to select, handle and use different materials in model making.




21 AR 1 – 08 ELECTIVE -I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 02	02	ISE	ESE	ICA	ESE	
Total	02	02	--	--	50	--	50

The student will opt for any one of the following courses

A. Architectural Vocabulary
B. Communication Skills
C. Art and Art Forms

The detail syllabus for the above subjects is given hereby

ARCHITECTURAL VOCABULARY
Course Objective:

1. To enable the student to understand the various terms used particularly in architectural design and practice.
2. To improve the vocabulary of the student to communicate one's design, ideas and details

Course Outcome:

After successful completion of this course, student should be able to:

1. Gain clarity of various terms used in Architectural Education and in practice
2. Adopt architectural language, principles, styles and can communicate their design in written format and thereby improving the vocabulary skill required for juries, seminar etc.
3. Prepare report, articles, essays, documentation required in Architectural Education and Profession.

B. COMMUNICATION SKILLS
Course Objective:

1. To develop skills in effective communication – both written and verbal
2. To explore the potential of media technology and the Internet to enhance communication.
3. To facilitate the flow of information and proprietary knowledge between clients and architects to either bridge or exploit the gap between these two cultures.
4. To facilitate the flow of information and knowledge to bridge the gap between two cultures.

Course Outcome:

After successful completion of this course, student should be able to

1. Master both written and spoken exercises as per the course out line which leads to effective communication both written and verbal
2. Facilitate the flow of information and proprietary knowledge between clients and architects to either bridge or exploit the gap between these two cultures.

C. ARTS AND ART FORMS




Course Objective:

1. To enable student, understand integration of art with architecture.
2. To introduce students to various art forms and their relation to architecture.
3. To write and speak effectively and clearly about works of art and architecture.
4. To establish the relevance of architecture as the 'Mother of all arts'

Course Outcome:

After successful completion of this course, student should be able to:

1. Explore different art forms in the form of presentations, acts, art works.
2. Relate art with Architecture.
3. Develop the technical skills and the ability to organize the visual elements necessary to communicate concepts and experiences.
4. Develop Visual Literacy.





Syllabus pattern -CBCS (2019 PATTERN)
YEAR & SEM- **B. ARCH 1ST YEAR SEM -II**

21 AR2 – 01 ARCHITECTURAL DESIGN- II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	07	07	ISE	ESE	ICA	ESE	
Total	08	08	--	---	100	150	250

Course Objective:

1. To acquaint students with the process of data collection, anthropometry and analysis considering functional requirements of various spaces.
2. To introduce students with various methods to study requirements and to find alternatives options for user comfort with help of block models.
3. To introduce students with the concepts of bubble diagram, zoning, circulation and user analysis in design development process.
4. To learn the importance of space planning considering different variable like movement, circulation, scale, volume, proportions and structure and its impact on built.
5. To introduce the concept of multifunctional activity, entire building form along with site

Course Outcome:

At the end of the semester students should be able to:

1. Apply the concepts of bubble diagram, zoning, circulation and user analysis in design development process
2. Finalize alternatives options for space planning and user comfort with help of various block models
3. Exhibit understanding and importance of space planning considering different variable like movement, circulation, scale, volume, proportions and structure and its impact on built
4. Design space planning for multifunctional activity for entire residential building
5. Assemble simple spatial elements in articulated concepts and visually represent them through hand-made drawings and models. to generate solution and represent it graphically.




21 AR 2- 02 BUILDING CONSTRUCTION AND MATERIAL- II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	05	05	ISE	ESE	ICA	ESE	
Total	06	06	---	100	50	100	250

Course Objective:

1. To acquaint students with fundamental concept of openings in both trabeated and arcuate construction methodologies.
2. To acquaint students with the principles of design of doors and windows.
3. To introduce principles of design of staircases and different types of staircases.
4. To acquaint students with fundamental concept of types of roof and its terminology.
5. To study and understand properties and uses of basic building materials.

Course Outcome:

At the end of the course students shall be able

1. To exhibit understanding of basic building elements, concept of openings in both trabeated and arcuate construction methodologies.
2. To apply acquainted of the principles of design of doors and windows.
3. To apply the acquainted knowledge of design of staircase.
4. To apply concept of types of various types of roofs and use it in design
5. To apply and exhibit understanding of various properties and uses of basic building materials




21AR2– 03: THEORY OF STRUCTURE -II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To understand the concept of material and its behaviour under external loads like axial force, shear force, and bending moment, the concept of moment of inertia, basic details of frames and trusses

Course Outcome:

By the end of term, the student shall exhibit understanding of

2. The stresses in a beam for given loading and support condition.
3. They will also be able to select appropriate truss type for different conditions.




21AR 2 – 04: HISTORY OF ARCHITECTURE -I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To study the evolution of prehistoric, Indus valley, Vedic, Buddhist, Mauryan, Egyptian, Mesopotamia, pre-Greek, pre- Roman architecture through critical analysis of appropriate examples.
2. To discuss building materials and building construction technology, built form, study of plans, structural system, building types, aesthetics and architectural compositions of buildings that flourished during the ancient period.

Course Outcome:

At the end of semester students should be familiar:

1. Evolution of different architectural periods through critical analysis of appropriate example
2. About construction technology-built form during ancient period through models exercised in group work.




21 AR2- 05: ARCHITECTURAL GRAPHICS AND DRAWING- II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	03	03	ISE	ESE	ICA	ESE	
Total	04	04	30	70	--	--	100

Course Objective:

1. To help students to understand graphical language as tool for drawing as communication in Architecture.

Course Outcome:

At the end of the semester students should be able to:

2. Understand, imagine, and draw design forms and three-dimensional representation.
3. Exhibit understanding of projection methods for representing the solids,
4. Draw orthographic projection, Isometric views of plans, elevations & section of solids.
5. Visualize and draw complex, compound objects and their true cut portion of shapes.

For,
Kalyanika




21 AR2 – 06: BASIC DESIGN AND VISUAL ARTS- II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 03	03	ISE	ESE	ICA	ESE	
Total	03	03	--	--	100	--	100

Course Objective:

1. To make students familiar with principles of composition and organization.
2. To acquaint students with various methods to work with models and forms.
3. To learn various methods of designing and expressing creativity in 2D and 3D forms.
4. To learn analysis of architectural designs with respect to principles of composition and organization.

Course Outcome:

By the end of the course student should be able to:

1. Apply acquainted knowledge to principles of composition and organization.
2. Apply acquainted knowledge of various methods to work with forms and model.
3. Exhibit understanding of various methods of expressing creativity through 2D and 3D forms.
4. Analysis work of architectural designs with respect to principles of composition and organization.

For,
Kalyanika




21 AR 2 – 07: WORKSHOP – II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 03	03	ISE	ESE	ICA	ESE	
Total	03	03	--	--	50	--	50

Course Objective:

1. The main objective is to study various model making techniques using advanced different or specific material expressing their design concepts and perception.
2. Models of basic design and abstraction of perceived images.

Course Outcome:

By the end of the semester, students will be able to:

1. Prepare final models for the subjects like Architectural design and Building technology, Basic Design
2. Students will be well equipped to select, handle and use different materials in model making
3. Make basic design and architectural design single unit model

For,
Kalyanika




21 AR2- 08 ELECTIVE -II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 02	02	ISE	ESE	ICA	ESE	
Total	02	02	--	--	50	--	50

The student will opt for any one of the following courses

Furniture design, Creative writing, Mud architecture

A: FURNITURE DESIGN
Course Objective:

1. To explore the scope of furniture design.
2. To explore integration of furniture design into building, street and landscape design.

