Koneru Lakshmaiah Education Foundation
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Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in
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DEPARTMENT OF ARCHITECTURE

PROGRAM DEVELOPMENT DOCUMENT

PROGRAM NAME: BACHELOR OF ARCHITECTURE

2025-2026

Vision of University:

To be a globally renowned university.

Mission of University:

To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.

Vision of Department:

To be globally renowned School for Architectural education, fostering innovation, research and sustainability.

Mission of Department:

To impart quality architectural education by integrating technology, sustainability, and critical thinking, fostering research, innovation, and ethical leadership to address societal needs while enabling architects to be globally competitive, socially responsible, and value-driven professionals.

Mission statements:

M1: Education & Learning – To create a dynamic, interdisciplinary learning environment integrating cutting-edge architectural skills, technology, and sustainability.

M2: Research, Innovation & Skill Development – To foster critical thinking, creativity, and innovation in architectural design and research.

M3: Industry & Community Engagement – To enhance employability and global academic progression through industry collaboration and advanced learning methodologies.

M4: Leadership, Ethics & Social Responsibility – To cultivate entrepreneurial and leadership abilities while promoting ethical and sustainable architectural practices for societal impact.

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Academic Goals:

G1: To offer academic flexibility by means of Choice based credit systems and the like.

G2: To identify and introduce new specializations and offer programs in emerging areas therein.

G3: To incorporate into the curriculum the Application orientation and use high standards of competence for academic delivery.

G4: To design and implement educational system adhering to outcome based international models.

G5: To introduce and implement innovation in teaching and learning process to strengthen academic delivery.

G6: To offer academic programs at UG, PG, doctoral, post-Doctoral which are industry focused, and incorporate Trans-discipline, inter-discipline aspects of the education system.

G7: To deliver higher education that includes technologies and meeting the global requirements.

Program Educational Objectives (PEOs):

PEO1. Should be able to excel in design, technology, and management, establishing themselves as skilled professionals in architecture and related disciplines.

PEO2. Acquire leadership capabilities to Lead projects, manage firms, or establish independent architectural practices with business acumen, innovation, and social responsibility.

PEO3. Engage in continuous learning through research, higher education, and professional development to contribute to the evolving field of architecture.

Program Outcomes (POs):

PO1. Ability to comprehend architecture as a language, integrating aesthetics, fine arts, function, and technology into built environment.

PO2. Analyze interaction between buildings, people, and environment for human-centric, inclusive and barrier-free designs for universal usability.

PO3. Apply contextual, historical, and cultural knowledge to contemporary design, heritage conservation, and urban spaces.

PO4. Utilize digital tools, and building services, construction technologies for innovative and interdisciplinary architectural design solutions.

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PO5. Apply structural principles, material knowledge, and construction techniques for sustainable, regenerative architecture, energy efficiency and resilient architecture

PO6. Develop site-responsive architectural solutions considering spatial efficiency, climate change adaptation, climate resilience, and resources conservation.

PO7. Integrate financial, project management, and legal frameworks into architectural practice and administration.

PO8. Apply ethical responsibility, professional judgment, and legal compliance in architecture while fostering leadership and entrepreneurship skills.

PO9. Recognize the need and engage in research, multidisciplinary learning, industry interface, and foreign languages for global competency.

PO10. Function effectively as an individual and as a member in co-curricular, extracurricular, and societal enrichment activities, to enhance leadership and teamwork skills.

MAPPING OF ACADEMIC GOALS WITH MISSIONSTATEMENTS:

Academic Goals	Mission Statements			
	M1	M2	M3	M4
G1	✓		✓	
G2	✓	✓	✓	
G3		✓	✓	✓
G4	✓		✓	
G5		✓	✓	
G6		✓	✓	✓
G7			✓	

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PEOs	ACADEMIC GOALS						
	G1	G2	G3	G4	G5	G6	G7
PEO1	✓	✓			✓		✓
PEO2			✓	✓		✓	✓
PEO3	✓	✓	✓	✓	✓	✓	✓

MAPPING OF PEO'S WITH ACADEMIC GOALS:

MAPPING OF PEOS WITH MISSION STATEMENTS OF THE DEPARTMENT:

S.NO	Description of PEOs	Key Components of Mission			
		M 1	M 2	M 3	M 4
PEO 1	Should be able to excel in design, technology, and management, establishing themselves as skilled professionals in architecture and related disciplines.	✓		✓	✓
PEO 2	Acquire leadership capabilities to Lead projects, manage firms, or establish independent architectural practices with business acumen, innovation, and social responsibility.		✓	✓	✓
PEO 3	Engage in continuous learning through research, higher education, and professional development to contribute to the evolving field of architecture.	✓	✓		

MAPPING OF POs/PSOs with PEOs:

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S.NO	Key Components of POs and PSOs	Should be able to excel in design, technology, and management, establishing themselves as skilled professionals in architecture and related disciplines.	Acquire leadership capabilities to Lead projects, manage firms, or establish independent architectural practices with business acumen, innovation, and social responsibility.	Engage in continuous learning through research, higher education, and professional development to contribute to the evolving field of architecture.
		PEO1	**PEO2**	**PEO3**
PO 1	Ability to comprehend architecture as a language, integrating aesthetics, fine arts, function, and technology into built environment.	✓		✓
PO 2	Analyze interaction between buildings, people, and environment for human-centric, inclusive and barrier-free designs for universal usability.		✓	✓
PO 3	Apply contextual,	✓	✓	

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	historical, and cultural knowledge to contempor ary design, heritage conservati on, and urban spaces.			
PO4	Utilize digital tools, and building services, construction technologies for innovative and interdisciplinary architectural design solutions.	✓	✓	
PO5	Apply structural principles, material knowledge, and construction techniques for sustainable, regenerative architecture, energy efficiency and resilient architecture		✓	✓
PO6	Develop site-responsive architectural solutions considering spatial efficiency, climate change adaptation, climate	✓	✓	

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	resilience, and resources conservation.			
PO7	Integrate financial, project management, and legal frameworks into architectural practice and administration.	✓	✓	
PO8	Apply ethical responsibility, professional judgment, and legal compliance in architecture while fostering leadership and entrepreneurship skills	✓	✓	
PO9	Recognize the need and engage in research, multidisciplinary learning, industry interface, and foreign languages for global competency.		✓	✓
PO10	Function effectively as an individual and as a member in co-curricular, extracurricular, and societal enrichment activities, to enhance		✓	

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	leadership and teamwork skills.			

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THRUST AREAS OF ARCHITECTURE			
LOCAL ***AP CRDA***	**REGIONAL** ***AP URBAN***	**NATIONAL** ***IKS and Council of Architecture***	**GLOBAL** ***UN Sustainable Development Goals***
Building Byelaws	Urban Design	Historic and Civilization Science	Sustainability
Transport Planning	Interiors	Contemporary Social / Cultural Sciences	Urbanization
	Landscape	Civil and Architectural Science	Disaster Mitigation and Management
	Housing		Architecture conservation
	Project management		Climate Responsive Architecture
			Energy Efficient & Conservation
https://crda.ap.gov.in/APCRDADOCS/GOSACTSRULES/Acts/01~0754CRDA%20Act.pdf • Chapter III 10(a) to 10(e) pg no 22 - 27	*https://www.apurban.com/* https://www.apurban.com/skillset.php Skill Set • https://www.apurban.com/admin/images/gos/GO%20132.PDF • Broad Scope, Pg.2	IKS https://iksindia.org/Details-of-IKS-Minor-Themes.pdf Pg:11, 15,16, 25 COA https://www.coa.gov.in/app/myauth/notification/COA_Minimum_Standards_of_Architectural_Education_R	SDG https://documents.un.org/doc/undoc/gen/n15/291/89/pdf/n1529189.pdf Goal 11. Sustainable cities and communities. Goal 13: Climate

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MAPPING OF NEEDS WITH MISSION STATEMENTS:

Local, Regional, National and Global Needs		Mission Statements			
		M1	M2	M3	M4
LOCAL NEEDS	BUILDING BYELAWS	✓			
	TRANSPORT PLANNING	✓	✓	✓	
REGIONAL NEEDS	URBAN DESIGN	✓		✓	✓
	INTERIORS	✓		✓	
	LANDSCAPE	✓		✓	✓
	HOUSING	✓	✓	✓	✓
	PROJECT MANAGEMENT	✓	✓	✓	✓
NATIONAL NEEDS	HISTORIC AND CIVILIZATION SCIENCE	✓	✓		
	CONTEMPORARY SOCIAL / CULTURAL SCIENCES	✓	✓		✓
	CIVIL AND ARCHITECTURAL SCIENCE	✓	✓	✓	
GLOBAL NEEDS	SUSTAINABLE ARCHITECTURE	✓	✓	✓	
	URBANIZATION	✓	✓	✓	✓
	RESILIENT AND DISASTER MITIGATION	✓	✓	✓	✓
	ARCHITECTURE CONSERVATION	✓	✓	✓	✓
	CLIMATE RESPONSIVE ARCHITECTURE	✓	✓	✓	✓
	ENERGY EFFICIENT & CONSERVATION	✓	✓	✓	✓

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COURSE OUTCOMES (COS) INTRODUCED / REVISED IN 2025-2026 CURRICULUM AS PER LOCAL, REGIONAL, NATIONAL AND GLOBAL NEEDS:

Local Needs		Course Outcome (CO)	Course Title
LOCAL NEEDS	Building Byelaws	Co1: Understand the importance of Building codes in different zones and learning about the terminologies	Building Bye laws and Real Estate 25AR3218
		Co2: Understand the different norms from National Building Code of India	
		Co3: Understand the essential requirement of local building regulations and terminology, and become familiar with concepts related to energy conservation.	
		Co4: Understand basis office procedure and management techniques in architecture	
	Transport Planning	Co1: Understand Basic elements and various category of vehicles depending upon the category of Roads exiting	Transportation Planning 25AR4224A
		Co2: Understand Various types of Circulation & Users along with their infrastructural needs.	
		Co3: Understand Road Safety & Civic Sense	
		Co4: Understand Traffic & Transportation byelaws & Regulation	

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Regional Needs		Course Outcome (CO)	Course Title
REGIONAL NEEDS	Urban Design	Co1: Understand Urban Design terminologies	Urban Design 25AR4119
		Co2: Understand Users and Activities in a city . Stakeholders roles and analysis. Different NGOs and Organization roles in developing and design Urban Spaces	
		Co3: Understand public spaces, streets & Transport	
		Co4: Understand the application of Urban Design through Case studies - national and International	
	Interiors	Co1: Apply and demonstrate proficiency in conceptualizing and executing interior design projects, integrating principles of spatial planning, aesthetics, and functionality effectively.	Interior Design Studio 25AR3264A
		Co2: Analyze advanced skills in utilizing digital tools and software to create comprehensive interior design presentations, fostering creativity and professionalism in their design solutions.	
		Co1: Understand the materials and its joinery: Timber, Bamboo. Understand the techniques, types of construction of wooden doors, windows, roofing. Understanding Cement and Concrete : Types, properties, tests, and applications in Doors, Windows, Roofing Understanding Ferrous and Non ferrous materials(Steel): Types, properties, Applications in Doors, Windows, Roofing,	Building Materials and Construction – II 25AR2157
		Co2: Apply the knowledge and draft the details of wooden & steel trusses ,RCC	

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		roofs, brick roofs, door and windows, wooden, RCC and Steel Roofs trusses as per construction industry/practice. Formwork, Shoring and Scaffolding : types and application	
		Co1: Understand the Floor Finishes, Roofing techniques like Vaults, domes and Different slab techniques like one way slab, two way slab, waffle, Bubble deck slab etc. Staircase components and types. Damp proof material and plastering	Building Materials & Construction – III 25AR2259
		Co2: Apply concrete, wooden, stone, tile, etc. for flooring. vault, dome, waffle, bubble deck, hollow core slabs, filler slab, etc. for roofing.wooden, metal, RCC, etc. for staircase types.	
	Interiors	Co1: Understanding Plastics, Glass, Aluminum, Gypsum Board, Fiber Board, particle Board as a building material: types, properties, use, principles and methods of construction. Markey Survey of the material types.	Building Materials & Construction – IV 25AR3162
		Apply the knowledge: Glass and Metal cladding of facades and building envelopes, Skylights: Fixing and fabrication details. Walls: Sandwich panel walls, PUF panels etc Partitions, False Ceiling and False Floorings: Types and Construction techniques, Construction details as per industry standards.	
	Landscape	Co1: Apply skills for a sustainable and aesthetically pleasing outdoor spaces that	Site Planning and

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		enhance the built environment .One Casestudy for practical knowledge	Landscape Studio 25AR3161
		Co2: Create a landscape design project . Minimum two projects at different level - Local, urban and incorporate different types of parameters like Sustainable landscape, Climate positive design ,Climate Responsive design etc.	
	Housing	Co1: Understand housing and Housing issues	Housing 25AR4120
		Co2: Understand Housing, 5-year plans specific to housing	
		Co3: Understand Critical Sources of Finance	
		Co4: Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends	
	Project Management	Co1: Understand the Objectives and Methods of project Management System	Building Construction and Management 25AR4223
		Co2: Understand various Tools and Techniques to facilitate efficient management of Projects	
		Co3: Analyze Project cost model and steps involved in cost optimization	
		Co4: Apply Scientific Evaluation Techniques to Manage Project Durations and resources with Examples	

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National Needs		Course Outcome (CO)	Course Title
NATIONAL NEEDS	Historic and Civilization Science	Co1: Understand Primitive Architecture and Ancient settlements in pre-Historic times and get knowledge on the Ancient River valley civilizations in the world.	History of Architecture – I 25AR1102
		Co2: Understand the Architecture and Planning of Ancient River Valley Civilizations	
		Co3: Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture	
		Co4: Understand the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture	
		Co1: Understand Vedic culture and study the origins of Early Hinduism, Jainism, Buddhism, and its rudimentary forms of construction.	History of Architecture – II 25AR1204
		Co2: Understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.	
		Co3: Understand and to get knowledge on the temple architecture and temple towns during various periods and empires in South India and North India.	
		Co4: Understand and to know the character and Architecture of temples of South India and North India in detail.	
		Co1: Understand the evolution of early Christian and Medieval periods its Architecture and socio political changes	History of Architecture – III 25AR2107
		Co2: Understand Renaissance and Mannerist Architectures and their	

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		practices in Europe, growth of nations and styles of Baroque and Rococo	
		Co3: Understand the Islamic principles philosophy & its relevance to various built forms and the influence of Islamic architecture on Indian subcontinent Architecture of various provinces under sultanate rule	
		Co4: Understand of Architectural developments during Mughal Dynasty Study of cross culture influence and evolution of secular architecture in princely states	
	Contemporary Social / Cultural Sciences	Co1: Understand the various elements of Human Settlements and the classification of Human Settlements.	Human Settlements and Planning 25AR2211
		Co2: Understand familiarize the students with Planning concepts and process in Urban and Regional Planning.	
		Co3: Understand the changing dynamics of Urban Form and its planning according to urban transformation	
		Co4: Understand the interrelationship between Human Settlements structure and Social Dynamics.	
		Co1 Apply of anthropometry, circulation patterns, standards of various facilities	Architectural Design Studio –IV 25AR2260
		Co2: Create the Design after the analysis of the rural planning, infrastructure, and settlement planning of a village (rural settlement) as per the needs of the settlement	
		Co1: Understand the Architecture and Planning of various Cities during Medieval Age. Understand the Culture and Built Forms in Pre – Independence (Colonial Rule) and Post-Independence of India.	Contemporary Indian Architecture 25AR2210

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		Co2: Understand the Theories of current Architect practices and their applicability in meeting present day Needs.	
		Co3: Understand Cubism & Constructivism along with various Building styles of Early Modern Architects. Understand Post Modernism and International Style along with Ideas and Works of Various Architects of that time	
		Co4: Understand Critical Regionalism and other alternative practices. along with Ideas and Works of Various Architects of that time. Understand Deconstructivism along with Forms, Ideas and Concepts followed by Various Architects in their works	
	Civil and Architectural Science	Co1: Understand the Vernacular Architecture, its Approaches & Concepts.	Vernacular Architecture 25AR4122B
		Co2: Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.	
		Co3: Understand the Vernacular Architectural Styles of Southern India.	
		Co4: Understand the Influence of Western world on Vernacular Architecture.	
		Co1: Understand about the basics of Conservation in India	Architectural Conservation 25AR4122A
		Co2:Understand the Conservation Practices	
		Co3: Understand the importance & analysis of Urban Conservation	
		Co4: Understand about Conservation planning & Adaptive Conservation.	

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Global Needs		Course Outcome (CO)	Course Title
GLOBAL NEEDS	Sustainability	Co1: Understand the Fundamentals of Sustainability and its impact on Environment	Sustainable Cities and Communities 25AR4121B
		Co2: Understanding the new concepts and terminologies of sustainability	
		Co3: Understand the importance of site planning and energy, water efficient landscaping as an important tool in sustainable architecture	
		Co4: Apply National and International Case studies of Sustainable Architecture through research summary on GRIHA, LEED and other Certification	
	Resilient and Disaster Mitigation	Co1: Understand the necessity for disaster management and measures that are to be followed.	Disaster Mitigation and Management 25AR4224B
		Co2: Understand the disaster preparedness and Involving Design Considerations for buildings	
		Co3: Understand the study of design considerations for disaster management and precautions.	
		Co4: Understand the Relief & Rehabilitation for Disasters	
		Co1: Understand the alternative building materials, applying cost. Effective materials and techniques to resolve environmental problems.	Appropriate Construction Technologies 25AR4121A
		Co2: Understand the indigenous construction materials and techniques for building resilience and disaster mitigation	
		Co3: Understand the materials and	

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		techniques for energy efficient building construction	
		Co4: Apply Building Information Modeling in modern construction industry	
GLOBAL NEEDS	Energy Efficient & Conservation	Co1: Understand and define key terminologies, materials, and basic concepts related to passive design, active systems, daylighting, and natural ventilation in sustainable architecture.	Green Building Rating Systems 25AR3217A
		Co2: Comprehend and apply the GRIHA rating system criteria for evaluating and designing green buildings in the Indian context.	
		Co3: Analyze and compare IGBC and LEED rating systems, and apply their principles to sustainable building projects.	
		Co4: Demonstrate the ability to use energy simulation software (eQuest) for evaluating building performance and prepare a technical report based on global case studies.	
GLOBAL NEEDS	Urbanization	Co1: Analyze the role of Services at higher scale in Urban level and apply the integration of services into intelligent sustainable building case study case study	Urban Design Studio 25AR4270
		Co2: Create High Density Urban facility as a solution to the Urban area problems, Current issues. (Project-1) Analyze the spaces, Transformation according lifestyle changes in Urban population, connectivity, and the standards of sustainable and service intensive building. Case study.Create design of a sustainable service integrated intelligent green building	

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		High Density Project. (Project 2)	
		Co1: Understand the theoretical and perceptual foundations of spatial design.	Spatial Design 25AR3217A
		Co2: Analyze spatial qualities and organization in architectural and urban contexts.	
		Co3: Apply basic principles of spatial design such as hierarchy, rhythm, sequence, and proportion.	
		Co4: Develop conceptual and physical models to explore spatial relationships.	
	Conservation	Co1: Understand about the basics of Conservation in India	Architectural Conservation 25AR4122A
		Co2:Understand the Conservation Practices	
		Co3: Understand the importance & analysis of Urban Conservation	
		Co4: Understand about Conservation planning & Adaptive Conservation.	
GLOBAL NEEDS	Climate Action	Co1: Understand of elements of climate, human comfort, and human body heat balance	Climate Responsive Architecture 25AR2106
		Co2: Understand the concept of heat transfer in buildings, sun path diagrams and designing shading devices	
		Co3: Understand air movement for designing buildings accordingly.	
		Co4: Understand climate responsive architecture through case studies.	