Course Outcome:

After successful completion of this course, student should be able to:

1. Become conversant with ergonomics and scope of furniture design.
2. Develop skill in conversant with model making material selection and joinery in indoor and outdoor furniture.

B: CREATIVE WRITING
Course Objective:

1. To develop methods of exercising an architectural narrative or description through different forms of creative writing.
2. To learn techniques of writing various genres
3. To analyse methods and vocabulary styles of writing.

Course Outcome:

After successful completion of this course, student will be able to:

1. Incorporate techniques and methods of expressing an architectural narrative or description through forms of creative writings such as fiction, poetry, travel writing, blogging which are based on architecture.
2. Learn architecture as a context.
3. Prepare Presentations on the techniques of writing different genres.
4. Discuss on various readings to familiarize and analyse the methods and vocabulary styles of writing.
5. Write assignments related to the genres culminating in a term paper.

C: MUD ARCHITECTURE
Course Objective:

1. To introduce the relevance of the material though history of building craft.
2. To introduce the material and relevant technologies.
3. To provide relevant examples.
4. To discuss works by architect's works in mud architecture.

Course Outcome:

After successful completion of this course, student will be able to:

1. Be conversant with the scope and possibilities of mud architecture.





Syllabus pattern -CBCS (2019 PATTERN)
YEAR & SEM- **B.ARCH.II YEAR SEM.III**
21 AR3 – 01: ARCHITECTURAL DESIGN – III

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
Practical/Studio - P/S	06	06	ISE	ESE	ICA	ESE	
Total	07	07	--	--	100	150	250

Course Objective:

1. To introduce students with the fundamental concept of basic services and its integration in multifunctional planning in design process.
2. To develop proficiency to integrate data collection and analysis of community level spaces in design.
3. To learn design approach as a continuous process through function, technology and aesthetics of building.
4. To develop acquaintance of knowledge gained in other subjects toward designing of spaces.

Course Outcome:

At the end of the semester, the students should be able to:

1. Apply the fundamental concept of basic services and its integration in multifunctional planning in design process
2. Apply acquainted knowledge to integrate data collection and analysis of community level spaces in design.
3. Apply acquainted knowledge of design approach as a continuous process through function, technology and aesthetics of building.
4. Apply acquainted knowledge gained in other subjects toward designing of spaces.

For,
Kalyanle




21 AR 3 - 02: BUILDING CONSTRUCTION AND MATERIAL- III

Teaching Scheme Per week		Credit	Examination Scheme					
Lecture/ week - L			Theory Exam		Practical oral exam		Total	
Practical/Studio P/S	-	04	04	ISE	ESE	ICA	ESE	
Total		05	05	---	100	50	100	250

Course Objective

1. To develop a fundamental understanding of openings in both trabeated and arcuate construction methodologies.
2. To introduce principles of design of doors and windows.
3. All types of heavy teakwood doors, windows and partitions joinery details.
4. To introduce students to different types of floorings and method of lying flooring using different materials.
5. To help students to understand the basic building elements, their function.
6. To study and understand properties and uses of basic building materials.

Course Outcome:

At the end of semester students should be able to:

1. To exhibit fundamental understanding of openings in both trabeated and arcuate construction methodologies.
2. To select and choose different materials for design of doors and windows.
3. Construction of all types of heavy teakwood doors, windows and partitions joinery details.
4. To use relevant method of different types of floorings and method of lying flooring using different materials.
5. To exhibit understanding of different properties and uses of basic building materials.




21AR3 – 03: THEORY OF STRUCTURE – III

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	02	02	Theory exam		Practical/Oral exam		Total
Practical/Studio(P/S)	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	----	----	100

Course Objective:

1. To understand the concept of principal stress and strain, direct and bending stress, analysis of axially loaded columns and struts, analysis of fixed and continuous beams using shear force and bending moment diagrams and slope and deflection of beams

Course Outcome:

By the end of the term, the students will also be able to

- 1.To identify the principal planes and stress-concentrated points of a member.
- 2.Analyse axially loaded columns, struts, cantilevered, simply supported beams and fixed and continuous beams.




21 AR3 – 04: HISTORY OF ARCHITECTURE-II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To study the evolution of Indian temple architecture, classical Greek, Rome, early Christian and Byzantine architecture through critical analysis of appropriate examples.
2. To discuss building materials and building construction technology, built form, structural system, building types, aesthetics and architectural compositions of buildings that flourished during the particular period.

Course Outcome:

At the end of semester students should be familiar:

1. To the physical and aesthetic experience of the buildings with available resources, and materials to build during ancient classical Architecture.
2. To develop understanding about evolution of different architectural periods through critical analysis of appropriate example
3. To exhibit knowledge about construction technology- built form during ancient period.




21 AR 3 – 05: ARCHITECTURAL GRAPHICS AND DRAWING -III

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	03	ISE	ESE	ICA	ESE	
Total		04	30	70	--	--	100

Course Objective:

1. To introduce the students to the fundamental techniques of Architectural drawings & to enhance their visualization skills and understand the principles of shades and shadows & to enhance their visualization skills by viewing at different angles.
2. Introduction of views –isometric, oblique, axonometric, perspective-one /two/three point.
3. To learn to draw perspective views of complicated objects, building, interior, parts, pedestals etc.

Course Outcome:

At the end of the semester, the students should be able:

1. To be equipped with graphical skills which shall be useful in translating the graphical ideas into appropriate technical drawings presentations with sociography in conventional direction by considering sun's position & in perspective.
2. To be equipped with use of wide and normal lenses, advanced photography techniques.




21 AR3 – 06: COMPUTER TECHNOLOGY IN ARCHITECTURE – I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio -P/S	02	02	ISE	ESE	ICA	ESE	
Total	03	03	--	--	50	50	100

Course Objective:

1. To develop and train students to use computers and digital media as tools to explore, develop, evaluate and present architectural ideas.
2. To equip the student with a range of digital tools and techniques in 2D drafting and vector graphics.
3. To acquaint student's computer application particularly in architecture

Course Outcome:

At the end of semester students should be able to:

1. Students will be accustomed to use computer as a drafting and presentation tool.
2. Use Computer operations principles and image editing through a graphical composition, computer aided 2D drafting through simple exercises.




21 AR3 – 07: BUILDING SERVICES -I

Teaching Scheme Per week		Credit		Examination Scheme				
Lecture/ week - L	02	02		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	01	01		ISE	ESE	ICA	ESE	
Total	03	03		30	70	--	--	100

Course Objective:

1. To make students understand the importance and scope of water supply (Hot and cold) and drainage system
2. Its application and integration in residential design premise.

Course Outcome:

By the end of term, the student should be able to:

1. To design water supply and drainage layout with calculations and sizing for a residential premise.

For,
Kalyanika




21 AR3 – 08: CLIMATOLOGY & ENVIRONMENT-I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. Study relation between built form & elements of Climate.
2. Study behaviour of built form in different climatic conditions & Design responding to climate.
3. Study different climate & elements of climate.
4. Micro climate & macro climate, Micro climate analysis, Bio Climate Designs & Bio climatic chart

Course Outcome:

At the end of the semester students should be able:

1. Exhibit understanding of various elements of climate & Global climate.
2. To impart knowledge regarding Micro climate & macro climate, Micro climate analysis
3. Students will be able to use Bio Climate Designs & Bio climatic chart, Sun dial & Sun path dial
4. Students will be able to understand Thermal Design - Heat exchange of building.