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Distribution of Credits

Sl No	Course Category	Short Name	No. Of courses	Credits	Contact Hours	As per COA Minimum Credits	As per ABET Credit Hours (if applicable)
1	Building Sciences and Applied Engineering	BSAE	14	48	52	52	NA
2	Professional Core Courses	PCC	15	43	43	130	NA
3	Project Research and Internship	PRI	9	96	96	Part of PC	NA
4	Professional Electives Courses	PEC	15	23	23	26	NA
5	Foreign Language	FL	3	3	3	As per University	NA
6	Professional Ability Enhancement Compulsory courses	PAECC	3	36	36	26	NA
7	Skill Enhancement Courses	SEC	4	13	13	13	NA
8	Humanities, Art & Social Sciences	HAS	12	7	14	NA	NA
9	University Courses	UC	2	4	6	NA	NA
Total			**77**	**273**	**286**	**260**	NA

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Course structure (category wise)

PROFESSIONAL CORE COURSES (PCC)

Sno	Course Code	Course Name	L	T	P	S	CR	CH	Prerequisites
1	25AR1101	THEORY OF ARCHITECTURE	3	0	0	0	3	3	Nil
2	25AR1102	HISTORY OF ARCHITECTURE - I	3	0	0	0	3	3	Nil
3	25AR1151	ARCHITECTURAL DRAWING - I	0	0	4	0	4	4	Nil
4	25AR1152	MODEL MAKING WORKSHOP	0	0	4	0	4	4	Nil
5	25AR1204	HISTORY OF ARCHITECTURE - II	3	0	0	0	3	3	Nil
6	25AR1254	ARCHITECTURAL DRAWING - II	0	0	4	0	4	4	Nil
7	25AR2107	HISTORY OF ARCHITECTURE - III	3	0	0	0	3	3	Nil
8	25AR2210	CONTEMPORARY INDIAN ARCHITECTURE	2	0	0	0	2	2	Nil
9	25AR2211	HUMAN SETTLEMENTS AND PLANNING	2	0	0	0	2	2	Nil
10	25AR3112	CONTEMPORARY WESTERN ARCHITECTURE	2	0	0	0	2	2	Nil
11	25AR3161	SITE PLANNING AND LANDSCAPE STUDIO	0	0	0	0	4	4	Nil
12	25AR3216	SPECIFICATION, ESTIMATION AND COSTING	3	0	0	0	3	3	Nil
13	25AR3218	BUILDING BY LAWS AND REAL ESTATE	2	0	0	0	2	2	Nil
14	25AR4119	URBAN DESIGN	2	0	0	0	2	2	Nil
15	25AR4120	HOUSING	2	0	0	0	2	2	Nil

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AUDIT

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25UC0009	ECOLOGY & ENVIRONMENT	2	0	0	0	0	2	Nil

BUILDING SCIENCES AND APPLIED ENGINEERING (BSAE)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25AR1203	DESIGN OF STRUCTURES - I	3	0	0	0	3	3	Nil
2	25AR1255	BUILDING MATERIALS AND CONSTRUCTION - I	0	0	4	0	4	4	Nil
3	25AR2105	DESIGN OF STRUCTURES - II	3	0	0	0	3	3	Nil
4	25AR2106	CLIMATE RESPONSIVE ARCHITECTURE	3	0	0	0	3	3	Nil
5	25AR2157	BUILDING MATERIALS AND CONSTRUCTION - II	0	0	4	0	4	4	Nil
6	25AR2208	DESIGN OF STRUCTURES - III	3	0	0	0	3	3	Nil
7	25AR2209	BUILDING SERVICES - I	3	0	0	0	3	3	Nil
8	25AR2259	BUILDING MATERIALS AND CONSTRUCTION - III	0	0	4	0	4	4	Nil
9	25AR3113	DESIGN OF STRUCTURES - IV	3	0	0	0	3	3	Nil
10	25AR3114	BUILDING SERVICES - II	3	0	0	0	3	3	Nil
11	25AR3162	BUILDING MATERIAL AND CONSTRUCTION - IV	0	0	4	0	4	4	Nil
12	25AR3215	BUILDING SERVICES - III	3	0	0	0	3	3	Nil
13	25AR4166	WORKING DRAWING - I	0	0	4	0	4	4	Nil
14	25AR4269	WORKING DRAWING - II	0	0	4	0	4	4	Nil

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PROJECT RESEARCH AND INTERNSHIP (PRI)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25AR1153	ARCHITECTURAL DESIGN STUDIO -I	0	0	9	0	9	9	Nil
2	25AR1256	ARCHITECTURAL DESIGN STUDIO -II	0	0	9	0	9	9	25AR1153
3	25AR2158	ARCHITECTURAL DESIGN STUDIO -III	0	0	9	0	9	9	24AR1256
4	25AR2260	ARCHITECTURAL DESIGN STUDIO -IV	0	0	9	0	9	9	24AR2159
5	25AR3163	ARCHITECTURAL DESIGN STUDIO -V	0	0	9	0	9	9	24AR2261
6	25AR3265	ARCHITECTURAL DESIGN STUDIO -VI	0	0	12	0	12	12	24AR3164
7	25AR4167	ARCHITECTURAL DESIGN STUDIO -VII	0	0	12	0	12	12	24AR3267
8	25AR4270	URBAN DESIGN STUDIO	0	0	12	0	12	12	24AR4168
9	25AR5272	ARCHITECTURAL THESIS	0	0	15	0	15	15	23AR5172

PROFESSIONAL ELECTIVE COURSES (PEC)

Sno	Course Code	Course Name		L	T	P	S	Ch	Cr	Prerequisites
1	25AR3217A	SPATIAL DESIGN	PE1	3	0	0	0	3	3	Nil
2	25AR3217B	GREEN BUILDING RATING SYSTEM								
3	25AR3264A	INTERIOR DESIGN STUDIO	PE2	0	0	4	0	4	4	Nil
4	25AR3264B	MODULAR CONSTRUCTION STUDIO								
5	25AR4121A	APPROPRIATE CONSTRUCTION TECHNOLOGIES	PE3	2	0	0	0	2	2	Nil
6	25AR4121B	SUSTAINABLE CITIES AND COMMUNITIES								
7	25AR4122A	ARCHITECTURAL CONSERVATION	PE4	3	0	0	0	3	3	Nil
8	25AR4122B	VERNACULAR								

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		ARCHITECTURE								
9	25AR4189A	ENVIRONMENTAL LAB	PE5	0	0	0	4	4	4	Nil
10	25AR4189B	REVIT-BIM								
11	25AR4224A	TRANSPOTATION PLANNING	PE6	3	0	0	0	3	3	Nil
12	25AR4224B	DISASTER MANAGEMENT AND MITIGATION								
13	25AR4224C	VASTU VIDYA								
14	25AR4268A	DISSERTATION	PE7	0	0	4	0	4	4	Nil
15	25AR4268B	THESIS SEMINAR								

SKILL ENHANCEMENT COURSES (SEC)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25AR2185	COMPUTER STUDIO - I	0	0	0	3	3	3	Nil
2	25AR2286	SITE SURVEY AND ANALYSIS	0	0	0	3	3	3	Nil
3	25AR2287	COMPUTER STUDIO - II	0	0	0	3	3	3	Nil
4	25AR3188	COMPUTER STUDIO - III	0	0	0	4	4	4	Nil

PROFESSIONAL ABILITY ENHANCEMENT COMPULSORY COURSES (PAECC)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25AR4223	BUILDING CONSTRUCTION AND MANAGEMENT	3	0	0	0	3	3	Nil
2	25AR5171	PRACTICAL TRAINING / INTERNSHIP	0	0	30	0	30	30	25AR4270
3	25AR5225	ARCHITECTURE PROFESSIONAL PRACTICE	3	0	0	0	3	3	Nil

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HUMANITIES ART AND SOCIAL SCIENCE (HAS)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25UC1103	LANGUAGE SKILLS	0	0	4	0	4	2	Nil
2	25UC2105	COMMUNICATION SKILLS	0	0	4	0	4	2	Nil
3	25AR3273	ACTIVITY BASED LEARNING -1 (Architectural Reading and Reflection)	0	0	2	0	2	1	Nil
4	25AR3274	ACTIVITY BASED LEARNING -1 (Architectural Project Documentation)	0	0	2	0			Nil
5	25AR3275	ACTIVITY BASED LEARNING -1 (Material to product documentation)	0	0	2	0			Nil
6	25AR3276	ACTIVITY BASED LEARNING -1 (Design project documentation)	0	0	2	0			Nil
7	25AR4277	ACTIVITY BASED LEARNING -2 (Architectural Ethnography)	0	0	2	0	2	1	Nil
8	25AR4278	ACTIVITY BASED LEARNING -2 (Creative Representation)	0	0	2	0			Nil
9	25AR4279	ACTIVITY BASED LEARNING -2 (Advanced Landscape)	0	0	2	0			Nil
10	25AR5180	ACTIVITY BASED LEARNING -3 (Advanced BCM)	0	0	2	0	2	1	Nil
11	25AR5181	ACTIVITY BASED LEARNING -3 (Low Cost Housing)	0	0	2	0			NIL
12	25AR5182	ACTIVITY BASED LEARNING -3 (URDPFI and Acts)	0	0	2	0			Nil

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FOREIGN LANGUAGE

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25FL3054	FRENCH LANGUAGE	3	0	0	0	3	3	Nil
2	25FL3055	GERMAN LANGUAGE	3	0	0	0	3	3	NIL
3	25FL3058	JAPANESE LANGUAGE	3	0	0	0	3	3	Nil

UNIVERSITY COURSE

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	25UC1203	DESIGN THINKING AND INNOVATION	0	0	4	0	4	2	Nil
2	25UC0026	HUMAN VALUES,GENDER EQUALITY AND PROFESSIONAL ETHICS	2	0	0	0	2	2	NIL

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Program Structure

Detailed structure of the program highlighting all the courses and their credits

S.No	Course code	Course name	Course Category	L	T	P	S	Cr	Ch	Pre requisites	New course/ revised course/ retained course	Focused on employability/ entrepreneurship/ skill development	Justification (Detailed Justification on how the course content maps to employability/entrepreneurship/skill category.)
1	25AR1101	THEORY OF ARCHITECTURE	PCC	3	0	0	0	3	3	Nil	Retained course	Employability	Provides the foundation for creative problem-solving and critical thinking, essential skills for success in any architecture-related field.
2	25AR1102	HISTORY OF ARCHITECTURE - I *(ANCIENT CIVILIZATION)*	PCC	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding historical design principles informs creative solutions and refines critical thinking for various architecture-related fields.
3	25AR1151	ARCHITECTURAL DRAWING - I *(BASIC GEOMETRY)*	PCC	0	0	4	0	4	4	Nil	Retained course	Skill development	It lays the foundation for spatial reasoning and technical skills essential for architectural design.
4	25AR1152	MODEL MAKING WORKSHOP	PCC	0	0	4	0	4	4	Nil	Retained course	Skill development	It directly develop practical skills in design, construction, and problem-solving.
5	25AR1153	ARCHITECTURAL DESIGN STUDIO - I	PRI	0	0	9	0	9	9	Nil	Retained course	Entrepreneurship	It can equip students with the creative problem-solving and project management skills necessary for entrepreneurial ventures in the built environment.
6	25UC1103	LANGUAGE SKILLS	HAS	0	0	4	0	2	4	Nil	Retained course	Skill development	Language Skills strengthen communication and presentation abilities, thereby enhancing employability and professional competence.

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7	25UC0009	ECOLOGY & ENVIRONMENT	AUDIT	2	0	0	0	0	2	Nil	Retained course	Employability	To inculcate Independent learning skills to the students and also to bring awareness on Environment and Ecology.
8	25AR1203	DESIGN OF STRUCTURES - I *(PLANE TRUSSES, SHEAR FORCE AND BENDING MOMENTS)*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	It equips you with the foundational knowledge to analyze and design structures, a skill highly sought after in the construction industry.
9	25AR1204	HISTORY OF ARCHITECTURE - II *(HINDU ARCHITECTURE)*	PCC	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding Hindu Architecture's rich history and symbolism can enhance design skills for projects inspired by or catering to Indian cultural contexts.
10	25AR1254	ARCHITECTURAL DRAWING - II *(3D FORMS AND COLOUR)*	PCC	0	0	4	0	4	4	Nil	Retained course	Skill development	It develops spatial visualization skills, which are valuable in many fields.
11	25AR1255	BUILDING MATERIALS AND CONSTRUCTION - I *(MASONRY)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Employability	It equips you with the skills to build structures with brick and stone, a valuable foundation for a career in construction.
12	25AR1256	ARCHITECTURAL DESIGN STUDIO -II	PRI	0	0	9	0	9	9	25AR 1153	Retained course	Entrepreneurship	It can equip students with the creative problem-solving and project management skills necessary for entrepreneurial ventures in the built environment.
13	25UC1203	DESIGN THINKING AND INNOVATION	UC	2	0	2	0	3	4	Nil	Retained course	Entrepreneurship	Design Thinking and Innovation cultivates creative problem-solving and entrepreneurial skills, enhancing employability and fostering innovation-

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S.No	Course code	Course name	Course Category	L	T	P	S	Cr	Ch	Pre requisites	New course/ revised course/ retained course	Focused on employability/ entrepreneurship/ skill development	Justification (Detailed Justification on how the course content maps to employability/entrepreneurship/skill category.)
													driven practice.
14	25UC0026	HUMAN VALUES,GENDER EQUALITY AND PROFESSIONAL ETHICS	UC	2	0	2	0	3	4	Nil	Retained course	Employability	Human Values, Gender Equality and Professional Ethics foster integrity, inclusivity, and ethical awareness, strengthening employability and responsible professional practice
15	25AR2105	DESIGN OF STRUCTURES - II *(DESIGN OF BEAMS AND COLUMNS)*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	Mastering the design of beams and columns, the building blocks of structures, strengthens your skill set for employment in civil and structural engineering fields.
16	25AR2106	CLIMATE RESPONSIVE ARCHITECTURE	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	These skills are increasingly sought after as sustainable design becomes a major focus in the construction industry.
17	25AR2107	HISTORY OF ARCHITECTURE- III *(MEDIVIAL ARCHITECTURE)*	PCC	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding Medieval Architecture's rich history and symbolism can enhance design skills for projects inspired by or catering to around the world contexts.
18	25AR2157	BUILDING MATERIALS AND CONSTRUCTION - II *(JOINERY, TRUSSES, ROOFS, FORMWORK)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Employability	It equips you with the skills to build structures with timber,bamboo,steel and RCC, a valuable foundation for a career in construction.
19	25AR2158	ARCHITECTURAL DESIGN STUDIO -III	PRI	0	0	9	0	9	9	25AR1256	Retained course	Entrepreneurship	It can connect with Entrepreneurship by exploring innovative and marketable building

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S.No	Course code	Course name	Course Category	L	T	P	S	Cr	Ch	Pre requisites	New course/ revised course/ retained course	Focused on employability/ entrepreneurship/ skill development	Justification (Detailed Justification on how the course content maps to employability/entrepreneurship/skill category.)
													solutions.
20	25AR2185	COMPUTER STUDIO - I (MS OFFICE, AUTOCAD 3D)	SEC	0	0	0	3	3	3	Nil	Retained course	Skill development	It equips students with digital literacy and technical drawing skills valuable in various careers.
21	25UC2105	COMMUNICATION SKILLS	HAS	0	0	4	0	2	4	Nil	Retained course	Skill development	Language Skills strengthen communication and presentation abilities, thereby enhancing employability and professional competence.
22	25AR2208	DESIGN OF STRUCTURES - III *(DESIGN OF FOOTINGS)*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding how to design safe and stable footings is a critical skill for civil engineers ensuring employability in building design and construction.
23	25AR2209	BUILDING SERVICES - I *(PLUMBING AND SANITATION)*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	It equips you with the skills to design, install, and maintain essential building systems, leading to high employability in construction and related fields.
24	25AR2210	CONTEMPORARY INDIAN ARCHITECTURE	PCC	2	0	0	0	2	2	Nil	New Course	Employability	Understanding contemporary architecture positions you for in-demand skills in sustainable design, heritage preservation, and catering to India's unique building needs.
25	25AR2211	HUMAN SETTLEMENT AND PLANNING	PCC	2	0	0	0	2	2	NIL	Retained course	Employability	It equip you to design functional and successful spaces, making you a valuable asset in construction, architecture, and urban planning fields.

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26	25AR2259	BUILDING MATERIALS AND CONSTRUCTION - III *(STAIRCASE,FLOORING & ADVANCED ROOFING)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Employability	Understanding flooring, and staircases builds essential skills for constructing safe and functional buildings, enhancing employability in the construction field.
27	25AR2286	SITE SURVEY AND ANALYSIS	SEC	0	0	0	3	3	3	Nil	Retained course	Skill development	These informations are targeted skill development by revealing the specific technical demands and physical environment workers encounter.
28	25AR2260	ARCHITECTURAL DESIGN STUDIO -IV	PRI	0	0	9	0	9	9	25AR 2158	Retained course	Entrepreneurship	It can equip you with the design thinking and project management skills necessary to launch your own architectural practice.
29	25AR2287	COMPUTER STUDIO - II *(IMAGE MAKING AND 3D MAKING SOFTWARE)*	SEC	0	0	0	3	3	3	Nil	Retained course	Skill development	It develops skills in creating digital content, which is valuable in many fields.
30	25AR3112	CONTEMPORARY WESTERN ARCHITECTURE	PCC	2	0	0	0	2	2	Nil	New Course	Employability	Understanding contemporary architecture positions you for in-demand skills in sustainable design, heritage preservation, and catering to India's unique building needs.
31	25AR3113	DESIGN OF STRUCTURES - IV (DETAILING OF STRUCTURAL MEMBER)	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding structural member details translates directly to designing and detailing safe, efficient buildings, enhancing your employability in the construction field.
32	25AR3114	BUILDING SERVICES - II *(ELECTRICAL,*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability -	It equips you with in-demand skills for designing comfortable,

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		AND ACOUSTICS)											safe, and energy-efficient buildings.
33	25AR3161	SITE PLANNING AND LANDSCAPE STUDIO	PCC	0	0	4	0	4	4	Nil	New Course	Employability	essential in equipping students with the practical and theoretical skills needed to design and organize land in a manner that is functional, aesthetically pleasing, sustainable, and responsive to both natural and built environments.
34	25AR3162	BUILDING MATERIAL AND CONSTRUCTION - IV *(PARTITIONS AND FALSE CEILING & FALSE FLOORINH)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Employability	Understanding steel structures, partitions, and false ceilings equips you for in-demand construction jobs involving building skeletons, interior layouts, and finishes.
35	25AR3163	ARCHITECTURAL DESIGN STUDIO -V	PRI	0	0	9	0	9	9	23AR 2261	Retained course	Entrepreneurship	It can equip students with the creative problem-solving and project management skills necessary for entrepreneurial endeavors in the design field.
36	25AR3188	COMPUTER STUDIO - III *(BUILDING INFORMATION MODELLING)*	SEC	0	0	0	4	4	4	Nil	Retained course	Skill development	It equips students with the skills to digitally design and simulate buildings, fostering a valuable skillset for the Architecture, Engineering, and Construction (AEC) industry.
37	25AR3215	BUILDING SERVICES - III *(HVAC AND FIRE SAFETY)*	BSAE	3	0	0	0	3	3	Nil	Retained course	Employability	It equips you with in-demand skills for maintaining comfortable and safe building environments, making you a valuable asset in the construction and facility

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													management industries.
38	25AR3216	SPECIFICATION, ESTIMATION AND COSTING	PCC	3	0	0	0	3	3	Nil	Retained course	Skill development	It builds essential planning and budgeting skills applicable to any industry.
39	25AR3217A	SPATIAL DESIGN	PEC-1	3	0	0	0	3	3	Nil	New course	Entrepreneurship	fundamental for developing a comprehensive understanding of how space influences human experience, behavior, and interaction.
	25AR3217B	GREEN BUILDING RATING SYSTEM		3	0	0	0	3	3	Nil	New course		essential in preparing future professionals to design, construct, and evaluate buildings that meet the growing global demand for sustainability, energy efficiency, and environmental responsibility.
40	25AR3218	BUILDING BY LAWS AND REAL ESTATE	PCC	2	0	0	0	2	2	Nil	Revised course	Entrepreneurship	Understanding building regulations and real estate helps entrepreneurs create a compliant, functional, and attractive workspace.
41	25AR3264A	INTERIOR DESIGN STUDIO	PEC-2	0	0	4	0	4	4	Nil	Retained course	Employability	It equips students with the design skills and business acumen to launch their own interior design firms.
	25AR3264B	MODULAR CONSTRUCTION STUDIO		0	0	4	0			Nil	Retained course		course addresses the urgent need for innovative, efficient, and sustainable building methods in response to global challenges such as rapid urbanization, housing shortages etc.