21 AR3-09: ELECTIVE- III

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 02	02	ISE	ESE	ICA	ESE	
Total	02	02	--	--	50	--	50

The student will opt for any one of the following courses

Art Appreciation, Vernacular Architecture, Basic Accounting.

ART APPRECIATION
Course Objective:

1. Vocabulary and principles of art, perception and representation, categories of art in terms of media and technique
2. Appreciating art through the study of art production in the west from the beginnings to the birth of modern art, context for new directions in art in the late 19th and early 20th century
3. Art production in India over history, contemporary art from India and its appreciation.

Course Outcome:

1. The student will be able to interpret, appreciate and articulate processes of artistic production, themes, socio-cultural and aesthetic issues that artists examine in their work
2. The role and influence of western ancient and medieval art in societies, histories and world cultures.
3. Appreciate and understand Indian art and its context

VERNACULAR ARCHITECTURE
Course Objective:

1. To instil sensitivity towards the less explored field that is concerned with Architectural building traditions/practices that are cost effective, ecologically sensible and culturally relevant.

Course Outcome:

2. Students acquire a working vocabulary that can help them describe vernacular architecture in meaningful ways.
3. Develop an understanding of grass root principles of indigenous architecture that has evolved over time in response to environment, climate, culture, economy and basic human needs.
4. Understanding of variations in built forms and their environmental performance across different climatic and geographical regions of India and adaptations of vernacular architecture in contemporary buildings.

BASIC ACCOUNTING
Course Objective:

1. This course provides an orientation in the field of accounting, accounting rules and prepare financial statements

Course Outcome:

1. Conceptually define accounting and bookkeeping
2. Identify the accounting rules required for business enterprises
3. Apply the accounting rules in determining financial results
4. Prepare financial statements




B.ARCH. SEM.IV
21 AR4 – 01: ARCHITECTURAL DESIGN - IV

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01		Theory Exam		Practical oral exam		Total
Practical/Studio - P/S	06	06	ISE	ESE	ICA	ESE	
Total	07	07	--	--	100	150	250

Course Objective:

1. To introduce students with the fundamental concept of climatology, its different types and zones.
2. To study the various climate-based design strategies and method to adopt in design and detailing process
3. To learn the design process and generate design approach through function, technology, aesthetics, user comfort considering knowledge gained in previous semester
4. To learn design process for medium complex function, low rise multi-functional projects.

Course Outcome:

At the end of the semester students must be able to:

1. Apply the fundamental concept of climatology, its different types and zones.
2. Use the relevant applications of various climate-based design strategies and method to adopt in design and detailing process.
3. Design and generate design approach through function, technology, aesthetics, and user comfort considering knowledge gained in previous semester.
4. Exhibit understanding in design process for medium complex function, low rise multi-functional projects.




21AR4 – 02: BUILDING CONSTRUCTION AND MATERIAL –IV

Teaching Scheme Per week		Credit	Examination Scheme					
Lecture/ week - L			Theory Exam		Practical oral exam		Total	
Practical/Studio P/S	-	04	04	ISE	ESE	ICA	ESE	
Total		05	05	---	100	50	100	250

Course Objective:

1. To help students to understand the construction of framed structure and incorporation of basic building elements, their function, position
2. To enable students to understand construction with specific reference to RCC frame structure.
3. To develop analytical and logical sequence in thinking, through site visit & material study.
4. To develop strong sense of designing windows and doors using metal as a building material.

Course Outcome:

At the end of semester, the students should be able to exhibit understanding:

1. Of the basic components of buildings construction systems,
2. Of techniques and methodology with specific reference to R.C.C construction method,
3. And use of metals for door, windows and as reinforcement in RCC structure.




21 AR4 – 03: THEORY OF STRUCTURE – IV

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	02	02	Theory exam		Practical/Oral exam		Total
Practical/Studio(P/S)	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	----	----	100

Course Objective:

- To help students to understand analysis and design of steel structural members by limit state method using IS 800-2007. (The students are allowed to carry steel tables and IS 800-2007 with themselves in exam halls)

Course Outcome:

By the end of the term,

- The student will be able to analyse and design members in steel structures like tension member, compression member, beam, truss and connections using IS 800-2007.




21 AR4 – 04: HISTORY OF ARCHITECTURE-III

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To study the evolution of Indo- Islamic architecture, Indian colonial architecture, Romanesque, Gothic, Renaissance and Baroque architecture through critical analysis of appropriate examples.
2. To discuss building materials and building construction technology, built form, structural system, building types, aesthetics and architectural compositions of buildings that flourished during the particular period.
3. To study the effects of industrial revolution on society and buildings.

Course Outcome:

At the end of semester students should be familiar:

1. Evolution of different architectural periods through critical analysis of appropriate example
2. About construction technology- built form Indian Islamic architecture, Indian colonial architecture, Romanesque, Gothic, Renaissance and Baroque architecture through critical analysis of appropriate examples.




21AR4- 05: THEORY OF ARCHITECTURE

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	ISE	ESE	ICA	ESE	
Total	03	03	30	70	--	--	100

Course Objective:

1. To acquaint the students with architectural theory from antiquity to the present and to identify issues which shaped the approach to architectural design in a particular context and age.

Course Outcome:

At the end of the semester students should be able:

1. To familiarized with the theories and treatise by eminent architects from antiquity to modern period.
2. To understand and critically acclaim architectural works.




21 AR4 – 06: COMPUTER TECHNOLOGY IN ARCHITECTURE -II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	03	ISE	ESE	ICA	ESE	
Total	04	04	--	--	50	50	100

Course Objective:

1. To acquaint student with computer application particularly in architecture to explore, develop, evaluate and present architectural ideas.
2. To equip the student with a range of digital tools and techniques in 2D drafting, 3D modelling, and vector graphics, their optimum application and use in the profession.

Course Outcome:

At the end of semester students should be able to:

1. To use Computer operations principles and image editing through a graphical composition, computer aided 2D drafting and 3D modelling through simple exercises; rendering of a building to create a photo realistic image.




21 AR4 – 07: BUILDING SERVICES -II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 01	01	ISE	ESE	ICA	ESE	
Total	03	03	30	70	--	--	100

Course Objective:

- To make students understand the importance and scope of Artificial Lighting, Electrification, Mechanical Ventilation, Air Conditioning and Lift and Escalator and their applicability in building design.

Course Outcome:

By the end of course,

- The student should be equipped to design Electrical layout with Lumen calculations and make necessary arrangements in plans while designing for Air conditioning.

For,
Kalyanika




21 AR4 – 08: CLIMATOLOGY & ENVIRONMENT-II

Teaching Scheme Per week		Credit	Examination Scheme					
Lecture/ week - L	02		02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100	

Course Objective:

1. To introduce student study of the relation between built form & elements of climate
2. To study behaviour of built form in different climatic conditions & design responding to climate.
3. Thermal control -Passive Design Strategies
4. Day lighting - Lighting principle/ factors, Day lighting Designing in buildings

Course Outcome:

1. Study of design-built form in different climatic conditions & Design responding to climate.
2. Exhibit understanding of Thermal Control -Passive Design Strategies.
3. Apply the concept of Day lighting - Lighting principle/ factors, Day lighting Designing in buildings.




21 AR4-09: ELECTIVE -IV

Teaching Scheme Per week		Credit	Examination Scheme					
Lecture/ week - L	02		02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	-	--	ISE	ESE	ICA	ESE		
Total	02	02	--	--	50	--	50	

The student will opt for any one of the following courses

Photography, Bamboo Architecture, Foreign language.

PHOTOGRAPHY
Course Objective:

1. To impart the skills of taking aesthetically appealing and creative architectural photographs through the use of appropriate cameras/ lenses and lighting conditions.

Course Outcome:

1. The ability to work in experimental and manipulative techniques, candid and contrived imagery, documentary photography, archival processing, and interpretive studies.
2. A familiarity with and command of materials, equipment, and library resources related to the study of photography.
3. The ability to work and study independently.

BAMBOO ARCHITECTURE
Course Objective:

1. As a substitute building material, which is renewable, environment friendly and widely available due to its rapid growth, its adaptability to most climatic conditions and due to its properties.
2. Main properties of bamboo, construction details and limitations of use of bamboo.

Course Outcome:

1. The student should be able to identify the different types of bamboo along with their application in different forms.
2. The student would be capable to work out bamboo connections using various tools and techniques and develop scientific temperament and research attitude.

FOREIGN LANGUAGE

Language- Chinese, French, German or Any Other

Course Objective:

1. To inculcate in students the ability to speak, read and write the language while each language offers a wide array of opportunities.

Course outcome:

1. To have a working knowledge of the language
2. To be able to appreciate to a greater extent the nuances of communication in the language





Syllabus pattern -CBCS (2019 PATTERN)
YEAR & SEM- **B. Arch III ,Sem-V**

21 AR5 – 01: ARCHITECTURAL DESIGN – V

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio - P/S	06	06	ISE	ESE	ICA	ESE	
Total	07	07	--	100	100	150	350

Course Objective:

1. To introduce students with designing through function, technology, user comfort integration of landscape and various services along with knowledge gained in previous semesters.
2. To develop acquaintance of landscape while designing indoor and outdoor space to maximize potential of space planning.
3. To introduce various services to integrate in planning and design
4. To acquaint and develop the students with knowledge of fundamental concepts in multifunctional mid-rise or campus planning

Course Outcome:

1. Apply acquainted knowledge of designing through function, technology, user comfort integration of landscape and various services along with knowledge gained in previous semesters.
2. Use relevant application for designing various acoustical services to integrate in planning and design.
3. Apply acquainted knowledge of fundamental concepts in multifunctional mid-rise or campus planning.




21 AR 5-02: BUILDING CONSTRUCTION & MATERIAL – V

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	04	04	ISE	ESE	ICA	ESE	
Total	05	05	---	---	100	150	250

Course Objective:

1. To study construction systems with focus on roofing (MS truss).
2. To study Construction techniques of deep foundation - pile foundation.
3. To develop strong sense of designing windows, doors and partitions using aluminium as a building material .

Course Outcome:

At the end of semester student should be able to Exhibit understanding of

1. Foundations in loose soil,
2. Door and windows of wide opening,
3. Roof truss of various span along with roofing material & their installation,
4. Partition walls using various materials and their installation.
5. Use of non-ferrous metals and false ceiling material in buildings.




21 AR5 – 03: THEORY OF STRUCTURE – V

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	02		02	Theory exam		Practical/Oral exam	
Practical/Studio(P/S)	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	----	----	100

Course Objective:

- To help students to understand and analyses the behaviour of RCC structural members like slabs, beams and columns by limit state method using IS 456-2000. (The students are allowed to carry IS 456-2000 with themselves in exam halls)

Course Outcome:

By the end of the course, the student should be able

- to analyse and design RCC structural members like slabs, beams, columns and footing by limit state method using IS 456-2000.

For,
Kalyanika




21 AR5-04 –HISTORY OF ARCHITECTURE –IV

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To study the modern architectural movements in India and west through ideas and works of great architects of modern era during 20th century, that flourished during the 20th century period.
2. To analyse the contemporary trends/approaches in architectural production in terms of design, practices, its perception, appreciation and critical discourses.
3. To critically reflect and comment on contemporary architecture across the world.

Course Outcome:

At the end of semester students should be able:

1. To exhibit understanding the contemporary trends/approaches in architectural production in terms of design, practices, its perception, appreciation and critical discourses, and can reflect and comment on contemporary architecture across the world.

For,
Kalyanika




21 AR5 -05 –INTERIOR DESIGN

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	03	03	ISE	ESE	ICA	ESE	
Total	04	04	--	--	50	100	150

Course Objective:

1. To make students understand the integration and importance of interior design spaces to create pleasant interior ambience by understanding history of interior design, furniture design, use of latest and green interior materials, interior landscaping, interior lighting and services.

Course Outcome:

By the end of the semester, the student should be able to:

1. To prepare interior design Plans, Sections and views along with details reflecting latest market trend including latest innovative interior materials and green interior materials creating pleasant interior ambience.

For,
Kalyanika




21 AR5 – 06: SURVEYING AND LEVELLING

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	01	01	Theory exam		Practical/Oral Exam		Total
Practical/Studio(P/S)	02	02	ISE	ESE	ICA	ESE	
Total	03	03	--	--	50	----	50

Course Objective:

1. To help students to understand linear measurement techniques, angular measurements techniques, area measurement techniques, and finding the relative positions of any point or object of the earth, prepare contour maps and other surveying maps.

Course Outcome:

By the end of the term, the student shall be able to

1. Exhibit understanding to use linear measurements, angular measurements, area measurement and determine relative positions of point on earth.
2. Prepare contour maps and other surveying maps.

For,
Katyonke




21 AR5-07: BUILDING SERVICES – III

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	02	02	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	--	--	100

Course Objective:

1. To develop the knowledge and skill required for understanding integration of acoustical, vertical transportation and fire safety in building for residential and public building architecture.

Course Outcome:

At the end of semester students should be able to:

1. Exhibit understanding concept of sound and its properties, acoustical design criteria for user
2. Use relevant application to control noise and acoustical treatment in various buildings
3. Apply acquainted knowledge of mechanical transportation systems, fire protection and fire safety in space planning.




21 AR5-08 - LANDSCAPE DESIGN

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio - P/S	02	02	ISE	ESE	ICA	ESE	
Total	03	03	----	----	50	--	50

Course Objective:

1. To introduce the students to Landscape Architecture and its functional significance of landscape on site planning and design,
2. To make students familiar about historical development French & English, Mughal, Japanese, Landscape
3. To make students familiar the elements and Principles of landscape design.
4. and to create a database for native plantation of your region and apply the concept to select plants, taxonomy plantation & maintenance

Course Outcome:

At the end of semester student will be

1. To analysis and develop design skills for small landscape projects and to do advance analytical and planning skills for Architectural project sites.
2. Elements of Landscape, Land forms, water bodies, Vegetation.
3. Apply the acquainted knowledge about historical development French & English, Mughal, Japanese, Landscape and work of noted architects and landscape projects.
4. Apply the concept to select plants, taxonomy plantation & its maintenance.
5. Apply acquainted knowledge in selection of Garden sculpture, furniture, hard scape.




21 AR5-09: ELECTIVE V

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	01	01	--	--	50	---	50

The student will opt for any one of the following courses

Sustainable Building Material, Green Building and Rating Systems, Sociology and Architecture
SUSTAINABLE BUILDING MATERIAL
Course Objective:

1.To understand the features of Sustainable Building Materials, understand basic elements, principles and techniques of Selecting & use of materials

Course Outcome:

After successful completion of this course, student shall be able to:

1. Apply knowledge to select sustainable materials, selection of material, technology and use of local material.
2. Exhibit understanding of material as per green rating systems and green certified products

B. GREEN BUILDING AND RATING SYSTEMS
Course Objective:

1. To develop and acquire knowledge about the green buildings
2. To Gain knowledge about the green Building codes
3. To understand the code compliance Process
4. To understand the Indian and International green building codes
5. To understand the design ideas for the green building
6. To understand about energy usage and code compliance.