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42	25AR3265	ARCHITECTURAL DESIGN STUDIO -VI	PRI	0	0	12	0	12	12	23AR3164	Retained course	Entrepreneurship	It can equip students with the design thinking and project management skills necessary to become entrepreneurial architects.
43	25AR3273	ACTIVITY BASED LEARNING -1 (Architectural Reading and Reflection)	HAS	0	0	2	0	1	2	Nil	New course	Employability	Architectural Reading and Reflection enhances analytical and communication skills, thereby strengthening employability in professional practice.
	25AR3274	ACTIVITY BASED LEARNING -1 (Architectural Project Documentation)	HAS	0	0	2	0			Nil	New course		Architectural Project Documentation builds professional skills in preparing drawings and reports essential for employability in architectural practice
	25AR3275	ACTIVITY BASED LEARNING -1 (Material to product documentation)	HAS	0	0	2	0			Nil	New course		Material to Product Documentation develops practical skills in material exploration, product design, and professional documentation, enhancing employability in design and construction practice.
	25AR3276	ACTIVITY BASED LEARNING -1 (Design project documentation)	HAS	0	0	2	0			Nil	New course		Design Project Documentation enhances professional skills in presenting and communicating design work, thereby strengthening employability in architectural practice.

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44	25AR4119	URBAN DESIGN	PCC	2	0	0	0	2	2	Nil	Retained course	Employability	Urban design and transportation planning shape livable cities, creating high demand for skilled professionals to design sustainable and efficient infrastructure.
45	25AR4120	HOUSING	PCC	2	0	0	0	2	2	Nil	Retained course	Employability	The demand for professionals who design, build, and manage intelligent living spaces is driving job growth in the housing industry. architecture photography can showcase innovation, attracting clients and employers
46	25AR4121A	APPROPRIATE CONSTRUCTION TECHNOLOGIES	PEC-3	2	0	0	0	2	2	Nil	Retained course	Employability	Mastering sustainable construction practices like energy-efficient building methods opens doors to high-demand green jobs.
	25AR4121B	SUSTAINABLE CITIES AND COMMUNITIES		3	0	0	0			Nil	New course		course is crucial in preparing students to address the complex environmental, social, and economic challenges facing urban areas in the 21st century
47	25AR4122A	ARCHITECTURAL CONSERVATION	PEC-4	3	0	0	0	3	3	Nil	Retained course	Employability	Combining architectural conservation knowledge with set design skills allows for historically accurate and visually stunning set creation for film, theater, and museums.
	25AR4122B	VERNACULAR ARCHITECTURE		3	0	0	0	3	3	Nil	Retained course		
48	25AR4166	WORKING DRAWING - I *(BUILDING STRUCTURE, CIVIL AND MASONRY)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Skill development	Understanding working drawings in building structures, civil engineering, and masonry translates directly to the skills needed for construction and project execution.

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49	25AR4189A	ENVIRONMENTAL LAB	PEC-5	0	0	0	4	4	4	Nil	New course	Skill development	It is designed to provide students with essential hands-on experience in monitoring, analyzing, and understanding environmental systems.
	25AR4189B	REVIT-BIM		0	0	0	4			Nil	New course		The *Revit – BIM* course is essential for preparing students to meet the growing demands of the architecture, engineering, and construction (AEC) industries.
50	25AR4167	ARCHITECTURAL DESIGN STUDIO -VII	PRI	0	0	12	0	12	12	23AR3267	Retained course	Entrepreneurship	It can equip students with the creative problem-solving and design thinking skills necessary for entrepreneurial ventures.
51	25AR4223	BUILDING CONSTRUCTION AND MANAGEMENT	PAECC	3	0	0	0	3	3	Nil	Retained course	Entrepreneurship	Building construction and management skills provide a strong foundation for entrepreneurship in the construction industry.
52	25AR4224A	TRANSPORTATION PLANNING	PEC-6	3	0	0	0	3	3	Nil	Retained course	Employability	Understanding how people behave in disasters allows you to design interventions that promote preparedness and effective response, increasing employability in disaster management.
	25AR4224B	DISASTER MITIGATION AND MANAGEMENT		3	0	0	0			Nil	Retained course		It is critical in preparing students to understand, assess, and respond to the increasing frequency and intensity of natural and human-induced disasters in the modern world.

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	25AR4224C	VASTHU VIDYA		3	0	0	0			Nil	New Course		As global interest in traditional knowledge systems.
53	25AR4268A	DISSERTATION	PEC-7	0	0	4	0	4	4	Nil	Retained course	Skill development	It equips students with the research and writing skills necessary to navigate complex projects and effectively communicate findings, fostering lifelong learning and professional success.
	25AR4268B	THESIS SEMINAR		0	0	4	0			Nil	Retained course		
54	25AR4269	WORKING DRAWING - II *(DETAILING)*	BSAE	0	0	4	0	4	4	Nil	Retained course	Skill development	It hones the technical drawing skills crucial for clear communication and precise manufacturing in any field.
55	25AR4270	URBAN DESIGN STUDIO	PRI	0	0	12	0	12	12	25AR4167	Retained course	Entrepreneurship	It can equip students with the design thinking and place making skills needed to become entrepreneurial change makers in shaping their communities.
56	25AR4277	ACTIVITY BASED LEARNING -2 (Architectural Ethnography)	HAS	0	0	2	0	1	2	Nil	New Course	Employability	Architectural Ethnography develops analytical and research skills to understand communities and contexts, thereby enhancing employability in socially responsive design practice.
	25AR4278	ACTIVITY BASED LEARNING -2 (Creative Representation)	HAS	0	0	2	0			Nil	New Course		Creative Representation builds visual communication and presentation skills, strengthening employability in architectural and design practice.

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	25AR4279	ACTIVITY BASED LEARNING -2 (Advanced Landscape)	HAS	0	0	2	0			Nil	New Course		Advanced Landscape imparts specialized skills in sustainable landscape design and planning, enhancing employability in architectural and environmental practice.
57	25AR5171	PRACTICAL TRAINING / INTERNSHIP	PAECC	0	0	30	0	30	30	25AR 4270	Retained course	Employ ability	Practical training/internships bridge the theory-practice gap, equipping graduates with in-demand skills and workplace experience desired by employers.
58	25AR5180	ACTIVITY BASED LEARNING -3 (Advanced BCM)	HAS	0	0	2	0	1	2	Nil	New Course	Employ ability	Advanced Building Construction and Materials imparts technical expertise in modern construction systems and materials, enhancing employability in the building industry
	25AR5181	ACTIVITY BASED LEARNING -3 (Low Cost Housing)	HAS	0	0	2	0			Nil	New Course		Low Cost Housing Materials and Specifications impart practical skills for affordable construction, enhancing employability and supporting entrepreneurial opportunities in housing solutions.
	25AR5182	ACTIVITY BASED LEARNING -3 (URDPFI and Acts)	HAS	0	0	2	0			Nil	New Course		Urban and Environmental Planning – URDPFI and Acts equips students with statutory and regulatory planning knowledge, enhancing employability in urban design and planning practice.

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59	25AR5225	ARCHITECTURE PROFESSIONAL PRACTICE	PAECC		0	0	0	3	3	Nil	Retained course	Entrepreneurship	It equips you with the skills to manage projects, finances, and clients, forming a strong foundation for
60	25FL3054	FRENCH LANGUAGE	FL	3	0	0	0	3	3	Nil	Retained course	Skill development	
	25FL3055	GERMAN LANGUAGE	FL	3	0	0	0			Nil	Retained course		
	25FL3058	JAPANESE LANGUAGE	FL	3	0	0	0			Nil	Retained course		
61	25AR5272	ARCHITECTURAL THESIS	PRI	0	0	15	0	15	15	25AR5171	Retained course	Entrepreneurship	Entrepreneurial architects can bridge the gap between design vision and real-world development through innovative building solutions.

Percentage of Syllabus New Courses = (13)/61 = 21%

Percentage of Courses focusing on Employability= 32/ 61 = 52.5%

Percentage of Courses focusing on Entrepreneurship= 14/ 61 = 23%

Percentage of Courses focusing on Skill Development or Career advancement= 20/61 = 24.5%

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MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES (POs)

S.No	Course Code	Course Name	CO.No	CO Description	PO									
					1	2	3	4	5	6	7	8	9	10
1	25AR1101	THEORY OF ARCHITECTURE	CO1	Understand architecture and basics on space and form development.	2									
			CO2	Understand components of building circulation and its relation to architecture.	2									
			CO3	Understand Architectural aesthetics in designing a building & also understand the key role of principles applied in architecture.	2									
			CO4	Apply functioning of design process and its application in architectural buildings through case studies.		2								
2	25AR1102	HISTORY OF ARCHITECTURE - I	CO1	Understand Primitive Architecture and Ancient settlements in pre-Historic times and get knowledge on the Ancient River valley civilizations in the world.			2							
			CO2	Understand the Architecture and Planning of Ancient River Valley Civilizations			2							
			CO3	Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture			2							

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					1	2	3	4	5	6	7	8	9	10
			CO4	Understand the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture			2							
3	25AR1151	ARCHITECTURAL DRAWING - I	CO1	Understand the fundamentals of drawing and drafting, including construction and development of surfaces for various basic 3D shapes, as well as the representation of various building components and related elements.				2						
			CO2	Comprehend the representation of a building in plan, elevation, and sections, and be able to prepare simple measure drawings.				2						
4	25AR1152	MODEL MAKING WORKSHOP	CO1	Understand cutting and sticking for making a model, Components of detailed model, Representing hills, Plateau, water bodies, furniture's, Cars	2									
			CO2	Understand different materials and apply the acquired knowledge and create a model Independently by choosing appropriate material and techniques.	2									
5	25AR1153	ARCHITECTURAL DESIGN STUDIO - I	CO1	Understanding of the qualities of different elements as well as their composite fusions. An ability to engage and combine the elements of design in spontaneous as well as intentional ways to create desired qualities and effects	2									

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					1	2	3	4	5	6	7	8	9	10
			CO2	Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings. Understanding of 3D Composition by involving students in a number of exercises which will help generation of a form from a two dimensional / abstract idea.	2	2								
6	25UC1103	LANGUAGE SKILLS	CO1	Understand the essential listening, speaking, and reading skills										2
			CO2	Apply and produce essential writing and non-verbal communication skills										2
7	25AR1203	DESIGN OF STRUCTURES - I	CO1	Understand about the architecture and structural engineering interface. Understanding the concept of forces and structural systems.					2					
			CO2	Understand the plane trusses					2					
			CO3	Apply the techniques of shear force and bending moments in column					2					
			CO4	Apply centre of gravity and moments of inertia and its impact on the structures.					2					
8	25AR1204	HISTORY OF ARCHITECTURE - II	CO1	Understand Vedic culture and study the origins of Early Hinduism, Jainism, Buddhism, and its rudimentary forms of construction.			2							

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					1	2	3	4	5	6	7	8	9	10
			CO2	Understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.			2							
			CO3	Understand and to get knowledge on the temple architecture and temple towns during various periods and empires in South India and North India.			2							
			CO4	Understand and to know the character and Architecture of temples of South India and North India in detail.			2							
9	25AR1254	ARCHITECTURAL DRAWING - II	CO1	Understand the concepts and Scientific Methods of Perspective Drawing and apply Rendering Techniques, principles of Shade & Shadow and Construct sociography of Architectural Structures				2						
			CO2	Understand identification and measuring of specific Architectural Details of Historically significant, Buildings and the presentation techniques of drawings				2						
10	25AR1255	BUILDING MATERIALS AND CONSTRUCTION - I	CO1	Understand the material stones, bricks and Soil: Types, Properties, Challenges. Bricks: Compositions, Classifications, Alternative Bricks Stone: Stone classifications, tests, uses, preservations, Artificial stones. Concrete: Masonry	3									

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					1	2	3	4	5	6	7	8	9	10
			CO2	Apply the knowledge about the techniques of masonry and draft the types of Stone masonry, brick masonry, and Concrete block masonry. Different masonry Walls, Foundations, Lintels and Arches. To understand the basic building components of the building i.e.: Foundation to parapet wall. To study the elements of the building and their importance, to understand the sequences of construction &structural system.					2					
11	25AR1256	ARCHITECTURAL DESIGN STUDIO -II	CO1	Apply anthropometric data, conduct desktop/case study and understand collected data towards framing parameters for House design and Cafeteria Design Cafeteria Design	3	2								
			CO2	Create Architectural Details for floated design exercise floated as per the semester complexity, Buildings and the presentation techniques of drawings		2	2							
12	25AR2105	DESIGN OF STRUCTURES - II	CO1	Understanding the concept of simple stresses and strains and elastic properties of solids					2					
			CO2	Analyze the properties of structural timber and bamboo					2					
			CO3	Analyze the Design of flexure members of timber and design of simple truss.					2					
			CO4	Understand Structural properties of brick masonry and analysis					2					

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13	25AR2106	CLIMATE RESPONSIVE ARCHITECTURE	CO1	Understanding of elements of climate, human comfort, and human body heat balance						2				
			CO2	Understanding the concept of heat transfer in buildings, sun path diagrams and designing shading devices						2				
			CO3	Understanding air movement for designing buildings accordingly.						2				
			CO4	Understanding climate responsive architecture through case studies.						2				
14	25AR2107	HISTORY OF ARCHITECTURE-III	CO1	Understanding the evolution of early Christian and Medieval periods its Architecture and socio-political changes			2							
			CO2	Understanding Renaissance and Mannerist Architectures and their practices in Europe, growth of nations and styles of Baroque and Rococo			2							
			CO3	Understanding the Islamic principle's philosophy & its relevance to various built forms and the influence of Islamic architecture on Indian subcontinent Architecture of various provinces under sultanate rule			2							
			CO4	Understanding of Architectural developments during Mughal Dynasty Study of cross culture influence and evolution of secular architecture in princely states			2							

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15	25AR2157	BUILDING MATERIALS AND CONSTRUCTION - II	CO1	Understand the materials and its joinery: Timber, Bamboo. Understand the techniques, types of construction of wooden doors, windows, roofing. Understanding Cement and Concrete: Types, properties, tests, and applications in Doors, Windows, Roofing Understanding Ferrous and Non-ferrous materials (Steel): Types, properties, Applications in Doors, Windows, Roofing,					3					
			CO2	Apply the knowledge and draft the details of wooden & steel trusses, RCC roofs, brick roofs, door and windows, wooden, RCC and Steel Roofs trusses as per construction industry/practice. Formwork, Shoring and Scaffolding: types and application					3					
16	25AR2158	ARCHITECTURAL DESIGN STUDIO -III	CO1	Applying methods to understand and analyze the use, spaces, and concepts of residential activities, as well as applying methods to understand and analyze the spaces, connectivity, and standards of institution buildings.	2	3								
			CO2	Create projects with design typologies such as Foundation School/Pre School/Public Health Care Centre/Restaurant/Museum/Library, labelled as Project 1 and Project 2.				2						
17	25AR2185	COMPUTER STUDIO - I (MS	CO1	Understand the basics of computer system and their supporting technologies like MS Office.				2						

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		OFFICE, AUTOCAD 3D)	CO2	Apply the learned skills in preparation of documentation reports, analysis reports, and audio-visual presentations.				2						
18	25UC2105	COMMUNICATION SKILLS	CO1	To Understand the essential career skills, including resume writing, interview techniques							2			
			CO2	Apply a comprehensive understanding of essential team skills, preparing them for successful collaboration and contribution in professional team environments.							2			
19	25AR2208	DESIGN OF STRUCTURES - III	CO1	Understanding of Basics of RCC design					2					
			CO2	Understanding and designing of columns					2					
			CO3	Understanding and designing of footings and staircases					2					
			CO4	Understanding and analysis a given section for under or over design carrying capacity					2					
20	25AR2209	BUILDING SERVICES - I	CO1	Understanding the processes involved in the distribution, treatment, and disposal of wastewater.				2						
			CO2	Understanding the building sanitation method and different types of plumbing systems.				2						
			CO3	Understanding the plumbing and sanitary layouts of a residence.				2						

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					1	2	3	4	5	6	7	8	9	10
			CO4	Understanding the use and installation of various plumbing fixtures and sewerage systems for sanitary conveyance.				2						
21	25AR2210	CONTEMPORARY INDIAN ARCHITECTURE	CO1	Understand the Architecture and Planning of various Cities during Medieval Age.			2							
			CO2	Understand the Culture and Built Forms in Pre – Independence (Colonial Rule) and Post-Independence of India.			2							
			CO3	Understand the Theories of current Architect practices and their applicability in meeting present day Needs.				2						
			CO4	Examine the influence of socio-political, cultural, and economic factors on contemporary Indian architecture.			2							
22	25AR2211	HUMAN SETTLEMENTS AND PLANNING	CO1	Understand the various elements of Human Settlements and the classification of Human Settlements.		2								
			CO2	Understand familiarize the students with Planning concepts and process in Urban and Regional Planning.			2							
			CO3	Understand the changing dynamics of Urban Form and it's planning according to urban transformation									2	
			CO4	Understand the interrelationship between Human Settlements structure and Social Dynamics.									2	

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					1	2	3	4	5	6	7	8	9	10
23	25AR2259	BUILDING MATERIALS AND CONSTRUCTION - III	CO1	Understand the Floor Finishes, Roofing techniques like Vaults, domes and Different slab techniques like one way slab, two-way slab, waffle, Bubble deck slab etc. Staircase components and types. Damp proof material and plastering				2						
			CO2	Apply concrete, wooden, stone, tile, etc. for flooring. vault, dome, waffle, bubble deck, hollow core slabs, filler slab, etc. for roofing. wooden, metal, RCC, etc. for staircase types.					3					
24	25AR2286	SITE SURVEY AND ANALYSIS	CO1	Understanding Surveying using Chain and Compass. Understanding Surveying using Dumpy Level and Theodolite.					2					
			CO2	Applying survey practices in field using Chain, Compass, Dumpy Level, Theodolite, Total Station and Alidade						2				
25	25AR2260	ARCHITECTURAL DESIGN STUDIO -IV	CO1	Analyze the anthropometry, circulation patterns, standards of various facilities	2	3								

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			CO2	Create the Design after the analysis of the rural planning, infrastructure, and settlement planning of a village (rural settlement) as per the needs of the settlement as Project 1. Propose a design depending on the village documentation and survey that is functionally, good community oriented and open spaces – Project 2						2				2
26	25AR2287	COMPUTER STUDIO - II	CO1	Understand and learn to use of image editing software, graphics and animation software's.				3						
			CO2	Apply the tools of sketch up or equivalent software to create a detailed 3D model by working in collaboration by application of advanced tools				3						
27	25AR3112	CONTEMPORARY WESTERN ARCHITECTURE	CO1	Understand Cubism & Constructivism along with various Building styles of Early Modern Architects.			2							
			CO2	Understand Post Modernism and International Style along with Ideas and Works of Various Architects of that time						2				
			CO3	Understand Critical Regionalism and other alternative practices. along with Ideas and Works of Various Architects of that time.				2						
			CO4	Understand Deconstructivism along with Forms, Ideas and Concepts followed by Various Architects in their works			2							

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28	25AR3113	DESIGN OF STRUCTURES - IV	CO1	Understanding of limit state design.					2					
			CO2	Apply the techniques and Design of reinforcement for a section.					2					
			CO3	Apply the Design detailing, and the purpose of one-way and two-way slabs.					2					
			CO4	Apply the detailing for special structures such as deep beams, corbels, and shear. walls etc.					2					
29	25AR3114	BUILDING SERVICES - II	CO1	Understanding the planning techniques and study of electricity, installations, wiring, and principles of distribution and safety.				2						
			CO2	Understanding the application of artificial illumination and lighting design for various spaces				2						
			CO3	Understanding the knowledge of ventilation principles.						2				
			CO4	Applying the properties of sound and architectural acoustics, applicability of acoustic concepts and design, and learning how to create acoustics and analyze the integration of all three services in architectural planning.				2						
30	25AR3161	SITE PLANNING AND LANDSCAPE STUDIO	CO1	Understand the elements, principles, and types of landscapes applicable to different architectural contexts.								2		

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			CO2	Analyze site characteristics and apply technical knowledge including tree species selection and landscape specifications.									2	
			CO3	Apply site planning methods for organizing built and open spaces efficiently and aesthetically.							2			
			CO4	Develop site and landscape design proposals through drawings, models, and documentation integrating ecological and functional requirements.									2	
31	25AR3162	BUILDING MATERIAL AND CONSTRUCTION - IV	CO1	Understanding Plastics, Glass, Aluminium, Gypsum Board, Fibre Board, particle Board as a building material: types, properties, use, principles and methods of construction. Markey Survey of the material types.				3						
			CO2	Apply the knowledge: Glass and Metal cladding of facades and building envelopes, Skylights: Fixing and fabrication details. Walls: Sandwich panel walls, PUF panels etc Partitions, False Ceiling and False Floorings: Types and Construction techniques, Construction details as per industry standards.					2					
32	25AR3163	ARCHITECTURAL DESIGN STUDIO -V	CO1	Analyse the use, the spaces and the concepts of different homes for the disabled. To understand and analyze the spaces, connectivity, and the standards of Institution buildings	2	2								