Course Outcome:

After successful completion of this course, student shall be able to:

1. Apply acquaint knowledge of the basic concept of green buildings; green rating systems around the world;
2. Apply criteria involved in the green rating systems.
3. Exhibit understanding for documentation of project for green Building certification.
4. Document design techniques to be followed as per codes.

C. SOCIOLOGY AND ARCHITECTURE
Course Objective:

1. To familiarize students with the basic concepts of sociology and its influence on architecture.

Course Outcome:

After successful completion of this course, student shall be able to:

1. Exhibit understanding of basic sociological concepts and learn their applications in space planning and architectural design.




21 AR5 – 10: ELECTIVE VI

Teaching Scheme Per week		Credit	Examination Scheme				Total
Lecture/ week - L	01		Theory Exam		Practical oral exam		
Practical/Studio -P/S	--	--	ISE	ESE	ICA	ESE	
Total	01	01	--	--	50	--	50

The student will opt for any one of the following courses

Architectural Journalism, Earthquake Resisting Structure, Basics of Archaeology
A. ARCHITECTURAL JOURNALISM
Course Objective:

1. It introduces students to the fundamentals of writing, explaining of various strategies
2. Introduction to Photojournalism and the contributions of photography to the professional their criticism.
3. Practice of architecture and develop proficiency in this art using modern photography techniques.

Course Outcome:

After successful completion of this course, student shall be able to:

1. Apply knowledge on fundamentals of writing, explaining of various strategies and design narratives.
2. Exhibit understanding of Contemporary Architectural Journalism by the students.
3. Apply knowledge on Regional, National, and international discussion forums.
4. Exhibit understanding of Photojournalism and the contributions of photography.

B. EARTHQUAKE RESISTING STRUCTURES
Course Objective:

1. To introduce the fundamentals of earthquake and the basic terminology
2. To provide basic knowledge of earthquake resistant design concepts
3. To inform the performance of ground and buildings.
4. To familiarize the students with design codes and building configuration
5. To understand the various types of construction details to be adopted in a seismic prone area.
6. To apply the knowledge gained in an architectural design assignment

Course Outcome:

After successful completion of this course, student shall be able to:

1. Develop ability to understand the formation and causes of earthquakes
2. Design of buildings and services to resist Earthquakes.
3. Exhibit understanding of the various types of construction details to be adopted in a seismic prone area.
4. Exhibit understanding on the performance of ground and buildings in a seismic prone area.

C. BASICS OF ARCHEOLOGY
Course Objective:

The objective of the course is to emphasize the relevance and centrality of archaeology to the field of conservation. To develop an understanding of the art and science of archaeology, the management of archaeological sites, aspects of display and presentation of heritage at various scales and most importantly the integration of archaeological sites with living habitats.

Course Outcome:

After successful completion of this course student shall be able to;

1. Exhibit understanding on basics of the nature, development and value of archaeology as a discipline.

As, Katgunte




B. Arch Sem-VI
21 AR6 – 01: ARCHITECTURAL DESIGN – VI

Teaching Scheme Per week		Credit	Examination Scheme					
Lecture/ week - L			Theory Exam		Practical oral exam		Total	
Practical/Studio P/S	-	06	06	ISE	ESE	ICA	ESE	
Total		07	07	--	--	100	150	250

Course Objective:

1. To introduce students with the fundamental concepts of services and its integration in vertical planning in design process.
2. To develop the proficiency to integrate landscape planning in high-rise, vertical planning for public buildings and design.
3. To learn the approach of design public building considering various parameter of design along with knowledge gained in previous semester.
4. To develop acquaintance with social, economic, climatic, geographical context to design multifunctional high-rise/ vertical public domain buildings of function like, intuitional project, administration service-oriented building

Course Outcome:

At the end of semester students shall be able to

1. Exhibit understanding of fundamental concepts of services and its integration in vertical planning in design process.
2. Apply the proficiency to integrate landscape planning in high-rise, vertical planning for public buildings and design.
3. Use relevant application to design public building considering various parameter of design along with knowledge gained in previous semester.
4. Apply acquainted knowledge of social, economic, climatic, geographical context to design multifunctional high-rise/ vertical public domain buildings of function like, intuitional project, administration service-oriented building.

For,
Kalyanika




21 AR6-02: BUILDING CONSTRUCTION AND MATERIAL-VI

Teaching Scheme Per week		Credit		Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total	
Practical/Studio P/S	04	04	ISE	ESE	ICA	ESE		
Total	05	05	---	---	100	150	250	

Course Objective -

1. To help students to understand the construction of underground structure and preventive measures against dampness, soil retention etc.
2. Construction with specific reference to retaining soil.
3. To develop student's analytical skill in facade development by curtain wall and cladding.
4. To develop analytical and logical sequence in thinking, through site visit & material study.
5. To study the construction system for vertical means of transport.
6. To study the construction system adopted for low cost and sustainable practices.

Course Outcome –

At the end of semester student able to exhibit understanding on

1. Construction of underground structure and preventive measures against dampness, soil retention etc.
2. Construction with specific reference to retaining soil.
3. Analytical skill in facade development by curtain wall and cladding.
4. Analytical and logical sequence in thinking, through site visit & material study.
5. The construction system for vertical means of transport.
6. The construction system adopted for low cost and sustainable practices.




21AR6-03 THEORY OF STRUCTURE – VI

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	02	02	Theory exam		Practical/Oral exam		Total
Practical/Studio(P/S)	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	----	----	100

Course Objective:

1. To help students to understand and analyze the behavior of RCC structural members like footings, staircases, retaining wall, water tank by limit state method using IS 456-2000. (The students are allowed to carry IS 456-2000 and IS 3370 with themselves in exam halls)

Course Outcome:

By the end of the term, the student develops skills

1. to analysis and design RCC structural members like retaining walls, Pile Foundation, combine footing and water tanks by limit state method using IS 456-2000.




21 AR6-04: WORKING DRAWING- I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L			Theory Exam		Practical oral exam		Total
Practical/Studio - P/S	03	03	ISE	ESE	ICA	ESE	
Total	04	04	--	--	50	100	150

Course Objective:

1. To enable the students, understand the significance of working drawings from the view point of executing the work on site
2. To make students familiar with the components of tender document and prepare working drawings for an architectural Load bearing project.

Course Outcome:

By the end of the term students should be equipped

1. To prepare working drawings for an architectural Load bearing project necessary for execution on site and understand its importance in tender document





21 AR6-05: URBAN PLANNING

Teaching Scheme per week		Credits		Examination scheme			
Lecture (L)	02	02	Theory exam		Practical/Oral exam		Total
Practical/Studio (P/S)	--	--	ISE	ESE	ICA	ESE	
Total	02	02	30	70	----	----	100

Course objective -

1. This course is proposed to impart knowledge of Town and regional aspects of planning.
2. The process of town planning factors affecting city planning and procedures involved,
3. To understand how foresighted city planning will meet present as well as future social, cultural and economic requirements.