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			CO2	Design a Social oriented building. A Home for physically and mentally challenged- Project 1 To design an institution-oriented building, School of Architecture, Design Institutions. Project 2 Old age Home, orphan age, School for disabled, Campus Design, theme-based hotels, shopping mall, Resort etc.		2		3						
33	25AR3188	COMPUTER STUDIO - III	CO1	Understand interface, workspace, and utilization of tools of 3Dmodeling software applies the required tools and componentsinbuildinga3D model. To create documentation reports, analysis reports, and audiovisual presentations.				3						
			CO2	Understand, visualize the space and apply the tools of BIM software, identify the need of tools of BIM software. To create a detailed 3D model by working in collaboration by application of advanced tools				3						
34	25AR3215	BUILDING SERVICES - III	CO1	Understanding the Thermal Properties of the building material and components and mechanical ventilation				2						
			CO2	Understanding the principles, systems, and design criteria of HVAC.				2						
			CO3	Understanding the techniques and concepts in fire safety norms in the buildings.				2						
			CO4	Apply the techniques of mechanical transportation systems in building plans				2						

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					1	2	3	4	5	6	7	8	9	10
35	25AR3216	SPECIFICATION, ESTIMATION AND COSTING	CO1	Understanding of data required and methods of estimation	2									
			CO2	Applying various methods, estimate different quantities.			2							
			CO3	Understanding of the types of estimates and costing			2							
			CO4	Understanding various specifications and terminology used.								2		
36	25AR3217A	SPATIAL DESIGN	CO1	Understand the theoretical and perceptual foundations of spatial design.								2		
			CO2	Analyze spatial qualities and organization in architectural and urban contexts.						2				
			CO3	Apply basic principles of spatial design such as hierarchy, rhythm, sequence, and proportion.							2			
			CO4	Develop conceptual and physical models to explore spatial relationships.							2			

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37	25AR3217B	GREEN BUILDING RATING SYSTEMS	CO1	Understand and define key terminologies, materials, and basic concepts related to passive design, active systems, daylighting, and natural ventilation in sustainable architecture.						2				
			CO2	Comprehend and apply the GRIHA rating system criteria for evaluating and designing green buildings in the Indian context.								2	2	
			CO3	Analyze and compare IGBC and LEED rating systems, and apply their principles to sustainable building projects.								2		
			CO4	Demonstrate the ability to use energy simulation software (DesignBuilder) to evaluate building performance through global case studies.							2			
38	25AR3218	BUILDING BYE LAWS AND REAL ESTATE	CO1	Understand the importance of Building codes in different zones and learning about the terminologies			2							
			CO2	Understand the different norms from National Building Code of India					2					
			CO3	Understand the basic need of building bye laws of local region and to learn the terminology. To be introduced to Energy Conservation				2						
			CO4	Fundamentals of real estate, Real Estate Markets and Trends				2						

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39	25AR3264A	INTERIOR DESIGN STUDIO	CO1	Apply and demonstrate proficiency in conceptualizing and executing interior design projects, integrating principles of spatial planning, aesthetics, and functionality effectively.	2		2							
			CO2	Analyze advanced skills in utilizing digital tools and software to create comprehensive interior design presentations, fostering creativity and professionalism in their design solutions	2				3					
40	25AR3264B	MODULAR CONSTRUCTION STUDIO	CO1	Applying methods to develop an understanding of space design at the local level. Additionally, applying techniques to integrate various knowledge systems to formulate a design proposal of a practical scale, along with implementing the process used for the same.						3				
			CO2	Creating opportunities for students to comprehend the area, scale, design, and implementation factors involved in Modular construction. Additionally, create projects for students to incorporate Modular construction, with a mandatory requirement for conducting case studies and documentation of Modular Construction.									2	
41	25AR3265	ARCHITECTURAL DESIGN STUDIO -VI	CO1	Analyse the challenges of designing functionally complicated buildings and having a complex array of activities and services, integration of structural design and specialized building services in the framework of architectural design	2	2								

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			CO2	Design A Functionally Complex Building (Medium Rise Structure Example Hospital, Juvenile Correction Centre, Research and Development Centre), Project 2 Design A Shopping Mall or Students Hostel or Travellers Hostel, Conventional Center,5-star hotel Etc.		2			3					
42	25AR4119	URBAN DESIGN	CO1	Understand Urban Design terminologies										2
			CO2	Understand Users and Activities in a city									2	
			CO3	Understand public spaces, streets & Transport										2
			CO4	Understand Application of Urban Design									2	
43	25AR4120	HOUSING	CO1	Understand housing and Housing issues	2									
			CO2	Understand Housing, 5-year plans specific to housing	2									
			CO3	Understand Critical Sources of Finance			2							
			CO4	Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends				2						
44	25AR4121A	APPROPRIATE CONSTRUCTION TECHNOLOGIES	CO1	Understanding the alternative building materials, applying cost. effective materials and techniques to resolve environmental problems.		2								

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			CO2	Understanding the indigenous construction materials and techniques for building resilience and disaster mitigation		2								
			CO3	Understanding the materials and techniques for energy efficient building construction			2							
			CO4	Applying Building Information Modelling in modern construction industry						2				
45	25AR4121B	SUSTAINABLE CITIES AND COMMUNITIES	CO1	Understand and explain the key concepts of sustainability, resource depletion, and climate change in the context of cities and communities.						2				
			CO2	Understand sustainable site selection, development principles, and the role of green materials and technologies in shaping sustainable urban environments.						2				
			CO3	Understand low-impact construction methods, biomimicry concepts, and various dimensions (environmental, social, economic, cultural) of sustainability in communities.						2				
			CO4	Understand recent global trends such as Transit-Oriented Development (TOD), Livable Cities, Healthy Cities, Happy Cities, and recognize sustainable practices through case studies of eco-cities and communities.						2				
46	25AR4122A	ARCHITECTURAL CONSERVATION	CO1	Understand about the basics of Conservation in India				2						

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					1	2	3	4	5	6	7	8	9	10
			CO2	Understand the Conservation Practices			2							
			CO3	Understand the importance & analysis of Urban Conservation			2							
			CO4	Discuss about Conservation planning & Adaptive Conservation.				2						
47	25AR4122B	VERNACULAR ARCHITECTURE	CO1	Understand the Vernacular Architecture, its Approaches & Concepts.				2						
			CO2	Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.						2				
			CO3	Understand the Vernacular Architectural Styles of Southern India.			2							
			CO4	Understand the Influence of Western world on Vernacular Architecture.			2							
48	25AR4166	WORKING DRAWING - I	CO1	Applying teaching methods, instruct students in preparing detailed working drawings for effective execution at construction sites and impart knowledge of the essential components of working drawings, notations, and drawing standards.				2						
			CO2	Applying methods of transmittals and record-keeping, integrate services drawings and detail various types of drawings. Apply the latest materials knowledge with specifications for updates.				2						

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S.No	Course Code	Course Name	CO.No	CO Description	PO									
					1	2	3	4	5	6	7	8	9	10
49	25AR4189A	ENVIRONEMENTAL LAB	CO1	Understand and evaluate climatic parameters (temperature, humidity, wind, solar radiation) and their implications for design. Conduct site analysis for environmental suitability, including sun path, wind flow, and shading studies.						2				
			CO2	Use tools and techniques for assessing daylight, thermal comfort, and natural ventilation in architectural spaces. Apply principles of passive design through model testing and simulation tools.						2				

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					1	2	3	4	5	6	7	8	9	10
50	25AR4189B	REVIT - BIM	CO1	Explain the fundamentals of Building Information Modeling (BIM) and its significance in modern architectural practice. Navigate and use the Revit software interface tailored for architectural workflows. Develop basic to intermediate architectural models including walls, doors, windows, floors, roofs, and other components. Create construction documents including plans, sections, elevations, and schedules directly from the BIM model.				2						

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					1	2	3	4	5	6	7	8	9	10
			CO2	Use Revit's annotation and detailing tools to produce clear and professional architectural drawings. Understand and apply principles of collaboration and coordination within BIM environments. Produce visual presentations and renderings of architectural models for design communication. Manage and export Revit projects effectively for academic submissions and professional use.				2						
51	25AR4167	ARCHITECTURAL DESIGN STUDIO -	CO1	Application of the integration of services, sustainable building and anthropometry,				2	2					

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					1	2	3	4	5	6	7	8	9	10
		VII		circulation patterns.										
			CO2	Create and design spatial planning and functionality in Low. Rise. High Density Project. Project 1. To analyze the spaces, connectivity, and the standards of sustainable and service intensive building. Case study. To create design of a sustainable service integrated intelligent. Green building in High Rise (Project 2)					2	3				
52	25AR4223	BUILDING CONSTRUCTION MANAGEMENT	CO1	Understand the Objectives and Methods of project Management System							2			
			CO2	Understand various Tools and Techniques to facilitate efficient management of Projects							2			
			CO3	Understand Project cost model and steps involved in cost optimization							2			
			CO4	Applying Scientific Evaluation Techniques to Manage Project Durations and resources with Examples							2			
53	25AR4224A	TRANSPORTATION PLANNING	CO1	Understand Basic elements and various category of vehicles depending upon the category of Roads exiting		2								
			CO2	Understanding Various types of Circulation & Users along with their infrastructural needs.		2								
			CO3	Understanding Road Safety & Civic Sense		2								

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					1	2	3	4	5	6	7	8	9	10
			CO4	Understanding Traffic & Transportation byelaws & Regulation		2								
54	25AR4224B	DISASTER MITIGATION AND MANAGEMENT	CO1	Understand the necessity for disaster management and measures that are to be followed.					2					
			CO2	Understand the disaster preparedness and Involving Design Considerations for buildings					2					
			CO3	Understand the study of design considerations for disaster management and precautions.						2				
			CO4	Understand the Relief & Rehabilitation for Disasters						2				
55	25AR4224C	VASTHU VIDYA	CO1	Understand the historical and philosophical foundations of Vastu Vidya in the context of Indian architectural traditions.			2							
			CO2	Interpret Vastu Purusha Mandala and its application in spatial planning and orientation.									2	
			CO3	Analyze architectural layouts based on Vastu principles and assess their influence on form, function, and energy flow.									2	

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					1	2	3	4	5	6	7	8	9	10
			CO4	Analyze architectural layouts based on Vastu principles and assess their influence on form, function, and energy flow.									2	
56	25AR4268A	DISSERTATION	CO1	Understand research skills by formulating a well-defined research question, conducting in-depth literature reviews, and presenting original findings in a structured academic format									2	
			CO2	Analyzing the theoretical frameworks and empirical evidence to produce a coherent argument, contributing new insights to their field of study.									2	
57	25AR4268B	THESIS SEMINAR	CO1	Identify, explore and research topics of their interest; then describe by the organized presentations.									2	
			CO2	Apply the ideas in finding a new solution to the existing problem and interpret via applying the architectural systems		2								
58	25AR4269	WORKING DRAWING - II	CO1	Applying teaching methods, instruct students in preparing detailed working drawings for effective execution at construction sites and impart knowledge of the essential components of working drawings, notations, and drawing standards.				2						

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					1	2	3	4	5	6	7	8	9	10
			CO2	Applying methods of transmittals and record-keeping, integrate services drawings and detail various types of drawings. Apply the latest materials knowledge with specifications for updates.								2		
59	25AR4270	URBAN DESIGN STUDIO	CO1	Analyse the role of Services at higher scale in Urban level and apply the integration of services into intelligent sustainable building case study case study		3		3						
			CO2	Create High Density Urban facility as a solution to the Urban area problems, Current issues. (Project-1) Analyze the spaces, Transformation according lifestyle changes in Urban population, connectivity, and the standards of sustainable and service intensive building. Case study. Create design of a sustainable service integrated intelligent green building High Density Project. (Project 2)					2					2
60	25AR5171	PRACTICAL TRAINING / INTERNSHIP	CO1	Understand the preparation of professional architectural portfolio and resume. Apply Academic architectural skills in various projects while working in office									3	
			CO2	Evaluate attributes of project, based on discussions with Chief Architect and clients. Site supervision during execution and coordination with the agencies involved in the construction process.										2

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					1	2	3	4	5	6	7	8	9	10
61	25AR5225	ARCHITECTURE PROFESSIONAL PRACTICE	CO1	Expose students to the daily realities of an architectural practice through the Training								2		
			CO2	Facilitate an understanding of the evolution of an architectural project from design to execution.								2		
			CO3	Enable an orientation that would include the process of development of conceptual ideas, presentation skills.								2		
			CO4	Involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure.										2
62	25FL3054	FRENCH LANGUAGE	CO1	Acquire a working knowledge of the basic elements of the French language viz. letters, vowels, accents, articles, useful expressions, etc.							2			
			CO2	Classify questions and respond in the affirmative or negative with ?tre and avoir and form plurals	2									
			CO3	Utilize and apply the adjectives and essential verbs.							2			
			CO4	Construct and use in speech, vocabulary, reading, questions and answers							2			
63	25FL3055	GERMAN LANGUAGE	CO1	Classify their understanding of greeting wishes, alphabets and numbers learning. To understand the greetings in formal and informal way							2			

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S.No	Course Code	Course Name	CO.No	CO Description	PO									
					1	2	3	4	5	6	7	8	9	10
			CO2	Apply their knowledge of essential daily expressions, present, past and future tense.Conjugating the verbs in the Singular and Plural groups, Past participle tense and the futertense and relations with the verbs	2									
			CO3	Utilize their understanding with suitable prepositions, questions, and possessive pronouns, and the importance of four German cases. Prepositions in Akkusativ and Dativ							2			
			CO4	Develop their knowledge about how to move in public places, such as shopping centres, restaurants, tourist places, etc, and preparation of them for German A1 level examination.									2	
64	25FL3058	JAPANESE LANGUAGE	CO1	Classify Hiragana, Katakana, and basic Kanji characters used in greetings and simple scripts							2			
			CO2	Apply their knowledge of essential daily expressions, numbers, months, dates, time, body parts, colors, and common vocabulary to effectively communicate in basic everyday situations	2									
			CO3	Utilize their understanding of present, past, and future tenses, along with the ability to construct interrogative sentences, to express themselves in various timeframes and ask questions effectively in different conversational contexts. pen_spark							2			

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					1	2	3	4	5	6	7	8	9	10
			CO4	Develop their knowledge of verbs, including negative conjugations, and prepositions to discuss hobbies, deliver self-introductions, and navigate basic interview scenarios in Japanese									2	
65	25AR5272	ARCHITECTURAL THESIS	CO1	Applying the Architectural Thesis, Writing Synopsis, Studies Related to Project. Literature study in relation to literatures, Desktop Studies, Case studies.	2	3								
			CO2	Create a design from the Site Study, Application of Data & Information Collected regarding project topic, Preliminary Drawings production. Creation of final Viable drawings & Building Services, Physical & Virtual Model and Report making.				3	2					

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Program Articulation Matrix (Mapping of Courses with POs)

S.No	Course Code	Category	Course Name	L	T	P	S	Cr	PO									
									1	2	3	4	5	6	7	8	9	10
1	25AR1101	PCC	THEORY OF ARCHITECTURE	3	0	0	0	3	2	2								
2	25AR1102	PCC	HISTORY OF ARCHITECTURE - I	3	0	0	0	3			2							
3	25AR1151	PCC	ARCHITECTURAL DRAWING - I	0	0	4	0	4				2						
4	25AR1152	PCC	MODEL MAKING WORKSHOP	0	0	4	0	4	2									
5	25AR1153	PRI	ARCHITECTURAL DESIGN STUDIO - I	0	0	9	0	9	2	2								
6	25UC1103	HAS	LANGUAGE SKILLS	0	0	4	0	2										2
7	25UC0009	AUDIT	ECOLOGY & ENVIRONMENT	2	0	0	0	0										
8	25AR1203	BSAE	DESIGN OF STRUCTURES - I	3	0	0	0	3					2					

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									1	2	3	4	5	6	7	8	9	10
9	25AR1204	PCC	HISTORY OF ARCHITECTURE - II	3	0	0	0	3			2							
10	25AR1254	PCC	ARCHITECTURAL DRAWING - II	0	0	4	0	4				2							
11	25AR1255	BSAE	BUILDING MATERIALS AND CONSTRUCTION - I	0	0	4	0	4	3				2						
12	25AR1256	PRI	ARCHITECTURAL DESIGN STUDIO -II	0	0	9	0	9	3	2	2								
13	25UC1203	UC	DESIGN THINKING AND INNOVATION	0	0	4	0	2											
14	25UC0026	UC	HUMAN VALUES,GENDER EQUALITY AND PROFESSIONAL ETHICS	2	0	0	0	2											
15	25AR2105	BSAE	DESIGN OF STRUCTURES - II	3	0	0	0	3					2						
16	25AR2106	BSAE	CLIMATE RESPONSIVE ARCHITECTURE	3	0	0	0	3						2					
17	25AR2107	PCC	HISTORY OF ARCHITECTURE- III	3	0	0	0	3			2								

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									1	2	3	4	5	6	7	8	9	10
18	25AR2157	BSAE	BUILDING MATERIALS AND CONSTRUCTION - II	0	0	4	0	4					3					
19	25AR2158	PRI	ARCHITECTURAL DESIGN STUDIO - III	0	0	9	0	9	2	3		2						
20	25AR2185	SEC	COMPUTER STUDIO - I (MS OFFICE, AUTOCAD 3D)	0	0	0	3	3				2						
21	25UC2105	HAS	COMMUNICATION SKILLS	0	0	4	0	2							2			
22	25AR2208	BSAE	DESIGN OF STRUCTURES - III	3	0	0	0	3					2					
23	25AR2209	BSAE	BUILDING SERVICES - I	3	0	0	0	3				2						
24	25AR2210	PCC	CONTEMPORARY INDIAN ARCHITECTURE	2	0	0	0	2			2	2						
25	25AR2211	PCC	HUMAN SETTLEMENTS AND PLANNING	2	0	0	0	2		2	2						2	
26	25AR2259	BSAE	BUILDING MATERIALS AND CONSTRUCTION - III	0	0	4	0	4				2	3					
27	25AR2286	SEC	SITE SURVEY AND ANALYSIS	0	0	0	3	3					2	2				

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									1	2	3	4	5	6	7	8	9	10
28	25AR2260	PRI	ARCHITECTURAL DESIGN STUDIO - IV	0	0	9	0	9	2	3				2				2
29	25AR2287	SEC	COMPUTER STUDIO - II	0	0	0	3	3				3						
30	25AR3112	PCC	CONTEMPORARY WESTERN ARCHITECTURE	2	0	0	0	2			2	2		2				
31	25AR3113	BSAE	DESIGN OF STRUCTURES - IV	3	0	0	0	3					2					
32	25AR3114	BSAE	BUILDING SERVICES - II	3	0	0	0	3				2		2				
33	25AR3161	PCC	SITE PLANNING AND LANDSCAPE STUDIO	0	0	4	0	4							2	2	2	
34	25AR3162	BSAE	BUILDING MATERIAL AND CONSTRUCTION - IV	0	0	4	0	4				3	2					
35	25AR3163	PRI	ARCHITECTURAL DESIGN STUDIO -V	0	0	9	0	9	2	2		3						
36	25AR3188	SEC	COMPUTER STUDIO - III	0	0	0	4	4				3						
37	25AR3215	BSAE	BUILDING SERVICES - III	3	0	0	0	3				2						

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									1	2	3	4	5	6	7	8	9	10
38	25AR3216	PCC	SPECIFICATION, ESTIMATION AND COSTING	3	0	0	0	3	2		2					2		
39	25AR3217A	PEC-1	SPATIAL DESIGN	3	0	0	0	3						2	2	2		
	25AR3217B	PEC-1	GREEN BUILDING RATING SYSTEMS	3	0	0	0							2	2	2	2	
40	25AR3218	PCC	BUILDING BYE LAWS AND REAL ESTATE	2	0	0	0	2			2	2	2					
41	25AR3264A	PEC-2	INTERIOR DESIGN STUDIO	0	0	4	0	4	2	3	2		3					
	25AR3264B	PEC-2	MODULAR CONSTRUCTION STUDIO	0	0	4	0							3			2	
42	25AR3265	PRI	ARCHITECTURAL DESIGN STUDIO - VI	0	0	12	0	12	2	2			3					
43	25AR3273	HAS	ACTIVITY BASED LEARNING -1 (Architectural Reading and Reflection)	0	0	2	0	1										
	25AR3274	HAS	ACTIVITY BASED LEARNING -1 (Architectural Project Documentation)	0	0	2	0											