Course Outcome:

At the end of semester students should develop understanding on

1. Evolution of Town Planning and Trends in urbanization in post-independence India;
2. Development plans, Urban and Rural Housing, Zoning and other regulations
3. Land-use planning and zoning
4. Infrastructure in city planning




21 AR6 – 06: ESTIMATING SPECIFICATIONS AND COSTING – I

Teaching Scheme per week		Credits	Examination scheme				
Lecture (L)	03	03	Theory exam		Practical/Oral exam		Total
Practical/Studio(P/S)	--	--	ISE	ESE	ICA	ESE	
Total	03	03	30	70	----	----	100

Course Objective:

1. This subject enables students to understand procedure of detailed estimate for simple load bearing structure (excluding reinforcement details) and gives an idea about financial aspect of construction of buildings.

Course Outcome:

By the end of term, the student will be equipped

1. To prepare detailed estimate for simple load bearing structure (excluding reinforcement details) along with determination of final project cost of building considering all required aspects.

For,
Kalyanika




21 AR6-07: BUILDING SERVICES – IV

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week	- L		Theory Exam		Practical oral exam		Total
Practical/Studio	-	-	ISE	ESE	ICA	ESE	
P/S							
Total	02	02	30	70	--	--	100

Course Objective:

1. The main objective is to make students familiar with various types of waste, their treatment and disposal.
2. To enable students to understand various methods of Sewage disposal – Natural and Artificial Method.
3. To enable them to understand maintenance and disposal of refuse in high rise buildings and methods of design of Swimming pool and details.

Course Outcome:

The end of semester student should develop understanding about –

1. Sewage Treatment plant and its layout, Waste water treatment plant.
2. Disposal of Sewage in Un sewerred areas.
3. Methods of design and construction of Swimming pool and details.




21 AR6 – 08: SITE PLANNING

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	--		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	- 03	03	ISE	ESE	ICA	ESE	
Total	03	03	--	--	100	---	100

Course Objective:

1. To introduce students influencing factors which governs the siting of building/ group of buildings in a given site along with integration of renewable energy systems as per ECBC.

Course Outcome:

By the end of the course student should be able to:

1. Prepare site analysis diagram and mapping based on site utilities, infrastructure
2. Prepare building siting and planning according to analysis done




21 AR6 – 09: ELECTIVE VII

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01	01	Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	01	01	--	--	50	--	50

The student will opt for any one of the following courses

Prefabricated Construction, Digital Graphics and Arts, Road Safety and Civic Sense

PREFABRICATED CONSTRUCTION
Course Objective:

1. To understand application of provisions of National Building Code [India] or any other such case example with respect to modular coordination in building design and standardization of building units & components
2. To understand application of prefabrication principles and processes as may be followed in small scale in a project site
3. To understand application of principles of specifying tolerances for building units & components
4. To understand application of construction techniques for different types of cost effective & environment friendly technologies of building construction (partial prefabrication/pre-casting).

Course Outcome:

After successful completion of this course, student should be able to:

1. Do layout of factory and stages of loading in precast construction.
2. Apply acquaint knowledge about panel systems, slabs, connections used in precast construction and will be in a position to design the elements.
3. Apply acquaint knowledge about types of floor systems, stairs and roofs used in precast construction.
4. Apply acquaint knowledge about types of walls used in precast construction, sealants, design of joints.

B. DIGITAL GRAPHICS AND ART
Course Objective:

1. To equip students with digital and 3D presentation techniques

Course Outcome:

After successful completion of this course:

1. Students will become conversant of communication through digital presentations.
2. Students will explore digital art.

C. ROAD SAFETY AND CIVIC SENSE
Course Objective:

1. To introduce the concepts, principles, tools and aids of Road Safety and Civic Sense to the students.
2. To acquaint them with the design and safety standards for roads.
3. To inculcate the practice of safe road behaviour and civic sense among them.

Course Outcome:

After successful completion of this course students shall be:





1. Apply concepts, principles, tools and aids of Road Safely and Civic Sense in design.
2. Able to inculcate the practice of safe road behaviour and civic sense among them.
3. Better citizens and respond to urban design challenges.

21 AR6 – 10 : ELECTIVE VIII

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture/ week - L	01		Theory Exam		Practical oral exam		Total
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	01	01	--	--	50	--	50

The student will opt for any one of the following courses

Hospitality Design, Disaster Mitigation and Management, Architectural Design with Structural Steel

A. HOSPITALITY DESIGN
Course Objective:

1. To develop a comprehensive understanding of the specialized nature of services, and infrastructure provisions required for a hotels and restaurant design and planning

Course Outcome:

After successful completion of this course, student should be able to

1. Design for various typologies in the hospitality sector.

A. DISSASTER MITIGATION AND MANAGEMENT
Course Objective:

1. To acquaint students about natural disasters, reasons of their occurrence and
2. Basic Knowledge of disaster management, mitigation and techniques for post disaster monitoring and design.

Course Outcome:

After successful completion of this course, student should be able to:

1. Exhibit understanding of various types of occurrences of disaster and their mitigation through design interventions.
2. Exhibit understanding of post disaster recovery and rehabilitation

ARCHITECTURAL DESIGN WITH STRUCTURAL STEEL
Course Objective:

1. To introduce the design potential of steel as an important material in modern construction and familiarize the students with the structural merits and limitations of steel.
2. To make students familiar to advance applications of steel in buildings.

Course Outcome:

By the end of semester students shall be able to deal with

1. The application of steel as structural material and its use in buildings of simple and complex nature.
2. Advance applications of steel in buildings.





Syllabus pattern -(2015 PATTERN)

YEAR & SEM- B. ARCH IV SEM VII & SEM VIII

AR 7 – 01: ARCHITECTURAL DESIGN –VII

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam		Practical / Oral Exam		Total
Practical/Studio	P/S	08	04	ISE	ESE	ICA	ESE	
Total		08	04	--	--	150	100	250

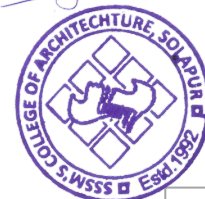
Course Objective:

1. To develop proficiency to design complex buildings and campus involving analytical study of space, economical climatic and cultural context
2. To develop the understanding of various fundamental concepts involved in architectural design, including function, construction, material, climate, social, cultural and economic factors, interior and landscape planning, services etc.
3. To learn the approach of designing of various public buildings, special purpose buildings, intuitional building, sports and building for entertainment
4. To learn to develop multilayer approach in design process involving user end comfort involving knowledge of allied subjects

Course Outcome

At the end of the course student should be able to

- 1.To develop proficiency to design complex buildings and campus involving analytical study of space, economical climatic and cultural context
- 2.To exhibit understanding of various fundamental concepts involved in architectural design, including function, construction, material, climate, social, cultural and economic factors, interior and landscape planning, services etc.
- 3.To design the programme for of various public buildings, special purpose buildings, intuitional building, sports and building for entertainment
- 4.To use relevant application for design of multilayer approach in design process involving user end comfort involving knowledge of allied subjects





AR7 – 02: Professional Practice – I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L			Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	--	ISE	ESE	ICA	ESE	
Total		03	30	70	---	---	100

Course Objective:

To make the students familiar with

1. Architecture as a profession, its duties, responsibilities and liabilities covering topics such as, Architecture as a professional practice, its duties, responsibilities and liabilities, Tender, Contract: etc
2. Able to know scope & avenues of Professional Architectural services and the demands & mode of Professional Practice field.
3. Students will be made familiar with the Council of Architecture, Architect's Act,
4. To learn Architect's office administration, documentation & other procedures of office along with the Laws applicable to Architects

Course Outcome

At the end of course, the student will be able to understand

1. The role & stature of the Architect in the society and understand duties, liabilities, responsibilities & ethics as a professional.
2. Able to apply the concepts of the scope & avenues of Professional Architectural services and the demands & mode of Professional Practice field.
3. Students will exhibit understanding of the Council of Architecture, Architect's Act,
4. To apply the concepts of Architect's office administration, documentation & other procedures of office along with the Laws applicable to Architects
5. Architecture as a professional practice, its duties, responsibilities and liabilities, Tender, Contract: etc





AR7 – 03: WORKING DRAWING II

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L	--	---		Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	04	2	ISE	ESE	ICA	ESE	
Total		04	2	---	----	100	50	150

Course Objective:

- 1.This subject introduces the student's methodology of preparation of working drawing of RCC structure based on the principle of interpretation and reading of drawings for execution.
- 2.They will be able to transfer site data on drawing through survey.