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									1	2	3	4	5	6	7	8	9	10
	25AR3275	HAS	ACTIVITY BASED LEARNING -1 (Material to product documentation)	0	0	2	0											
	25AR3276	HAS	ACTIVITY BASED LEARNING -1 (Design project documentation)	0	0	2	0											
44	25AR4119	PCC	URBAN DESIGN	2	0	0	0	2									2	2
45	25AR4120	PCC	HOUSING	2	0	0	0	2	2		2	2						
46	25AR4121A	PEC-3	APPROPRIATE CONSTRUCTION TECHNOLOGIES	2	0	0	0	2		2	2			2				
	25AR4121B	PEC-3	SUSTAINABLE CITIES AND COMMUNITIES	2	0	0	0							2				
47	25AR4122A	PEC-4	ARCHITECTURAL CONSERVATION	3	0	0	0	3			2	2						
	25AR4122B	PEC-4	VERNACULAR ARCHITECTURE	3	0	0	0				2	2		2				
48	25AR4166	BSAE	WORKING DRAWING - I	0	0	4	0	4				2				2		

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49	25AR4189A	PEC-5	ENVIRONEMENTAL LAB	0	0	0	4	4						2				
	25AR4189B	PEC-5	REVIT - BIM	0	0	0	4					2						
50	25AR4167	PRI	ARCHITECTURAL DESIGN STUDIO - VII	0	0	12	0	12				2	2	3				
51	25AR4223	PAECC	BUILDING CONSTRUCTION MANAGEMENT	3	0	0	0	3							2			
52	25AR4224A	PEC-6	TRANSPORTATION PLANNING	3	0	0	0	3		2								
	25AR4224B	PEC-6	DISASTER MITIGATION AND MANAGEMENT	3	0	0	0						2	2				
	25AR4224C	PEC-6	VASTHU VIDYA	3	0	0	0				2						2	
53	25AR4268A	PEC-7	DISSERTATION	0	0	4	0	4									2	
	25AR4268B	PEC-7	THESIS SEMINAR	0	0	4	0			2							2	
54	25AR4269	BSAE	WORKING DRAWING - II	0	0	4	0	4				2				2		

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S.No	Course Code	Category	Course Name	L	T	P	S	Cr	PO									
									1	2	3	4	5	6	7	8	9	10
55	25AR4270	PRI	URBAN DESIGN STUDIO	0	0	12	0	12		3		3	2					2
	25AR4277	HAS	ACTIVITY BASED LEARNING -2 (Architectural Ethnography)	0	0	2	0											
	25AR4278	HAS	ACTIVITY BASED LEARNING -2 (Creative Representation)	0	0	2	0	1										
56	25AR4279	HAS	ACTIVITY BASED LEARNING -2 (Advanced Landscape)	0	0	2	0											
57	25AR5171	PAECC	PRACTICAL TRAINING / INTERNSHIP	0	0	30	0	30									3	2
	25AR5180	HAS	ACTIVITY BASED LEARNING -3 (Advanced BCM)	0	0	2	0											
	25AR5181	HAS	ACTIVITY BASED LEARNING -3 (Low Cost Housing)	0	0	2	0	1										
58	25AR5182	HAS	ACTIVITY BASED LEARNING -3 (URDPFI and Acts)	0	0	2	0											
59	25AR5225	PAECC	ARCHITECTURE PROFESSIONAL PRACTICE	3	0	0	0	3								2		2
60	25FL3054	FL	FRENCH LANGUAGE	3	0	0	0	3	2						2			

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									1	2	3	4	5	6	7	8	9	10
	25FL3055	FL	GERMAN LANGUAGE	3	0	0	0		2						2		2	
	25FL3058	FL	JAPANESE LANGUAGE	3	0	0	0		2						2		2	
61	25AR5272	PRI	ARCHITECTURAL THESIS	0	0	15	0	15	2	3		3	2					

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SYLLABUS OF COURSES UNDER VARIOUS CATEGORIES AS PER THE TEMPLATE IN

Annexure 3

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SYLLABUS OF COURSES

PROFESSIONAL CORE COURSES – PCC

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THEORY OF ARCHITECTURE (TOA)

COURSE CODE	25AR1101	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand architecture and basics on space and form development.	2	PO4
CO2	Understand components of building circulation and its relation to architecture.	2	PO2
CO3	Understand Architectural aesthetics in designing a building & also understand the key role of principles applied in architecture.	2	PO4
CO4	Apply functioning of design process and its application in architectural buildings through case studies.	3	PO10

Syllabus

Module 1	Architectural Space and Mass: Definition of architecture- Architect role and responsibilities – primary elements of architecture 2D & 3D - Space defining elements, openings in space defining elements, spatial relationship, spatial organization, Primary forms, properties of form, transformation of forms - dimensional transformation, subtractive, additive forms, organization of additive forms - Articulation of forms –Degree of Enclosure, Light and View.
Module 2	Circulation Movement through space - Components of building circulation - The building approach, The building entrance, Configuration of path, Path space relationship, Form of circulation space - Circulation diagram for residence and restaurant
Module 3	Aesthetic Components of Design Proportion & scale in relation to human scale, Modular, Visual and Human Scale - Exploration of the basic principles of design such as balance, rhythm, repetition, transformation, symmetry, hierarchy, axis with building examples. Involves the study of the other principles that govern an architectural composition Such as Unity, Harmony, Dominance, Fluidity, Emphasis, Contrast etc.
Module 4	Design Process and Analysis of Building Design process –integration of aesthetics and function - Understanding of formative ideas, organization concepts, spatial characteristics, - Massing and circulation in design analysis of the following buildings: Falling water house, & Guggenheim Museum by F. L. Wright -Villa Savoye & Chapel of Notre dame Du Haut by Le Corbusier

Reference Books:

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Sl No	Title	Author(s)	Publisher	Year
1	Principles of Design in Architecture	K.W.Smithies	Van Nostrand Reinhold Company	1981
2	Design Process - A Primer for Architectural & Interior Design	Sam F. Miller	Van Nostrand Reinhold Company,	1995
3	Elements of Architectural Design – A Visual Resource	Government of India, New Delhi	Van Nostrand Reinhold Company,	1999
4	Design Fundamentals in Architecture	V.S.Pramar	Somaiya Publications, New Delh	1973

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HISTORY OF ARCHITECTURE - I (HOA- I)

COURSE CODE	25AR1102	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Primitive Architecture and Ancient settlements in pre-Historic times and get knowledge on the Ancient River valley civilizations in the world.	2	PO3
CO2	Understand the Architecture and Planning of Ancient River Valley Civilizations	2	PO3
CO3	Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture	2	PO4
CO4	Understand the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture	2	PO4

Syllabus

Module 1	Prehistoric / Primitive Architecture: Introduction to Palaeolithic & Neolithic Culture. It's Impact on Built forms. Primitive Settlements, Shelters, Megaliths, Memorials and Burial Systems. Ancient Settlements: Jericho, CatalHuyuk, Hassuna, Skara Brae. Ancient River Valley Civilizations: Nile River, Tigris and Euphrates Rivers, Yellow River and Indus River. Topography, Climate, Religion, Culture and Political System. Character of Settlements and Typology of Shelters/Buildings.
Module 2	Ancient River Valley Civilizations: Places of importance Egyptian Architecture: Great Pyramid of Giza, Temple of Amon Ra, Karnak, Temples of Abu Simbel, Nubia. Mesopotamian Architecture: Ziggurat of Urnammu-Ur (Sumerian Architecture), Palace of Sargon-Khorsabad (Assyrian Architecture), City of Babylon and Ishtar Gate (Neo-Babylonian Architecture), Palace at Persepolis (Persian Architecture). Chinese Architecture: Imperial Palaces, Traditional Chinese Gardens, Religious structures, Altars and Temples, Tombs and Mausoleums. Indus Valley Architecture: Harappa& Mohenjo-Daro settlement Architecture and Town planning.
Module 3	Classical Period: GREECE Topography, Climate, Religion, Culture and Political System. Construction Materials, Techniques and Structural Systems. Greek Orders, Residences, Urban Spaces, Temples and other Public Buildings. Classical Period: ROME Roman History: Republic and Empire. Topography, Climate, Religion, Culture and Political System. Construction Materials, Techniques and Structural Systems. Roman Orders, Urban Spaces, Temples, Basilicas, Amphitheatres & Residences.

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Module 4	Classical period Greece: Places of importance Athens, Agora, Acropolis, Patheon, Stoa, Bouleuterion, Threates. Classical Period Rome: Places of Importance Forum Romanum, Coliseum, Pantheon, Circus Maximus, Thermae of Caraculla

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"History of World Architecture – Series", Harry N. Abrams,	Harry N. Abrams	Inc. Pub., New York, 1972.	1972
2	"History of World Architecture – Series"	Lloyd S. & Muller H. W	London	1986
3	"Man, the Builder"	Gosta, E. Samdstrp	Mc.Graw Hill Book Company, New York,	1970
4	"Western Civilisation"	Webb and Schaeffer	Volume I; VNR: NY	1962
5	"Architecture – The Natural and the Manmade"	Vincent Scully	Harper Collins Pub	1991

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ARCHITECTURAL DRAWING - I (AD-I)

COURSE CODE	25AR1151	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the fundamentals of drawing and drafting, including construction and development of surfaces for various basic 3D shapes, as well as the representation of various building components and related elements.	2	PO4
CO2	Comprehend the representation of a building in plan, elevation, and sections, and be able to prepare simple measure drawings.	2	PO5

Syllabus

Module 1	Fundamentals of Drawing and its practice, Introduction to drawing equipment, familiarization, use and handling. Drawing sheet sizes, title panels, legends, layouts and composition, construction of lines, line value, line types, Architectural lettering; Basic geometry – Shapes &Forms; Study of illusions. Pattern Drafting; Basic 2-D Shapes; Use of "SCALES" in drawings (Increasing & Decreasing); Orthogonal Projections, 3D projections – Isometric View, Oblique View, Axonometric, Bi-Metric, Tri-Metric, Exploded view. Architectural Representation of components and materials/textures, measured drawing of building components and furniture –Doors, Windows, Wardrobe, Drafting table etc.,
Module 2	Measured drawing of a simple form/space. Comprehend the representation of a building in plan, elevation, and sections, and be able to prepare simple measure drawings.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Geometrical Drawing for Art Students	Morris IH	Orient Longman, Madras	2004
2	Architectural Graphics	Francis D. K. Ching	John Wiley and Sons	2004
3	Architectural Drawing	Fraser Reekie, Reekie's	Edward Arnold	1995

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MODEL MAKING WORKSHOP (MMW)

COURSE CODE	25AR1152	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand cutting and sticking for making a model, Components of detailed model, Representing hills, Plateau, water bodies, furniture's, Cars	2	PO7
CO2	Understand different materials and apply the acquired knowledge and create a model Independently by choosing appropriate material and techniques.	2	PO6

Syllabus

Module 1	Detail description of tools used in Model making - Basic surface development - introducing Techniques used for cutting and sticking - Different materials (Paper, Thermocol / Coir, Foamboard) - Making models of Cube, Cylinder &Sphere - Making Block Models. Model making of Site with different levels using ethoflex or corrugated sheet - Different ways of representing trees, vehicles, streetlights in architectural model, Blown up model along with furniture. Advanced Surface development (half cuts, reverse cut, elevation and slabs etc.), Detailed model with doors, windows, balconies and other architectural elements, making of detailed base showingroads, pathways, greens, plinth and water bodies.
Module 2	Exploring and experimenting with tensile materials -Bamboo, wood, metal frame works. Model making of any Architectural Structure

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Architectural Model making	Nick Dunn	Laurence King Publishing, 2nd edition	2014
2	A Guide to Professional Architectural and Industrial Scale Model Building	Graham D. Pattinson	Prentice Hall, 1st Edition	1982

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HISTORY OF ARCHITECTURE - II (HOA - II)

COURSE CODE	25AR1204	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Vedic culture and study the origins of Early Hinduism, Jainism, Buddhism, and its rudimentary forms of construction.	2	PO4
CO2	Understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.	2	PO4
CO3	Understand and to get knowledge on the temple architecture and temple towns during various periods and empires in South India and North India.	2	PO2
CO4	Understand and to know the character and Architecture of temples of South India and North India in detail.	2	PO3

Syllabus

Module 1	Early Hindu, Jain, and Buddhist Architecture: Origin of Early Hinduism. Vedic Culture, Vedic village& Rudimentary forms of Bamboo Structures.Origins, Thought, Art and Culture of Jainism &Buddhism. Character of Jain Architecture. Hinayana and Mahayana Styles of Buddhist Architecture. Evolution of Built form based on form&function. Architectural Features like Stupas Chaityas, Viharas, Stambhas, Toranas, Railings etc. Places of Importance: Ashokan Pillar-Sarnath, Rock Cut Caves-Barabar; Sanchi Stupa-Sanchi Rock Cut Architecture; Great Stupa at Amaravati, Ajanta& Ellora; Karli Caves, Rani Gumpha-Udaigiri; Takht I Bahi- Gandhara
Module 2	Evolution of Hindu Temple Architecture: Hindu forms of worship – evolution of temple form –Concept, meaning, symbolism, ritual and socialimportance of temple. Classification of Indian temples - Elements of temple -Metaphysical plan of Temple ArchitectureEarly shrines of the Gupta and Chalukyan and Rashtrakuta periods. Places of Importance: Tigawa temple - Ladh Khan and Durga temple, Aihole - Papanatha, Virupaksha temples, Pattadakal -Kailasanatha temple, Ellora.

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Module 3	Temple Architecture - Southern India: Brief history of South India and its Characteristics–Different phases of South Indian Temple Architecture, Relation between Bhakti period, Dravidian Order-Evolution and form of gopurams, Temple architecture of temple towns Temple Architecture - Northern India: Brief history of North India and its Characteristics –Different phases of North Indian TempleArchitecture -Sub schools developed under the style. Architectural production and salient features in Orissa, Gujarat, Madhya Pradesh and Rajasthan.
Module 4	Southern India- Places of Importance: Rock cut productions under Pallavas: Rathas of Mahabalipuram, Shore temple-Mahabalipuram Chola Architecture: Brihadeeswara Temple, Thanjavur,Pandyan and Nayaka Architecture: MeenakshiTemples, Temple Towns :Madurai. Northern India- Places of Importance: Lingaraja Temple- Bhubaneswar, Sun temple-Konarak, Somnatha temple-Gujarat, Kandariya Mahadev temple-Khajuraho group, Madhyapradesh,Dilwara temple, Mt. Abu

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	The Hindu Temple	George Michell	BI Pub., Bombay	1977
2	Temple culture of south India	Parameswaran Pillai V.R.	Inter India Publications	1990
3	Temple Towns of Tamil Nadu	George Michell Ed	Marg Pubs	1995
4	Temples of Tamil Nadu Works of Art	Raphael D.	Fast Print Service Pvt Ltd.	1996

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ARCHITECTURAL DRAWING - II (AD-II)

(3D FORMS AND COLOR)

COURSE CODE	25AR1254	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the concepts and Scientific Methods of Perspective Drawing and apply Rendering Techniques, principles of Shade & Shadow and Construct sociography of Architectural Structures	2	PO7
CO2	Understand identification and measuring of specific Architectural Details of Historically significant, Buildings and the presentation techniques of drawings	2	PO10

Syllabus

Module 1	Rendering Techniques using various mediums – Dot rendering, Line rendering, Colour rendering etc., Introduction to perspective Drawing & Sketching – One-point perspective, two-point perspective, three-point perspective – Simple 3D forms and building interiors; Exercises on any building interior/exterior view and rendering. Introduction to Sociography – Shade, shadow casting on horizontal and vertical surfaces – Ground,different projections/depressions in walls, Chajjas; Sociography for 3D forms.
Module 2	Introduction to Building Documentation – Building typologies – Vernacular, Historical prominent, Heritage, Public Buildings, Religious Structures. Report presentation on building documentation with appropriate sheet work.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Geometrical Drawing for Art Students	Morris IH	Orient Longman, Madras	2004
2	Architectural Graphics	Francis D. K. Ching	John Wiley and Sons	2004
3	Architectural Drawing	Fraser Reekie, Reekie's	Edward Arnold	1995
4	Rendering with Pen and Ink	Arthur Leighton Guptill	Watson-Guptill; New edition	1997

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HISTORY OF ARCHITECTURE- III (HOA -III)
(MEDIEVAL PERIODS)

COURSE CODE	25AR2107	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the evolution of early Christian and Medieval periods its Architecture and socio-political changes	2	PO4
CO2	Understanding Renaissance and Mannerist Architectures and their practices in Europe, growth of nations and styles of Baroque and Rococo	2	PO6
CO3	Understanding the Islamic principle's philosophy & its relevance to various built forms and the influence of Islamic architecture on Indian subcontinent Architecture of various provinces under sultanate rule	2	PO3
CO4	Understanding of Architectural developments during Mughal Dynasty Study of cross culture influence and evolution of secular architecture in princely states	2	PO3

Syllabus

Module 1	Early Christian and Medieval Periods: Birth and spread of Christianity – transformation of the Roman Empire – early Christian worship and burial. Church planning – basilica concept: S. Hagia Sophia, Constantinople; St. Marks, Venice. The Carolingian Renaissance – Feudalism and rural manorial life – Papacy – Monasticism – Craft and merchant guilds. Romanesque churches – Development of vaulting – Pisa Group – British Cathedrals. Political and social changes: Re-emergence of the city – Crusades - Scholasticism. Development of Gothic Architecture Church plan, structural developments in France and England – Notre Dame.
Module 2	Renaissance, Mannerism and Post Renaissance Movements: Idea of Renaissance and Humanism – Development of thought – Renaissance architecture: Brunelleschi and rationally ordered space – ideal form and the centrally planned church: Alberti and Donato Bramante – Merchant Prince palaces: Palazzo Ricardi– Villas of Palladop: Villa Capra Vicenza – Mannerist architecture: The Renaissance in transition – Michaelangelo: Library at S. Lorenzo, Florence, Capitoline Hill. Protestantism – French Revolution – Monarchy and growth of nations. Roman Baroque churches: The central plan modified – St. Peters, Rome; French Baroque: Versailles – English baroque – Sir Christopher wren; St. Paul's London – Rococo Architecture.
Module 3	Islamic Architecture in India and Delhi Sultanate: History of Islam: birth, spread and principles - evolution of building types in terms of forms and functions: mosque, tomb, minaret, madarasa, palace, caravanserai, market - character of Islamic architecture: principles, structure, materials and methods of construction, elements of decoration, colour, geometry, light. Islamic architecture in India: sources and influences.