Course Outcome

PART – I- Working drawing for R.C.C. Framed structure of previous design problem with min. G+1 structure, minimum area of 400 sq.m. And above.

PART – II -Measure drawing showing basic plan, sections and details of small structure (group activity)





AR7- 04: Project -I

ARCHITETURAL DESIGN DISSERATATION)

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	02	01	ISE	ESE	ICA	ESE	
Total		02	01	--	---	50	50	100

Course Objective:

1. The course is designed to discover, frame and develop a Proposal for Project, the problem itself with appropriate title and Synopsis i.e., reasons for selecting that particular problem.
2. The objective is to expand the scope and focus of the student by introducing diverse topics in architecture and to nurture design/research projects that can make creative and technically competent contributions to the field of architecture.

Course Outcome

The final outcome shall include a formal submission of

1. Written Synopsis (key ideas on the topic including premise, description/ justification and conclusion) and
2. Thesis Proposal, clearly highlighting/explaining the Project type; architectural Proposition/ Premise; Site/ Location; Scope and Limitations; Program.





AR 7-05: Building Construction & Material –VII

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	06	03	ISE	ESE	ICA	ESE	
Total		6	03	--	---	100	50	150

Course Objective:

1. To study Advanced construction Methods with focus on super structure and services like fire Escape, disaster managements including Earthquake.
2. To introduce students to concept of Vertical communication in the buildings, fire safety in buildings,
3. to acquaint students to various principles of low cast building material and technology and various research organizations working on it.
4. Use of various false ceiling materials, sound insulating materials, epoxy materials their applications in building industry.
5. Industrial interaction with various companies and vendors in the market
6. To develop analytical and logical sequence in thinking, through site visit & material study.

Course Outcome

At the end of semester student able to

1. Exhibit understanding of various technologies adopted in construction of large span structures, earthquake resisting structures, building repair and maintenance and demolition of structures.
2. Vertical communication in the buildings, fire safety in buildings,
3. To apply acquainted knowledge of principles of low cast building material and technology and various research organizations working on it.
4. To use relevant applications of various false ceiling materials, sound insulating materials, epoxy materials their applications in building industry.





AR7-06: THEORY OF STRUCTURE VII

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam	Practical / Oral Exam	Total		
Practical/Studio	P/S	--	--	ISE	ESE	ICA	ESE	
Total		03	03	30	70	--	---	100

Course Objective:

Students will be made familiar with design of

1. Study of different types of slabs
2. Study of different types of pile foundations
3. Design of water tanks
4. Study of shells and plates
5. Study of different prestressing techniques
6. Study of gantries and cranes
7. Study of frames
8. Study of earthquake resistant construction techniques

Course Outcome

At the end of the semester students will exhibit understanding on

1. Study of different types of slabs, different types of pile foundations and study of shells and plates
2. Design of water tanks
3. apply the concepts of different prestressing techniques
4. apply the concepts of gantries and cranes and of frames
5. apply the concepts of earthquake resistant construction techniques

For,
Kalyanika





AR7- 07: ESTIMATING SPECIFICATIONS AND COSTING - II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L			Theory Exam		Practical / Oral Exam		Total
	04	04					
Practical/Studio	P/S	--	ISE	ESE	ICA	ESE	
Total	04	04	30	70	---	---	100

Course Objective:

1. The subject enables the student to prepare outline specifications and approximate and detailed estimates for simple buildings and gets an idea about financial aspect of construction of buildings.
2. Prepare outline specification, estimates for RCC buildings.
3. To enable students to get an idea about tenders and contract.

Course Outcome

At the end of semester student will be able to exhibit understanding on

1. To prepare estimate calculating detailed quantities of building items of building plan using current D.S.R.
2. Prepare outline specification, estimates for RCC buildings.
3. To enable students to get an idea about tenders and contract

For,
Katyavale





AR7 -08: ENVIRONMENTAL DESIGN

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	05	2.5	ISE	ESE	ICA	ESE	
Total		05	2.5	--	---	100	50	150

Course Objective:

1. The main aim shall be to integrate design with environmental concerns in totality involving design and use concerned with climate and using low-cost materials, recycling, waste management and ideas for energy sensitive settlements for sustainable development.

Course Outcome

At the end of the semester student will gain knowledge about

1. To exhibit understanding of existing immediate Environmental and analyse it.
2. To exhibit understanding of Morphological approach of study of existing pocket of city.
3. To use relevant application for volumetric analysis and building bye laws.
4. Apply reliability for Planning of residential areas.




B. ARCH SEM-VIII AR8 -01: Project II

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L				Theory Exam		Practical / Oral Exam		Total
Practical/Studio	P/S	08	4	ISE	ESE	ICA	ESE	
Total		08	4	--	---	150	150	300

Course Objective:

1. The intent is to encourage new ideas/ research avenues/ design experimentation in architecture to provide a larger framework within which systematic Research on a chosen topic can be undertaken; to develop a proposition, narrative and methodology for the chosen topic which can be tested through design in X Semester.
2. The Architectural Design Project shall consist of Design Demonstration i.e., formulation of design programme, site investigation and site selection and site analysis, Design Concept and Conceptual Drawings.

Course Outcome

. At the end of semester students shall be able

1. To culminate the undergraduate studies and shall display the capability of the candidate to conceive/ formulate a design project and provide solution.
2. It shall consist of Design Demonstration i.e., formulation of design programme, site investigation and site selection and site analysis, Design Concept and Conceptual Drawings.
3. To apply acquainted knowledge to prepare an Independent conceptual solution to the programme finalized by the student in semester VII.





AR8 – 02: Professional Practice II

Teaching Scheme Per week		Credit		Examination Scheme				
Lecture - L	03	03		Theory Exam	Practical / Oral Exam		Total	
Practical/Studio	P/S	--	---	ISE	ESE	ICA	ESE	
Total	03	03		30	70	---	---	100

Course Objective:

1. To make the students familiar with Architecture as a profession, its duties, responsibilities and liabilities covering topics such as Arbitration, Land acquisition, Easements, Building Byelaws etc
2. Able to know scope & avenues of Professional Architectural services and the demands & mode of Professional Practice field.
3. Students will be made familiar with the Council of Architecture, Architect's Act,
4. Architectural competitions & other allied professional organizations.
5. To learn Architect's office administration, documentation & other procedures of office along with the Laws applicable to Architects

Course Outcome

At the end of semester, the student shall be able to

1. To get acquainted with the role & stature of the Architect in the society and understand duties, liabilities, responsibilities & ethics as a professional.
2. To know scope & avenues of Professional Architectural services and the demands & mode of Professional Practice field.
3. Use relevant application in Architect's office administration, documentation & other procedures of office along with the Laws applicable to Architects.
4. Familiarize with the Council of Architecture, Architect's Act,
5. Exhibit understanding on Architectural competitions & other allied professional organizations.