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	Establishment of the Delhi Sultanate- evolution of architecture under the Slave, Khalji, Tughlaq, Sayyid and Lodhi Dynasties – tombs in Punjab- important examples for each period.
Module 4	Mughal Architecture: Mughals in India- political and cultural history- synthesis of Hindu-Muslim culture, Sufi movement - evolution of architecture and outline of Mughal cities and gardens under the Mughal rulers: Babur, Humayun, Akbar, Jahangir, Shahjahan, Aurangzeb- important examples- decline of the Mughal empire. Cross Cultural influences across India and secular architecture of the princely states: Oudh, Rajput, Sikh, Vijayanagara, Mysore, Madurai- important examples.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Architecture of the Islamic World - Its History and Social meaning"	George Mitchell	Thames and Hudson, London	1978
2	"Islamic Architecture- Form, Function and Meaning"	Robert Hillenbrand	Edinburgh University Press	1994
3	"The History of Architecture in India"	Christopher Tadgell	Penguin Books (India) Ltd, New Delhi	1990
4	"History of Mughal Architecture", Vols I to III -	R.Nath	Abhinav Publications, New Delhi	1985

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CONTEMPORARY INDIAN ARCHITECTURE (CIA)

COURSE CODE	25AR2210	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Architecture and Planning of various Cities during Medieval Age.	2	PO3
CO2	Understand the Culture and Built Forms in Pre – Independence (Colonial Rule) and Post-Independence of India.	2	PO6
CO3	Understand the Theories of current Architect practices and their applicability in meeting present day Needs.	2	PO4
CO4	Examine the influence of socio-political, cultural, and economic factors on contemporary Indian architecture.	2	PO3

Syllabus

Module 1	Influenced Indian Architecture Transformation of Indian traditional architecture due to influence of various Indian occupied rulers like Islamic, Mughal, Deccan kings, Vijayanagar empire, etc., Lessons from public architecture (place designing like Market places, palaces, tombs, forts, public gathering places). Influence of Colonial architecture in transforming the building design and its elements.
Module 2	Post Independent & Modern Architecture in India Indo-Saracenic architecture. Modern architecture influence on Indian Architecture near to post- Independence times. New Delhi, Kolkata, Chennai, Princely states Architecture of India (colonial architecture). International trends like Brutalist architecture, Cubism, etc., influence on Indian architecture. Contributions of BV Doshi, Raj Rewal, Sirish Beri, Nari Gandhi, Achyut Kanvinde, Anantha Raje, Charles Correa, Laurie Baker, etc., to Indian Architecture.
Module 3	Contemporary Indian Architecture Contemporary theories in Indian Architects like Minimalism, Expressive, Exposed Brick, Earthen Architecture, Sustainable Architecture, etc. The concepts of contemporary architects like Chitra Viswanath, Brinda Somayya, Sanjay Mohe, Jaisim, Bimal Patel, Sirish Beri, etc.,
Module 4	Redefining Traditional and Indian Vernacular styles. Change of Role of Courtyard, opening in the buildings, Natural lighting, Neighborhood & High-rise Buildings designing. Contemporary public buildings study.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year

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1	Charles Correa	Kenneth Frampton	The Perennial Press	1998
2	Balkrishna Doshi, An Architecture for India	William Jr. Curtis	Rizzoli	1988
3	Laurie Baker: Life, Work and Writings	G. Shankar (Editor)	Penguin Books India	2001

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HUMAN SETTLEMENTS AND PLANNING (HSP)

COURSE CODE	25AR2211	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the various elements of Human Settlements and the classification of Human Settlements.	2	PO2
CO2	Understand familiarize the students with Planning concepts and process in Urban and Regional Planning.	2	PO3
CO3	Understand the changing dynamics of Urban Form and it's planning according to urban transformation	2	PO9
CO4	Understand the interrelationship between Human Settlements structure and Social Dynamics.	2	PO9

Syllabus

Module 1	Origin of Human Settlements – Factors influencing the growth and decay of human settlements,Elements of Human Settlements; Type and classification of settlements – Urban and Rural.
Module 2	Introductory study of the development of various settlement forms – Before and after Industrial Revolution. Theory of 'EKISTICS'; Planning concepts and their relevance to Indian Planning practice – Ebenezer Howard (Garden City Concept), Patrick Geddes (Geddisian Triad), C.A Perry(Neighbourhood Planning), Radburn Theory, Satellite Towns, City Beautiful; Concept and Case studies.
Module 3	Town planning & Regional theories like Garde City, city beautiful movement, Linear city,Concentric circle theory, sectoral theory, Christeller weber central place theory, etc., Brief Introduction to the town planning organization in India – Various levels of planning, National, Regional, Urban, Rural, Local etc. differences and relationships between them; Ecological, Social and Economic aspects of town planning in India; Definitions and terms in Indian context – Zonal plan, Master Plan, Land Use Plan, Development regulations, regional plans, etc.
Module 4	Urbanization – Fact, elementary theories and problems related to urbanization with socialreference to India, Emergence of new forms of developments, Transportation, and communication. – Potentials and limitations of roadways, Railways, Airways and Waterways in development of settlements; Problems and potentials. Concepts of SMART cities, Utopian Cities, IOT facilities in Urban Planning, Modal Split, NMT, Pedestrianization of cities etc.,

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	An Introduction to the Science of Human Settlements	C.L.Doxiadis, Ekistics	Hutchinson, London,	1968
2	Housing and Urban Renewal	Lang, J. T.	George Allen and Unwin, Sydney	2005
3	Ministry of Urban Affairs and Employment	Government of India, New Delhi	Government of India, New Delhi	1999
4	Urban Development Plans: Formulation & Implementation	Government of India, New Delhi	Government of India, New Delhi	1996.
5	Master Plan for Madras Metropolitan Area, SecondMaster Plan,	Madras Metropolitan Development Authority	Madras Metropolitan Development Authority	2007

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CONTEMPORARY WESTERN ARCHITECTURE (CWA)

COURSE CODE	25AR3112	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Cubism & Constructivism along with various Building styles of Early Modern Architects.	2	PO3
CO2	Understand Post Modernism and International Style along with Ideas and Works of Various Architects of that time	2	PO6
CO3	Understand Critical Regionalism and other alternative practices. along with Ideas and Works of Various Architects of that time.	2	PO4
CO4	Understand Deconstructivism along with Forms, Ideas and Concepts followed by Various Architects in their works	2	PO3

Syllabus

Module 1	Early Modern Architecture: Study of various movements. Baroque-Rococo, Cubism, Constructivism, Brutalist Architecture, Neo-Classism etc., Study of works of Architects: Philip Johnson, Robert Venturi, Frank Lloyd Wright, Mies Vand Rohe, Oscar Niemeyer, Alver Alto, Le Corbusier, Louis Khan, Richard neutral, Richard Neutra, Richard Meier.
Module 2	Later Modern Architecture Post modernism, Various Design & Art schools, and their Philosophies like Bauhaus, Change of ideologies and conceptualization, and international style. Study of the ideas and works of Architects like Paul Rudolph, Robert Venturi, I.M.Pei, KenzoTange, Minoru Yamasaki, Kisho Kurokawa, Richard Meier, Toyo Ito.
Module 3	Alternative Practices and Ideas African Architecture, Critical regionalism, works and ideas of Hassan Fathy, Geoffrey Bawa, Tado Ando, Laurie baker and Paulo soleri.
Module 4	Deconstructivism – Works of Zaha Hadid, Daniel Libeskind, Frank o Gehry, Peter Eisenman, Santiago Calatrava and his structural concepts- News forms and ideas of Norman Foster, Greg Lynn, Rem Koolhaas. Contemporary concepts of Earthships, Energy Efficiency, Sustainability, Floating Architecture, Berm Architecture.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Architecture Theory	Michael Hays	CBA	1999
2	Deaths and Life of Great American Cities	Jane Jacobs	Vintage	2003
3	Hassan Fathy	James Steele	Academy Editions	1985

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SITE PLANNING AND LANDSCAPE DESIGN STUDIO (SPLS)

COURSE CODE	25AR3161	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the elements, principles, and types of landscapes applicable to different architectural contexts.	2	PO8
CO2	Analyze site characteristics and apply technical knowledge including tree species selection and landscape specifications.	3	PO9
CO3	Apply site planning methods for organizing built and open spaces efficiently and aesthetically.	4	PO7
CO4	Develop site and landscape design proposals through drawings, models, and documentation integrating ecological and functional requirements.	5	PO9

Syllabus

Module 1	Introduction to Landscape Design and Site Planning: Man, and Nature: the role of landscape in enhancing architectural environments. Principles and elements of landscape design (unity, balance, rhythm, focal point, scale). Types of landscapes: formal, informal, naturalistic, urban, rural, institutional, residential. Introduction to site planning: factors affecting siting — topography, sun, wind, approach, views.
Module 2	Tree Planting Specifications and Landscape Elements: Tree species selection: shade trees, flowering trees, avenue trees, native vs. exotic species. Planting specifications: pit sizes, soil preparation, staking, watering, maintenance. Design of softscape (plants, lawns, ground covers) and hardscape (paths, seating, pavements). Technical details: grading, drainage, soil conservation in site development.
Module 3	Site Planning Techniques and Codes: Site zoning: functional layout, circulation, activity nodes, service areas. Scientific techniques of site analysis (climate, hydrology, vegetation, soil). Codes and regulations affecting site planning (setbacks, FAR, ground coverage). Integration of utilities and renewable energy systems in site layout.
Module 4	Studio Exercises and Design Applications. Exercises in site analysis diagrams and landscape design proposals. Design of open spaces for residential, institutional, or recreational projects.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Landscape Architecture: A Manual of Environmental Planning and Design"	Barry Starke	McGraw-Hill Education	2006
2	Drawing for Landscape Architects: Construction and Design Manual	Sabrina Wilk	Birkhäuser Architecture	2018
3	"Principles of Landscape Architecture"	S. B. Ghosh	Oxford Book Company	2014

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SPECIFICATION, ESTIMATION AND COSTING (SEC)

COURSE CODE	25AR3216	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding of data required and methods of estimation	2	PO1
CO2	Applying various methods, estimate different quantities.	3	PO3
CO3	Understanding of the types of estimates and costing	2	PO3
CO4	Understanding various specifications and terminology used.	2	PO8

Syllabus

Module 1	Introduction: Introduction to Quantity estimation - costing and specifications related to building projects - Definition and purpose of Estimating and Costing - Procedure of estimating or method of estimating - data required to prepare an estimate (Drawings/ specification/ rates) - complete estimate structure.
Module 2	Measurement of Materials and Works: Introduction to measurement of various construction work items - importance and significance in construction projects - Units of measurement, rules for measurement - Methods of taking out quantities: long wall and short wall method, centre line method, partly centre line, cross wall method - Standard modes of measurement as per Indian Standards for various work items.
Module 3	Types of Estimates and Costing: Preliminary/Approximate Quantity Estimates: Importance & purpose of Preliminary / Approximate estimates, Plinth area method, Cubical contents method and centre line method and their preparation. Types of approximate estimates, basic differences, and advantages. Detailed Quantity Estimation: Types of detailed estimates and their application, Methods of deriving detailed quantities for various construction work items. Preparation of Detailed estimate, Work items as per construction stages: Foundations, Superstructure, Finishing works in a simple building. Description & significance of Items in Bill-of-Quantities (BOQ).
Module 4	Costing: Introduction, meaning, purpose, methods of estimating cost of construction for various work items, cost indices, rates of labour and material, analysis of rates, preparation of abstract of estimated cost, use of CPWD schedule of rates. Deriving construction cost as per BOQ. Specifications: Introduction, Definition, importance and purpose of specifications, impact on costing. Principles and practices. Types of specifications. Knowledge of manufacturers' specifications for construction materials/ products. Specification of common building materials including carriage & stacking of materials. Specifications for a simple building. Standard specifications of BIS. General abbreviations used in specifications. Specification of new building materials.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Textbook of Estimating and Costing.	Birdie,G.S.	Dhan Patrai Publishing.	2005

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2	Estimating, Costing, Specification & Valuation	Chakraborty, M.	M Chakraborty	2006
3	C.P.W.D. Standard Schedule of Rates.		C. P.W.D.	2021
4	Estimating and Costing in Civil Engineering.	Dutta, B. N.	UBS Publishers, Distributors Ltd.	1998 (24th Ed.)

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BUILDING BY LAWS AND REAL ESTATE (BRE)

COURSE CODE	25AR3218	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the importance of Building codes in different zones and learning about the terminologies	2	PO3
CO2	Understand the different norms from National Building Code of India	2	PO5
CO3	Understand the basic need of building bye laws of local region and to learn the terminology. To be introduced to Energy Conservation	2	PO4
CO4	Fundamentals of real estate, Real Estate Markets and Trends	2	PO4

Syllabus

Module 1	Introduction to building codes and norms: Introduction to Building codes, bye laws and regulations, their need and relevance. Overview of basic terminologies, nature of building codes in special regions like heritage zones, air funnels, environmentally sensitive zones, disaster prone regions, coastal zones, hilly areas, etc.
Module 2	Study of building regulations: Study of structure of Building bye laws, National Building Code etc. General building requirements, building classifications and permissible uses. Norms for exterior and interior open spaces, setbacks and margins, norms for building projections in open spaces, considerations in FAR, guidelines for open green areas. Plinth, habitable rooms, kitchen, wet areas, mezzanine, storerooms, elevated parts like chimneys, parapets etc. Means of access, norms for access widths for various types of buildings, requirements of parking spaces, Equivalent Car Space (ECS), standards for turning radius, access to service areas.
Module 3	Study the Role and functions of the administrative and Development authorities- Vijayawada Municipal Corporation, CRDA (Capital Region Development Authority) etc and the local regulations for building permissions, architectural control and provision of building services, regulations for super structures, building height regulations, regulations for multi storied buildings etc. Introduction of Energy Conservation Building Code (ECBC): Eco Niwas Samhita 2018, Part I and Eco Niwas Samhita 2021 (code compliance)
Module 4	Overview of real estate: definitions, sectors (residential, commercial, industrial). Role of architects in real estate development. Understanding market analysis: supply, demand, and trends. Economic factors influencing real estate (interest rates, demographics).

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Handbook of Professional Documents 2020,	by Council of Architecture, India	Council of Architecture, India	2020
2	Model Building ByeLaws 2016,	Municipal Administration and Ur	Government of Andhra Pradesh	2016
3	"Real Estate Principles: A Value Approach"	David C. Ling & Wayne R. Archer	McGraw-Hill Education	2021

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URBAN DESIGN (UD)

COURSE CODE	25AR4119	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Urban Design terminologies	2	PO10
CO2	Understand Users and Activities in a city	2	PO9
CO3	Understand public spaces, streets & Transport	2	PO10
CO4	Understand Application of Urban Design	2	PO9

Syllabus

Module 1	Introduction to Urban Design; Terminologies; Urban Design as a Multi-Disciplinary field; Stakeholders and their role in the process of Urban Design. Users and Activities in a city and their Analysis; User needs and behavioral studies; Socio-cultural and Socio-economic aspects of people; Memory and mental mapping
Module 2	Users and Activities in a city and their Analysis; User needs and behavioral studies; Socio-cultural and Socio-economic aspects of people; Memory and mental mapping
Module 3	Urban Design – Scope, Scale, Strategies, levels & legislation; “FIVE ELEMENTS” in a city; People- Centric Design and Public Participation. Urban morphology & Urban Character; Elements and aspects of Urban Design; Built & unbuilt spaces; Buildings; Public spaces, streets & Transport; Pedestrianization& streetscape; Movement pattern; Services; Defensible Spaces; Environment and Urban Design.
Module 4	Survey techniques; Evolution Analysis; Townscape analysis; Perpetual structure; Permeability study (Privacy & Accessibility) & Visual Analysis; Constraints and possibilities; designing in a context and site planning; articulation of spaces; Flexibility, adaptability; Formulation of issues for intervention. Application of Urban Design, Examples of Good Urban Design; New Urbanism, case studies and contemporary urban interventions.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Good City form	Kevin Lynch	MIT press	1995
2	The Image of the City	Kevin Lynch	MIT press	1960
3	Where We Want to Live: Reclaiming Infrastructure for a New Generation of Cities	Ryan Gravel	St. Martin.s press	2016
4	The city of Tomorrow: Sensors, networks, Hackers, and the future of Urban Life	Carlo ratti and Matthew Claudel	Yale University	2016

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PE5: HOUSING (HSG)

COURSE CODE	25AR4120	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand housing and Housing issues	2	PO1
CO2	Understand Housing, 5-year plans specific to housing	2	PO1
CO3	Understand Critical Sources of Finance	2	PO3
CO4	Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends	2	PO4

Syllabus

Module 1	Concept of shelter, timeline, Dynamics of housing (users, need, demand & supply, terminologies); Migration, urbanization, scale, scope, types and ownership. Housing issues – Significance in National development; statistics of housing, problems, Future Demands – slums, shortage etc.
Module 2	Planning principles & Policies in Housing, 5-year plans specific to housing, Current scenario, Issues & Challenges. National & State policies; Development control regulations; Government & Private agencies, Schemes – Public Private Partnership, Slum rehabilitation Authority, Redevelopment etc. Study of International and Various countries policies in comparison to India.
Module 3	Economics of Housing – Concepts, issues, valuation, rent, development cost; Low-cost housing, mass housing, Affordable Housing, Sources of Finance – Banks, Finance agencies. Case studies and exploration and analysis of housing schemes for Rual & Urban areas.
Module 4	Study of user profiles, Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Futureforecasts, and Trends. Contemporary solutions for housing like Bunker houses, 3D printing, Tube houses, Container housing.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Urban Housing Strategies	Babur Mumtaz and Patweikly	Pitman Publishing, London	1976
2	Low Income Housing in the Development World	GeofreyK.Payne	John Wiley and Sons,Chichester	1984
3	Housing by people	John F.C.Turner	Marison Boyars, London,	1976

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SYLLABUS OF COURSES UNDER

PROFESSIONAL ELECTIVE COURSES (PEC)

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PE1: SPATIAL DESIGN

COURSE CODE	25AR3217A	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the theoretical and perceptual foundations of spatial design.	2	PO8
CO2	Analyze spatial qualities and organization in architectural and urban contexts.	3	PO6
CO3	Apply basic principles of spatial design such as hierarchy, rhythm, sequence, and proportion.	4	PO7
CO4	Develop conceptual and physical models to explore spatial relationships.	6	PO7

Syllabus

Module 1	Fundamentals of Spatial Design: - Definition and dimensions of space (physical, visual, perceptual), Elements of space: point, line, plane, volume, Spatial hierarchy, scale, and proportion
Module 2	Spatial Perception and Human Experience: - Human body and scale in space, Perception of space: visual, tactile, acoustic, Movement through space and experiential sequence.
Module 3	Spatial Organization Principles: - Types of spatial relationships: centralized, linear, radial, clustered, grid, Circulation and spatial flow, Boundaries and transitions between spaces.
Module 4	Light, Material, and Form: - Natural and artificial lighting in shaping space, Materiality and surface treatments, Role of form, mass, and void in spatial composition.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Spatial Design Education: New Directions for Pedagogy in Architecture and Beyond"	Ashraf M. Salama	Ashgate Publishing	2015
2	"Spatial Agency: Other Ways of Doing Architecture"	Nishat Awan, Tatjana Schneider, Jeremy Till	Routledge	2011
3	"The Production of Space"	Henri Lefebvre	Blackwell Publishing	1991

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PE2: GREEN BUILDING RATING SYSTEMS

COURSE CODE	25AR3217B	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and define key terminologies, materials, and basic concepts related to passive design, active systems, daylighting, and natural ventilation in sustainable architecture.	2	PO6
CO2	Comprehend and apply the GRIHA rating system criteria for evaluating and designing green buildings in the Indian context.	2	PO8, PO9
CO3	Analyze and compare IGBC and LEED rating systems, and apply their principles to sustainable building projects.	2	PO8
CO4	Demonstrate the ability to use energy simulation software (DesignBuilder) to evaluate building performance through global case studies.	3	PO7

Syllabus

Module 1	Fundamentals, Terminologies & Daylighting Techniques: - Key terminologies: Passive design, active systems, embodied energy, operational energy, U-value, SHGC, thermal comfort. Sustainable materials and eco-friendly construction techniques. Daylighting design principles: daylight factor, light shelves, glare control, skylights. Natural ventilation strategies: cross ventilation, stack effect, courtyard ventilation. Introduction to Net Zero buildings and the role of passive strategies.
Module 2	GRIHA Rating System:- Introduction to GRIHA (Green Rating for Integrated Habitat Assessment). Detailed study of GRIHA manual: categories, criteria, points system. Materials, energy efficiency, water efficiency, waste management credits in GRIHA. Case studies of GRIHA-rated buildings in India. Exercise: Mapping passive design and daylighting strategies to GRIHA criteria.
Module 3	IGBC & LEED Rating Systems:- Overview and comparison of IGBC (Indian Green Building Council) and LEED (Leadership in Energy and Environmental Design). Study of IGBC manual: rating types (new buildings, homes, existing buildings), criteria, scoring. Study of LEED manual: rating levels, categories, material credits, energy credits. Comparative analysis between GRIHA, IGBC, and LEED. Case studies of IGBC and LEED certified buildings.
Module 4	Energy Simulation and Building Performance Evaluation: Introduction to energy simulation software (Design Builder) for assessing building performance. Creating building models, assigning materials, and defining occupancy and climate data. Simulation of daylighting, natural ventilation, and energy consumption. Understanding and interpreting simulation results to improve building design. Study of global case studies where energy simulation has been applied to sustainable buildings.

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Sustainable urban design: an environmental approach	Thomas, Randall & Fordham Max	Taylor and Francis	2009
2	Passive and Low Energy Cooling of Buildings	Givoni Baruch	VNR, New York	1994
3	Green design: design for the Environment	Mackenzie Doroth	Laurence King, London	1997

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PE3: INTERIOR DESIGN STUDIO (IDS)

COURSE CODE	25AR3264A	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply and demonstrate proficiency in conceptualizing and executing interior design projects, integrating principles of spatial planning, aesthetics, and functionality effectively.	3	PO1, PO3
CO2	Analyze advanced skills in utilizing digital tools and software to create comprehensive interior design presentations, fostering creativity and professionalism in their design solutions	4	PO1, PO5, PSO2

Syllabus

Module 1	Introduction to parameters of design, anthropometrics and ergonomics, human activity and use interior spaces and furniture. Analysis of design to perceive elements which define the character of the environment. Analyze the design process and concept formation.
Module 2	The student is expected to design two projects using Interior design principles and software's like Cad, Revit, Sketchup, Lumion etc. Concepts, detailed plans, measured drawings, 3D representation by Model making.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Space Planning Basics	Karen Mark,	Van Nostrand Reinhold	1992
2	Interior Design Illustrated	Francis.D. Ching & orky Bingelli	Wiley Publishers	

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PE4: MODULAR CONSTRUCTION STUDIO (MCS)

COURSE CODE	25AR3264B	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Applying methods to develop an understanding of space design at the local level. Additionally, applying techniques to integrate various knowledge systems to formulate a design proposal of a practical scale, along with implementing the process used for the same.	3	PO6
CO2	Creating opportunities for students to comprehend the area, scale, design, and implementation factors involved in Modular construction. Additionally, create projects for students to incorporate Modular construction, with a mandatory requirement for conducting case studies and documentation of Modular Construction.	6	PO9

Syllabus

Module 1	Principles of Modular construction, Objectives, Types of Modular construction, Delivery methods, Modular building process, Pros & Cons of Modular construction.
Module 2	Identify the participants including customers, Manufacturers, Installers, etc. Design Phase – Site evaluation, design considerations, Scope of work, building codes & specifications. Pre-construction and construction phases – Objectives, Construction documents, Estimation and budgeting, Scheduling, supply chain management of modular construction, Quality control and Assurance. Safety programs and standards, Tools plus machinery and heavy equipment needed.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Introduction to Commercial Modular Construction,		Modular Building Institute,	2019
2	Design for Modular Construction: An Introduction for Architects,		MBI,	2019

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PE5: APPROPRIATE CONSTRUCTION TECHNOLOGIES

COURSE CODE	25AR4121A	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the alternative building materials, applying cost. effective materials and techniques to resolve environmental problems.	2	PO2
CO2	Understanding the indigenous construction materials and techniques for building resilience and disaster mitigation	2	PO2
CO3	Understanding the materials and techniques for energy efficient building construction	2	PO3
CO4	Applying Building Information Modelling in modern construction industry	3	PO6

Syllabus

Module 1	Apply cost-effective building materials and techniques in construction, Study of the availability of Materials, Comprehend the importance of Recycling used Materials, study different Government departments researching alternative building materials and techniques,
Module 2	Learning about current architectural practices on alternative building materials and techniques. Identify Environmental Issues. Vernacular construction practices as suitable techniques to make resilient buildings. Various types of construction details of foundations, soil stabilization, retaining walls, and plinth fill, flooring, wall, opening, roof, parapets, boundary walls, staircases, etc. Local practices for disaster resistance and traditional regional responses.
Module 3	Building resources: Passive energy system design, building envelope, Building orientation and components of building fabric, Curtain wall, sourcing, and recycling of building materials. Use of alternative building materials and technologies for making the building energy efficient and less resource Dependent.
Module 4	Dry construction technology for lesser use of water and other resources. Introduction to Building Information Modelling and its Application to the building construction industry. Building automation systems - approaches, application – lighting, security, fire detection, office automation, vertical transportation, surveillance. Smart construction, Autonomous equipment, Future Potential for AI in Construction.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Alternative Building Materials and Technologies	K S Jagadeesh, B V Venkatta Rama Reddy & K S Nanjunda Rao	New Age International Publishers	2014

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PE6: SUSTAINABLE CITIES AND COMMUNITIES

COURSE CODE	25AR4121B	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and explain the key concepts of sustainability, resource depletion, and climate change in the context of cities and communities.	2	PO6
CO2	Understand sustainable site selection, development principles, and the role of green materials and technologies in shaping sustainable urban environments.	2	PO6
CO3	Understand low-impact construction methods, biomimicry concepts, and various dimensions (environmental, social, economic, cultural) of sustainability in communities.	2	PO6
CO4	Understand recent global trends such as Transit-Oriented Development (TOD), Livable Cities, Healthy Cities, Happy Cities, and recognize sustainable practices through case studies of eco-cities and communities.	2	PO6

Syllabus

Module 1	Introduction to Sustainable Cities & Green Concepts: - Definition and evolution of sustainability in cities. Green concepts: resilience, circular economy, regenerative cities. Depleting resources: water, energy, land, biodiversity loss. Climate change and its urban impact: flooding, urban heat islands, carbon emissions. Principles of sustainable site selection and development for new cities and communities.
Module 2	Sustainable Building Materials & Low-Impact Technologies: - Overview of sustainable materials: recycled, renewable, low-carbon. Green building technologies: rainwater harvesting, solar energy, wastewater recycling. Low-impact construction: prefabrication, modular systems, permeable pavements. Biomimicry in urban design and construction: nature-inspired solutions.
Module 3	Dimensions of Sustainable Communities & Emerging Urban Trends:- Dimensions of sustainability: environmental, social, economic, cultural. Concepts of Transit-Oriented Development (TOD) and its role in reducing urban sprawl. Livable Cities: public spaces, pedestrianization, mixed-use development. Healthy Cities: clean air, active transportation, green infrastructure. Happy Cities: psychological well-being, inclusivity, community engagement. Other trends: Smart cities with sustainable focus, 15-minute city concept, Blue-Green infrastructure.
Module 4	Case Studies of Eco-Cities & Sustainable Communities:- Global case studies: Masdar City (UAE) – zero-carbon city concept, Vauban (Germany) – car-free community, Songdo (South Korea) – smart and sustainable city Indian case studies: Auroville (Tamil Nadu) – experimental sustainable township, Lavasa (Maharashtra) – lessons from success and failure, GIFT City (Gujarat) – green and smart city

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	initiative Understanding and documenting sustainable practices in real-world cities.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Designing Sustainable Cities	Rachel Cooper, Graeme Evans, Christopher Boyko	Wiley-Blackwell	2009
2	The Sustainable City	Steven Cohen	Columbia University Press	2017
	Green Infrastructure: Linking Landscapes and Communities	Mark A. Benedict, Edward T. McMahon	*Island Press*	2012

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PE7: ARCHITECTURAL CONSERVATION (AC)

COURSE CODE	25AR4122A	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand about the basics of Conservation in India	2	PO4
CO2	Understand the Conservation Practices	2	PO3
CO3	Understand the importance & analysis of Urban Conservation	2	PO3
CO4	Discuss about Conservation planning & Adaptive Conservation.	2	PO4

Syllabus

Module 1	Introduction to conservation: Understanding Heritage. Types of Heritage. Heritage conservation- Need, Debate and purpose. Defining Conservation, Preservation and Adaptive reuse. Distinction between Architectural and Urban Conservation. International agencies like ICCROM, UNESCO and their role in Conservation
Module 2	Conservation in India: Monument conservation and the role of Archaeological Survey of India –role of INTACH – Central and state government policies and legislations- select case studies of sites such as Hampi, Golconda, Mahabalipuram etc Conservation practice: Brief study on Listing –Grading-Documentation - Assessing architectural character of historic structures. Guidelines for preservation, rehabilitation, and adaptive re-use of historic structures.
Module 3	Urban conservation: Understanding the character and issues of historic cities in South India. Upgradation programmes in old areas and development strategies for regeneration of inner-city areas– select case studies of towns like Srirangapatna, Mysore and Bijapur. Historic districts and heritage precincts.
Module 4	Conservation planning: Conservation as a planning tool. - Financial incentives and planning tools such as Transferable Development Right (TDR)-urban conservation and heritage tourism infrastructure facilities. Conservation management- community participation and financing conservation. Adaptive Conservation: Heritage tourism, Heritage Walk creation, Athen's charter, Adaptive reuseof Heritage buildings.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	The Conservation of European Cities	Donald Apple yard	M.I.T. Press,	1979
2	Historic Preservation: Curatorial Management of the Built World	James M. Fitch	University Press ofVirginia;	1990
3	a Richer Heritage: Historic Preservation in the Twenty-First Century	Robert E. Stipe	Univ. of North Caroling press	2003

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PE8: VERNACULAR ARCHITECTURE (VA)

COURSE CODE	25AR4122B	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Vernacular Architecture, its Approaches & Concepts.	2	PO4
CO2	Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.	2	PO6
CO3	Understand the Vernacular Architectural Styles of Southern India.	2	PO3
CO4	Understand the Influence of Western world on Vernacular Architecture.	2	PO3

Syllabus

Module 1	Definition and classification of Vernacular architecture – Vernacular architecture as a process – Survey and study of vernacular architecture: methodology – Sense of Identity, Continuity, Socio-Cultural and Contextual responsiveness of vernacular architecture: an overview. Approaches and Concepts, Different approaches, and concepts to the study of vernacular architecture: an overview of historical outline, religious context, and social customs aesthetic, architectural, temporal, political and anthropological studies in detail.
Module 2	Vernacular tradition in building serves in creating a balance between nature and society, optimal utilization of natural resources and of local skills and craftsmanship. Vernacular Architecture Of The Western, Northern & North-East Regions Of India, Forms spatial planning, cultural aspects, symbolism, colour, and art, materials of construction and construction technique of the vernacular architecture of the following: Deserts of Kutch and Rajasthan; Havelis of Rajasthan, Rural and urban Gujarat; wooden mansions (havelis); Havelis of the Bohra Muslims, Geographical regions of Kashmir; house boats, Houses of Sikkim, Arunachal Pradesh, Mizoram, Etc., housing Styles.
Module 3	Vernacular Architecture of South India, Forms, spatial planning, cultural aspects, symbolism, art, colour, materials of construction and construction technique, proportioning systems, religious beliefs and practices in the vernacular architecture of the following: Kerala: Houses of the Nair &Namboothri community; Koothambalam, Padmanabhapuram palace etc., Tamil Nadu: Houses and palaces of the Chettinad region; Agraharams etc., Karnataka: Houses of Melkote, Madikere etc., Andhra Pradesh – Iktas houses in Nalgonda etc.
Module 4	Western Influences on Vernacular Architecture of India, Colonial influences on the Tradition Goan house - Evolution of the Bungalow from the traditional bangla, Victoria Villas – Planning principles and materials and methods of construction. Settlement pattern and housing typologies in Pondicherry and Cochin.

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Haveli – Wooden Houses and Mansions of Gujarat	V.S. Pramar	Mappin Publishing Pvt. Ltd., Ahmedabad	1989
2	Architecture of	Kulbushanshan Jain and Minakshi JainMud	Aadi Centre, Ahmedabad	1992
3	Indian Architecture according to Manasara Silpasastra,	AcharyaPrasanna K	Indian, India, Patna:	1979 (Reprint of 1928 ed.).
4	The tradition of Indian Architecture Continuity, Controversy – Changesince 1850	G.H.R. Tillotsum	Oxford University Press, Delhi	1989
5	VISTARA – The Architecture of India,	Carmen Kagal	Pub: The Festival of India	1986

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PE9: ENVIRONMENTAL LAB

COURSE CODE	25AR4189A	MODE	R	LTPS	0-0-0-4	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and evaluate climatic parameters (temperature, humidity, wind, solar radiation) and their implications for design. Conduct site analysis for environmental suitability, including sun path, wind flow, and shading studies.	2	PO7
CO2	Use tools and techniques for assessing daylight, thermal comfort, and natural ventilation in architectural spaces. Apply principles of passive design through model testing and simulation tools.	6	PO9

Syllabus

Module 1	Introduction to Environmental Parameters:- Importance of environmental analysis in architecture ,Basic climatology: temperature, humidity, rainfall, solar radiation, wind ,Microclimate and site factors. Climatic Data Analysis:- Interpreting climate data from IMD, ECBC, and WeatherTool, Climate classification and its application in design ,Bioclimatic charts and psychrometric analysis
Module 2	Solar and Wind Studies:- Sun path diagrams and shading analysis ,Solar radiation analysis and its effect on building design ,Wind rose diagrams and wind tunnel tests for ventilation strategies. Daylighting and Visual Comfort:- Natural lighting concepts and daylight factor ,Tools: Lux meters, heliodon, artificial sky ,Glare control and window design

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Environmental Engineering Laboratory Manual	N.N. Basak	McGraw Hill Education (India)	2015
2	Environmental Studies: Laboratory Manual	Anubha Kaushik, C.P. Kaushik	New Age International Publishers	2007

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PE10: REVIT-BIM

COURSE CODE	25AR4189B	MODE	R	LTPS	0-0-0-4	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Explain the fundamentals of Building Information Modeling (BIM) and its significance in modern architectural practice. Navigate and use the Revit software interface tailored for architectural workflows. Develop basic to intermediate architectural models including walls, doors, windows, floors, roofs, and other components. Create construction documents including plans, sections, elevations, and schedules directly from the BIM model. Understanding 4-D (Project Management, project phasing, collaboration) 5-D (Cost) Preparation of related documents, and Coordination; 6-D (Building Performance Analysis)	6	PO7
CO2	Use Revit's annotation and detailing tools to produce clear and professional architectural drawings. Understand and apply principles of collaboration and coordination within BIM environments. Produce visual presentations and renderings of architectural models for design communication. Manage and export Revit projects effectively for academic submissions and professional use. Digital Twins in BIM; Introducing Autodesk Forma,BIMx, ACC, IFC file etc. Additional Applications, and Artificial Intelligence (AI) Plugins for Revit Architecture to enhance productivity; BIM Portfolio Creation	6	PO9

Syllabus

Module 1	Introduction to BIM and Revit for Architecture**: -** BIM concepts and benefits in architecture Overview of Revit software and its interface, Setting up a new architectural project in Revit. Project Setup and Basic Modeling**: -** Levels, grids, and project units, Basic architectural elements: walls, doors, and windows, Editing and modifying elements, Understanding families and components Architectural Modeling Essentials**: -** Floors, roofs, ceilings, and stairs, Curtain walls and

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	openings, Working with rooms and spaces for area calculations Views and Documentation**: -** Creating and managing views: plan, elevation, section, 3D views, Annotation tools: dimensions, tags, text notes, creating sheets and placing views on sheets
Module 2	Advanced Modeling and Customization:- Creating and modifying custom families ,Using massing tools for conceptual design ,Design options and phasing basics , Schedules and Quantification **:-**Generating door, window, and room schedules ,Quantity takeoffs for materials ,Exporting data for cost estimation. Collaboration and BIM Coordination:- Linking and importing external models ,Introduction to worksharing and collaboration ,Clash detection basics and coordination principles. Visualization and Presentation: -Applying materials and textures, Creating renderings and walkthrough animations, Exporting views and models for presentations.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Mastering Autodesk Revit	Lance Kirby, Marcus Kim, Eddy Krygiel	Wiley	2025
2	Design Integration Using Autodesk Revit	Daniel John Stine	SDC Publications	2025

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PE11: TRANSPORTATION PLANNING (TSP)

COURSE CODE	25AR4224A	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes:

CO#	CO Description	BTL	PO Mapping
CO1	Understand Basic elements and various category of vehicles depending upon the category of Roads exiting	2	PO1
CO2	Understanding Various types of Circulation & Users along with their infrastructural needs.	2	PO1
CO3	Understanding Road Safety & Civic Sense	2	PO1
CO4	Understanding Traffic & Transportation byelaws & Regulation	2	PO9

Syllabus

Module 1	Role of Roads & Its network, Type of Users & their Behaviour, Type of vehicles, their characteristics, and their convenience. Type of roads, classification, Design elements of according to type of carriage way & vehicles of roads.
Module 2	Categories and typologies in signages used on road networks in city, highways, etc. Development or change in signages & their utility. Road markings, typologies, colour categorization, standards for signages. Types of intersections like T, Y, Three-legged, etc., Spatial standards for traffic islands, components in various road intersections. Traffic calming elements like speed breakers, tabletop crossings, etc., Traffic signals, Traffic control, street lighting & Road accidents statistics: Traffic signals Advantages & disadvantages, Signal indications, signal illustrations, Co-ordinated control signals, emergency traffic control, location of signals location & design of traffic signals. Nature & type of road accidents. India road accident statistics. Streetlighting, Emergency responsive system, identification of accident-prone areas. Traffic management measures for accident prevention.
Module 3	Need for road safety, category of road users and their safety suggestions, precautions for driving in difficult conditions like night, rain, fog, skidding conditions, etc., Importance of civic sense, road etiquettes and road user behaviour, rules of road, right of way, sensitization of road rage, assistance to road accident victims.
Module 4	Indian Motor Vehicles Act (Chapter – VII, in detail), Regulation concerning traffic to cycles, scooters, pedestrian traffic, over taking rules, left drive, etc., various kinds of penalties. National Road Safety policy, state motor vehicular rules. Pedestrian circulation infrastructure, standards for walkways & materials. Pedestrian bridges, subways, cycle tracks, Barrier free design elements, all age and types of users' friendly features design. Comforts and needed infrastructure for especially abled users, safety provisions needed like hand railing, anti-skid flooring, etc.

Reference Books:

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1	Introduction to Traffic Engineering	R. Srivasa rao.	Hutchinson, London,	1968
2	Traffic engineering & Transport planning	LR Kadiyali	George Allen and Unwin, Sydney	2005
3	Road Signages and signs	Ministry of Road Transport and Highways	Government of India, New Delhi	1999
4	Pocket book for Highway Engineers	MORT & H	Government of India, New Delhi	2019
5	Street Design Guidelines, Guidelines for Road Markings, Guidelines and Specification for Crash Barriers, pedestrian Railing and Dividers	UTTIPEC	Government of India, New Delhi	2007

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PE12: DISASTER MITIGATION AND MANAGEMENT (DMM)

COURSE CODE	25AR4224B	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the necessity for disaster management and measures that are to be followed.	2	PO3
CO2	Understand the disaster preparedness and Involving Design Considerations for buildings	2	PO3
CO3	Understand the study of design considerations for disaster management and precautions.	2	PO3
CO4	Understand the Relief & Rehabilitation for Disasters	2	PO9

Syllabus

Module 1	Introduction: Disaster Management & its necessity; Types, characteristics, causes & impacts; Natural disasters, Manmade disasters, Epidemics; Institutional & Legal arrangement; NDMA; Financial arrangement; Role of Architect at all stages of Disaster Management. Disaster Prevention & Mitigation: Risk Assessment & Vulnerability Mapping; Long-term measures; Review & revision of building byelaws & codes; Hospital Preparedness; Retrofitting; Mitigation strategies, Trigger Mechanism; Capacity building; Awareness programs. Architectural Design considerations.
Module 2	Disaster Preparedness: Forecasting & Early Warning Systems: Plans of action for probable disasters; emergency, medical, casualty management systems; Resources needed; Training, Simulation & Mock Drills; Partnerships for Mitigation & Preparedness; Audit of buildings & infrastructure; Architectural.
Module 3	Design considerations. Response: Role of various agencies; Standard Operating Procedures (SOPs); Levels of Disasters; Incident Comm& System (ICS); First & Other Key Responders; Medical Response; Information & Media Partnership; Search & rescue; Architectural Design considerations.
Module 4	Relief & Rehabilitation: Temporary Relief Camps; Management of Relief Supplies; Provision of Intermediate Shelters; Relocation & reconstruction, repair & retrofitting of buildings & infrastructure; Socio-cultural-economic considerations; Capacity building for self-help construction; training & awareness programs. Architectural Design considerations.