AR 8 – 03: PROJECT MANAGEMENT

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	04	04	Theory Exam		Practical / Oral Exam		Total
Practical/Studio	P/S	--	---	ISE	ESE	ICA	ESE
Total	04	04	30	70	---	---	100

Course Objective:

1. To help the students in understanding programming and management of a project, labor, tools and equipment.
2. To learn basic fundamental concepts of management.
3. To get acquainted with Characteristics of projects and different aspects of management.
4. To learn Traditional Management system Gantt's approach, load-charts, progress-chart, bar-chart,
5. To learn use of computer and programming in project management

Course Outcome

At the end of course students shall be

1. Exhibit the understanding fundamental concepts, of Project Management.
2. To apply the acquainted knowledge to various characteristics of projects and different aspects of management.
3. Traditional Management system Gantt's approach, load-charts, progress-chart, bar-chart, merits and limitations.
4. To apply suitable concepts of project programming.
5. To Use of computer and programming in project management.





AR8- 04: ELECTIVE – I

Teaching Scheme Per week			Credit	Examination Scheme				
Lecture - L	---	---	---	Theory Exam		Practical / Oral Exam		Total
Practical/Studio	P/S	04	02	ISE	ESE	ICA	ESE	
Total		04	02	---	---	100	100	200

The student will opt for any one of the following Subject-
The electives offered are

Valuation of immovable properties
Course Objective: -

1. To develop an understanding of Principles of Valuation
2. To acquaint students how valuation is done for properties and land in the profession.
3. To acquaint student an elementary grasp of valuation of the immovable property

Course Outcomes-

After successful completion of this course, student will be able to:

1. Apply acquainted knowledge of valuation of properties and land in the profession
2. Apply acquainted knowledge of the basic approaches of valuation of the immovable property.

Contemporary architecture
Course Objective:

1. To acquaint students with contemporary architecture from the 1960s to the present, and to provide an understanding and appreciation of contemporary issues and trends in Indian and western architecture in terms of ideas and directions.

Course Outcomes-

After successful completion of this course, student will be able to:

1. Apply acquainted knowledge of contemporary issues, trends in Indian and Western Architecture in terms of ideas and directions

waste water management
Course Objective:

1. To Understand issues related to Waste water Management, Processes Treatment types
2. To Understand Conventional and Non-conventional treatment systems

Course Outcomes-

After successful completion of this course, student will be able to:

1. Exhibit understanding on water management plan in small building and reuse of waste water
2. Exhibit understanding on Waste water Management, Processes Treatment types: Conventional and Non-conventional treatment systems.





AR8- 05: ELECTIVE –II

Teaching Scheme Per week			Credit	Examination Scheme				Total
Lecture - L		--		Theory Exam		Practical / Oral Exam		
Practical/Studio	P/S	04	02	ISE	ESE	ICA	ESE	
Total		04	02	---	---	100	100	200

The student will opt for any one of the following Subjects. The electives offered are Design with Climate, Architectural Conservation, Intelligent Building

Design with Climate

Course Objective:

1. To Study Bio climatic design strategies and its problems confronting architectural design considering the different aspects of climate various methods & techniques for controlling solar radiation.
2. To study the energy efficiency in buildings through solar passive design.

Course Outcomes-

After successful completion of this course, student will be able to:

1. Evaluate the practices in solar passive design and climate responsive design
2. Apply acquainted knowledge of sizing and calculations of Bioclimatic Design Strategies.
3. Apply concepts in design with respect to context and local climate.

Architectural Conservation

Course Objective:

1. To acquire comprehensive understanding about architectural conservation.
2. To introduce students the role of conservation architects.
3. To learn types and methodology of architectural conservation.

Course Outcomes-

After successful completion of this course, student will be able to:

1. Demonstrate comprehensive understanding about architectural conservation.
2. Exhibit understanding of conservation architects in historic buildings.
3. Apply different ways and methodology of architectural conservation.

C. Intelligent Building

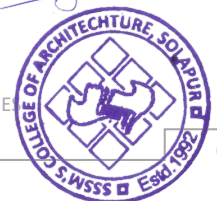
Course Objective:

1. To introduce students to the fundamental concept of building automation and understand the issues related to the control system in a building.

Course Outcomes-

After successful completion of this course, student will be able to:

1. Apply the concepts studied in their plans.
2. Apply the concepts of computerized control systems, network designed to monitor and control various systems for lighting, ventilation, alarms & security in their Architectural Design.




Pattern - (2015 PATTERN)
B.Arch Sem -IX
AR9- 01: PROFESSIONAL TRAINING

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L			Theory Exam	Practical / Oral Exam		Total	
Practical Training with COA Registered Architect P/S	40	20	ISE	ESE	ICA	ESE	
Total	40	20	--	--	200	200	400

Course Objective:

1. The purpose of this study is to expose students to the practices carried out in an Architect's office.
2. Starting from the conceptual drawings and to end up with the all working details on the same which could be carried out for execution.
3. Here student shall learn practical application of knowledge acquired by him through the process of curriculum

Course Outcome:

At the end of the course student shall be able to

1. Apply and exhibit the understanding in real life situation of Professional Practice and to work with Ethical and professional responsibilities.
2. To continually read, discuss, clarify further and engage with their chosen topics through IX Semester (Professional Training).
3. To use relevant knowledge learned from the field/ industry into the chosen topic and
4. To apply acquainted knowledge in designing and detailing in the Architectural Design Project in the X Semester.





B.Arch Sem-X

AR10- 01: STRUCTURAL THESIS

Teaching Scheme Per week			Credit	Examination Scheme				Total
Lecture - L				Theory Exam	Practical / Oral Exam			
		--	--					
Practical/Studio	P/S	10	5	ISE	ESE	ICA	ESE	
Total		10	5	--	--	100	100	200

Course Objective:

1. To develop the proficiency skills to design
2. Design the RCC structural elements of one G+2 storey frame structure.
3. Design the structural steel elements of any structural steel building

Course Outcome:

By the end of the course students shall be

1. To do analysis and structural design of each structural component of building along with structural drawings.
2. A report including all design data, analysis and structural design along with structural drawings.





AR10- 02: PROJECT – III

Teaching Scheme Per week			Credit	Examination Scheme				Total
Lecture - L	--	--	--	Theory Exam		Practical / Oral Exam		
Practical/Studio	P/S	10	5	ISE	ESE	ICA	ESE	
Total		10	5	--	--	200	200	400

Course Objective:

1. To demonstrate an ability to comprehend the nature of architectural problem & create a brief which sets the frame work for design.
2. To provide an opportunity to the students to apply the knowledge and skills gained in earlier years to a full-fledged Architectural Design project of student's choice with a holistic approach including background research, programme formulation, site selection investigations and design demonstration.
3. To demonstrate an advanced level design ability.

Course Outcome:

After successful completion of the course, student shall be able to

1. Showcase the knowledge gained in all the semester.
2. Display the capability to conceive/ formulate a design project and provide solution, aptly demonstrated through supporting research.
3. Prepare set of presentation drawings, working drawings, detailed drawings and study model are part of the requirements for submission.