Reference Books:

Sl No	Title	Author(s)	Year	Publisher
1	Disaster Hits Home, New policy for Urban Housing Recovery,	Mary C Comerio	2001	Oxford University Press, London
2	Proceedings – Learning from practice- Joint US and Italy Workshop- October 18- 23		1992	National Science Foundation; US
3	Earthquake Resistant Design and Construction of buildings Practice-	Bureau of Indian	1993	BIS

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PE13: VASTU VIDYA

COURSE CODE	25AR4224A	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes:

CO#	CO Description	BTL	PO Mapping
CO1	Understand the historical and philosophical foundations of Vastu Vidya in the context of Indian architectural traditions.	2	PO1
CO2	Interpret Vastu Purusha Mandala and its application in spatial planning and orientation.	2	PO6
CO3	Understand architectural layouts based on Vastu principles and assess their influence on form, function, and energy flow.	2	PO2
CO4	Understand architectural layouts based on Vastu principles and assess their influence on form, function, and energy flow.	2	PO9

Syllabus

Module 1	Introduction to Vastu Vidya:- Definition, origin, and scope of Vastu Shastra ,Philosophical and metaphysical basis: Panchabhutas (Five Elements), directions, and cosmic geometry ,Importance in historical Indian architecture
Module 2	Vastu Purusha Mandala:- ,Concept and symbolism of the Vastu Purusha ,Grid systems: 1x1 to 10x10 layouts ,Mandala classifications and significance in site planning ,Orientation, cardinal directions, and energy flow.
Module 3	Spatial Planning and Functionality:- Site selection and analysis as per Vastu ,Zoning and placement of rooms in residences and temples ,Entrance, kitchen, toilets, and puja room orientations ,Proportions, symmetry, and balance.
Module 4	Application in Vernacular and Temple Architecture:-Case studies from Indian temple architecture (e.g., Khajuraho, Konark, Srirangam) ,Vernacular architecture across regions (Kerala, Rajasthan, Tamil Nadu) ,Role of Vastu in climate-responsive design.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Vaastu: The Indian Art of Placement	Rohit Arya	Inner Traditions / Bear & Company	2000

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Sl No	Title	Author(s)	Publisher	Year
2	Vastu Shastra: For a Healthy, Prosperous and Happy Life	B. Niranjan Babu	Rupa publications India	2005

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PE14: DISSERTATION (DIS)

COURSE CODE	25AR4268A	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand research skills by formulating a well-defined research question, conducting in-depth literature reviews, and presenting original findings in a structured academic format	2	PO6
CO2	Analyzing the theoretical frameworks and empirical evidence to produce a coherent argument, contributing new insights to their field of study.	4	PO3

Syllabus

Module 1	Students may choose a topic related to Architecture and allied subjects. The topics must be vetted by the faculty. Emphasis must be on critical understanding, logical reasoning, and structured writing. Students may be encouraged to select the topic which may eventually culminate in the Architectural Design Thesis of the subsequent semester.
Module 2	Students can thus utilize this as an opportunity for pre-Thesis study, amounting to literature review and relevant case studies which are otherwise required for Thesis By the end of the semester, students are expected to submit a written paper of approximately 3500 words. Standard referencing conventions and technical writing norms must be adhered to. Students are expected to present the progress of the study at various stages of the semester. Final assessment of the students' work may be based on written Paper as well as oral communication. However, greater weightage may be given for writing skills and research content of the study

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Thesis and assignment writing	Anderson, J. and Poole, M	John Wiley	1998
2	The dissertation: an architecture student's handbook	Borden, I. and Ray, K. R.	Oxford Architectural	2006
3	Conducting research literature reviews: from paper to the Internet	Fink, A.	Sage.	1998
4	Writing for academic journals	Murray, R	Berkshire	2005

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PE15: THESIS SEMINAR (TS)

COURSE CODE	25AR4268B	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Identify, explore and research topics of their interest; then describe by the organized presentations.	2	PO6
CO2	Apply the ideas in finding a new solution to the existing problem and interpret via applying the architectural systems	3	PO10,

Syllabus

Module 1	Students will explore and research topics of their interest; then organize presentations. To help students improve as speakers, each student will receive feedback from their CC, Guides, other faculty members and fellow students. All enrolled students must be present at each seminar. It is expected that students will actively participate by asking questions of the speaker.
Module 2	The seminar process includes topic selection, synopsis submission, research on the topic and finally a presentation. Students should strive for professionalism in all aspects of this class. Students can take aid of various mediums of visual presentation ranging from Power points to films to working models to best explain their topic. Each student will give two 20-minute presentations. The student's seminar should cover a minimum of four related papers in the topic chosen. First one will be a practice seminar in front of the class to get immediate feedback and constructive criticism. The entire department will be invited for the second one. Students to submit a detailed report describing their presentation.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Architectural Research Methods	Linda Groat and David Wang	Wiley	2013
2	101 Things I Learned in Architecture School	Matthew Frederick	The MIT Press	2007
3	The Architecture Reference & Specification Book	Julia Mc Morrough	Rockport Publishers	2018

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SYLLABUS OF COURSES UNDER AUDIT

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ECOLOGY AND ENVIRONMENT (E&E)

COURSE CODE	25UC0009	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO #	CO Description	BTL	PO Mapping
CO1	Understand the importance of Environmental education and conservation of natural resources	2	PO1
CO2	Understand the importance of ecosystems and biodiversity	2	PO1
CO3	Understand critically about individual roles in prevention of pollution. An Environmental Studies will be enabled to do independent research on human interactions with the environment	2	PO7
CO4	Understand the environmental science knowledge on solid waste management, disaster management and EIA process Recognize the knowledge on environmental legislation, disaster management and EIA process.	2	PO8

Syllabus:

Module 1	The Multidisciplinary nature of Environmental Studies - Natural Resources- Forest resources. Mining its impact on environment - Water resources - Mineral resources-.
Module 2	Energy resources - Land resource s- Soil erosion.
Module 3	Ecosystems - Biodiversity and its Conservation Environmental Pollution - Soil waste management - Electronic waste management, biomedical waste management
Module 4	Disaster management –. Environmental Legislation Environmental Impact

Reference Books:

S.NO	Title	Author	Year	Publisher
1	Environmental Studies	Anubha Kaushik, C.P.Kaushik	2007	New Age International
2	Environmental Studies	Benny Joseph	2009	Tata McGraw-Hill companies, New Delhi

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SYLLABUS OF COURSES UNDER
BUILDING SCIENCE AND APPLIED ENGINEERING
(BSAE)

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DESIGN OF STRUCTURES - I

(PLANE TRUSSES, SHEAR FORCE AND BENDING MOMENT) (DOS-I)

COURSE CODE	25AR1203	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand about the architecture and structural engineering interface. Understanding the concept of forces and structural systems.	2	PO5
CO2	Understand the plane trusses	2	PO5
CO3	Apply the techniques of shear force and bending moments in column	3	PO5
CO4	Apply centre of gravity and moments of inertia and its impact on the structures.	3	PO5

Syllabus

Module 1	Process of building structures. Broad categorization of structural systems. Basic requirements of structure. Force and its units, Laws of forces, Resultant of a Force System, Law of Inertia, Law of action and reaction, Free body diagram, Static equilibrium & conditions of equilibrium, Degree of Indeterminacy. Types of supports and support reactions, support reactions for statically structures, Analysis of forces, moments, and couples in structures.
Module 2	Perfect truss by method of joints and method of sections. Simple stress and strains, elastic constants, stress strain curves, relationship among elastic constants. Study of beams with different types of support conditions and different types of loadings. BIS 875 code for estimation of design loads in a building.
Module 3	Shear force and shear force diagrams, bending moment & Bending moment diagrams for determinate beams, Sagging and Hogging Bending Moments, Sign Convention, Point of contraflexure and determination of its location. Flexural and shear stresses under bending, Determination of deflection in the beams (only formulae to be told, no derivation) Deflected shapes of the beams.
Module 4	Centre of Gravity and Centroid and its determination for a plane lamina. Moment of Inertia and its determination for a plane lamina, Parallel Axis theorem and Perpendicular Axis theorem.

Reference Books:

Sl No	Title	Author(s)	Year	Publisher
1	A textbook on Engineering Mechanics	Bansal R. K	2005	Laxmi Publications, Delhi
2	A textbook on Strength of Materials	Bansal R. K	2007	Lakshmi Publications

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DESIGN OF STRUCTURES - II (DESIGN OF BEAMS AND COLUMNS) (DOS-II)

COURSE CODE	25AR2105	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the concept of simple stresses and strains and elastic properties of solids	2	PO5
CO2	Analyze the properties of structural timber and bamboo	4	PO5
CO3	Analyze the Design of flexure members of timber and design of simple truss.	4	PO5
CO4	Understand Structural properties of brick masonry and analysis	2	PO5

Syllabus

Module 1	Simple Stresses and Strains: Introduction to structural elements. Types of engineering materials, their mechanical properties, and the tests for determination of the same. Study of a section subjected to pure bending, Neutral Axis, Moment of Resistance and Section Modulus. Stress and Strains; stress strain diagram for mild stee and high tensile steel and concrete Elastic constants and their mutual relationships; Simple redundant problems of stresses and strains.
Module 2	Properties of Structural Timber, Defects of timber and their impact on structural properties of timber, permissible stresses in timbers and modification factors. Classification of timber, Introduction to IS Code of Timber Construction – IS: 883. Introduction to Bamboo as structural material
Module 3	Analysis and Design of flexural members of timber. Built up beams and fletched beams. Analysis and Design of timber columns; Solid columns and built-up columns. Design of members of a simple truss.
Module 4	Brick as a structural material, Design of a load bearing brick wall and wall footing. Types of masonry used as structural system for building structures. Structural properties of brick masonry and analysis and design of low-rise masonry buildings including masonry foundation

Reference Books:

Sl No	Title	Author(s)	Year	Publisher
1	A textbook on Engineering Mechanics	Bansal R. K	2005	Laxmi Publications, Delhi
2	A textbook on Strength of Materials	Bansal R. K	2007	Lakshmi Publications
3	Strength of Materials and Theory of Structures	Punmia P.C	1994	Vol. I, Lakmi Publications, Delhi
4	Strength of Materials	Ramamrutham S.	1990	Dhanpatrai& Sons, Delhi.
5	Strength of Materials	Nash W.A	1989	McGraw Hill Book

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CLIMATE RESPONSIVE ARCHITECTURE (CRA)

COURSE CODE	25AR2106	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding of elements of climate, human comfort, and human body heat balance	2	PO6
CO2	Understanding the concept of heat transfer in buildings, sun path diagrams and designing shading devices	2	PO6
CO3	Understanding air movement for designing buildings accordingly.	2	PO6
CO4	Understanding climate responsive architecture through case studies.	2	PO6

Syllabus

Module 1	Climate and Human Comfort Factors that determine climate of a place – Components of Climate – Climate characteristics - Climate classifications - NBC climatic classification for India – classification for building designers in tropics. Human body heat balance – Human body heat loss – Effects of climatic factors on human body heat loss – Effective temperature – Human thermal comfort – Use of C. Mahony's tables.
Module 2	Heat Flow through Building Envelope Concepts The transfer of heat through solids – Definitions – Conductivity, Resistivity, Specific heat, Conductance, Resistance and Thermal capacity – Surface resistance and air cavities – Air to air transmittance (U value) – Time lag and decrement – Types of envelopes with focus on glass. Design of Solar Shading Devices Movement of sun – Locating the position of sun – Sun path diagram – Overhead period– Solar shading– Shadow angles – Design of appropriate shading devices
Module 3	Air Movement due to Natural and Built Forms The wind – The effects of topography on wind patterns – Air currents around the building – Air movement through the buildings – The use of fans – Thermally induced air currents – Stack effect, Venturi effect – Use of courtyard.
Module 4	Climate and Design of Buildings Design strategies in warm humid climates, hot humid climates, hot and dry climates, and cold climates – Climate responsive design exercises

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	An Introduction to Building Physics	Narashimhan	Professional Pub Service	2001
2	Housing Climate & Comfort	M.Evans	Architectural Press, London	1980
3	Manual of Tropical Housing and Building-Climatic Design	O.H. Koenigsberger and Others	Orient Longman, India,	2010

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BUILDING MATERIAL AND CONSTRUCTION-I(MASONRY) (BMC-I)

COURSE CODE	25AR1255	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the material stones, bricks and Soil: Types, Properties, Challenges. Bricks: Compositions, Classifications, Alternative Bricks Stone: Stone classifications, tests, uses, preservations, Artificial stones. Concrete: Masonry	2	PO1
CO2	Apply the knowledge about the techniques of masonry and draft the types of Stone masonry, brick masonry, and Concrete block masonry. Different masonry Walls, Foundations, Lintels and Arches. To understand the basic building components of the building i.e.: Foundation to parapet wall. To study the elements of the building and their importance, to understand the sequences of construction &structural system.	3	PO5

Syllabus

Module 1	Stones: Geological Classification of rocks – test for stones, uses of stones, deterioration of stone, preservation of stones, stones available for construction in India their properties and uses. Stones for finishes – cutting & polishing – granite and marble. Artificial stone and their uses & types of stone masonry. Bricks &Clay Products: Bricks: Composition of good brick, properties and uses of bricks, classification of bricks, shape of bricks, fire bricks, and substitutes for bricks Clay products: Tiles, terra cotta, stoneware, earthenware, porcelain, and clay block their properties and uses, types of masonry systems. Concrete: Hollow and solid blocks, manufacturing, uses and properties, CMU wall construction and detailing.
Module 2	Basic Building Components, Foundation, Walls, Lintels and Arches Basic building components: Cross section of a small building to understand foundation, plinth beam flooring, sill, lintel, roof beam and slabs, Parapet & weathering course; Foundation: typical types of foundations in stone, brick & RCC. Walls: Details of walls section across the opening (door & window) Roofs: simple configurations and details of various forms of roofs (flat, slope pyramidical & dome). Basic building components: Cross section of a small building to understand foundation, plinth beam flooring, sill, lintel, roof beam and slabs, Parapet & weathering course; Foundation: typical types of foundations in stone, brick & RCC. Walls: Details of walls section across the opening (door & window) Roofs: simple configurations and details of various forms of roofs (flat, slope pyramidical & dome). Brick, Stone Masonry & different types of masonry systems: Applications of brick masonry: Foundation, walling, types of brick walls, brick masonry (English, Flemish, rat trap bond) detailed brick layout at corners, junctions and brick piers, style of construction viz., exposed brick work, Reinforced brick walls, piers etc

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Construction principles, Materials and Methods",	Harold B.Olin	John Wiley & Sons	1994
2	"Building construction"	B.C.Punmia	Laxmi publications (p)Ltd	1984
3	''Construction Technology"	R. Chudley	Prentice hall	2005

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DESIGN OF STRUCTURES – III
(DESIGN OF COLUMNS AND FOOTINGS) (DOS-III)

COURSE CODE	25AR2208	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding of Basics of RCC design	3	PO5
CO2	Understanding and designing of columns	3	PO5
CO3	Understanding and designing of footings and staircases	3	PO5
CO4	Understanding and analysis a given section for under or over design carrying capacity	3	PO5

Syllabus

Module 1	History of reinforced concrete structures and philosophy of limit state design Understanding the codal provision. Analysis and design of reinforced concrete beams, slabs.
Module 2	Introduction to columns: short columns, slender columns, uni-axial behaviour, and bi-axial behaviour. Designing the same.
Module 3	Introduction to types of footings and analyzing and designing the isolated footing with axial load and moment. Introduction to the types of staircases and analyzing and designing the dog legged staircase.
Module 4	Under Reinforced, Balanced and Over-Reinforced sections: Formulation, Analysis of a given section and determination of moment of resistance/load carrying capacity. Design under shear, bond and development length, Analysis & Design of a doubly reinforced RC beam, Continuous and Cantilever Beams.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Limit State Design in Structural Steel	M.R. Shiyekar,	PHI Learning Private Limited	2010
2	Design of Steel Structures	N. Subramanian,	Oxford Higher Education	2008
3	Limit State Design of Steel Structures	S.K. Duggal,	McGraw Hill Education, Private Limited.	2010
4	Structures Publications	Dr. V. L. Shah, Prof. Veena Gore,		2012
5	Design of Steel Structures" by Limit State Method as per IS800-2007	S.S. Bhavikatti	I.K. International Publishing House Pvt, Ltd.	2012

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BUILDING SERVICES – I (PLUMBING AND SANITATION) (BS-I)

COURSE CODE	25AR2209	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the processes involved in the distribution, treatment, and disposal of wastewater.	2	PO4
CO2	Understanding the building sanitation method and different types of plumbing systems.	2	PO4
CO3	Understanding the plumbing and sanitary layouts of a residence.	2	PO4
CO4	Understanding the use and installation of various plumbing fixtures and sewerage systems for sanitary conveyance.	2	PO4

Syllabus

Module 1	Water quality, Treatments and Distribution: Sources of water supply – Water Quality – Water requirements for all type of residential, commercial, Industrial buildings and for town – Water treatment methods – Screening, aeration, Sedimentation, Filtration, Disinfection, Softening, conveyance of water – Distribution of water – Choice of pipe materials- Types of fixtures and fittings – System of plumbing in all type of buildings. Sources of water supply – Water Quality – Water requirements for all type of residential, commercial, Industrial buildings and for town – Water treatment methods – Screening, aeration, Sedimentation, Filtration, Disinfection, Softening, conveyance of water – Distribution of water – Choice of pipe materials-
Module 2	Types of fixtures and fittings – System of plumbing in all types of buildings. Wastewater, Treatments and Disposal Wastewater: Sewage disposal, primary treatment. Secondary treatment, biological treatment, and Modern types of Sewage Treatment Plants - Sewer line fixtures and traps, Manholes, Septic tank. Basic principles of storm water drainage – drainpipes and type of pipe – storm water gutter – rainwater harvesting principles – storage sumps. Building Sanitation: Principles of sanitation, collection, and disposal of various kinds of refuse from buildings.
Module 3	Methods of carrying refuse, systems of refuse disposal, their principles. Plumbing definitions and related terms, plumbing systems (one pipe, two pipe etc.), House drainage system, Drainage of subsoil water. Inspection chambers, Manholes, Sub-drains, culverts, ditches, and gutters, drop inlets and catch basins, roads and pavements, storm overflow/regulators. Plumbing and Sanitary Appliances: Basic principles of Plumbing, need, scope,

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	terminology. Specifications and installation of sanitary fittings like wash basins, water closets, urinals, bidets, sinks, etc. in buildings. Uses of gate valve, float valve, flap valve, ball valve, flush valve, etc., different types of taps, faucets, stop cocks, bib cocks, 'P', 'Q', 'S', floor/bottle traps used in buildings.
Module 4	Design considerations on drainage scheme. Planning of bathrooms, lavatory blocks and kitchen in domestic and multi- storied buildings. Preparation of plumbing drawings, symbols commonly used in these drawings. Sewerage: Indian standards and byelaws for sanitary conveyance. Disposal of sewage from isolated buildings, Gradients used in laying of drains and sewers for various sizes. Septic tank details & capacity calculation. Sewage treatment. Use of pumps in sanitation, biogas, soil disposal without water carriage, rural sanitation. Layout design and details of water supply distribution system in a Campus or Small residential Neighbourhood - Layout design and details of sewage and drainage system for different types of buildings - water supply pipelines, storm water drainage pipelines and Rainwater Harvesting for small residential Neighbourhood.

Reference Books:

Sl No	Title	Author(s)	Year	Publisher
1	Water supply and sanitary engineering	S.C.Rangwala	Anand, 1989.	Charotar Publishing House
2	Wastewater Engineering	Punmia B.C.,	2009	Laxmi Publications,
3	Wastewater Treatment for Pollution Control	Arceivala S.J.,	2008	Tata McGraw Hil
4	Water Supply Engineering	Punmia, B. C., Jain, A. K. and Jain, A. K.	1995	New Delhi: Laxmi Publications
5	National Building Code	bureau of indian standards (BIS)	2016	Bureau of Indian standards (BIS)

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BUILDING MATERIAL AND CONSTRUCTION-II (DOORS, WINDOWS, PARTITION, FALSE CELING) (BMC II)

COURSE CODE	25AR2157	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the materials and its joinery: Timber, Bamboo. Understand the techniques, types of construction of wooden doors, windows, roofing. Understanding Cement and Concrete: Types, properties, tests, and applications in Doors, Windows, Roofing Understanding Ferrous and Non-ferrous materials (Steel): Types, properties, Applications in Doors, Windows, Roofing,	2	PO5
CO2	Apply the knowledge and draft the details of wooden & steel trusses, RCC roofs, brick roofs, door and windows, wooden, RCC and Steel Roofs trusses as per construction industry/practice. Formwork, Shoring and Scaffolding: types and application	3	PO5

Syllabus:

Module 1	Timber-Joinery: Methods of construction using natural timber in joinery works including methods of fixing and options for finishing of doors &windows-terms associated &positioning. Windows (panelled, louvered, glazed and sliding windows) - Doors (panelled, glazed, sliding, sliding/folding, louvered and pivoted) – Ventilators (top hung, bottom hung, pivoted, louvered, and glazed. Bamboo and Other Materials: Design and Construction Techniques using bamboo for building components for small scale buildings like snack bar, tree house including detailing of doors and windows, arches, barrel walls, weave structures and understanding of the same through case studies Cane, gate, coir, coconut - Growth, Form, Shape, Roofing materials – Thatch, grass, Bamboo, reeds – Basics – Case studies and applications. Doors, Windows, Wooden trusses
Module 2	Roofs, Trusses: Methods of construction using material in various structural components of the building such as floors, walls, and roof - Exercises involving the above through case studies. Roofing: Types of brick roofs, Madras terrace roof, jack arch roof, brick arches and domes, reinforced brick roofs, vaults and domes, and construction of arches, vaults, and domes, RCC flat roofs, Steel trusses. Formwork, Shoring and Scaffolding - types and application

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	American Institute of Timber Construction (AITC),"Timber Construction Manual"		Wiley Publishers	2004
2	"Building Construction"	Francis D.K Ching	John Willey & Sons	2008
3	"Construction of Buildings" Volume 1&2	Barry	Blackwell Publishing Ltd,Oxford	2005
4	"Modern Carpentry"	Howard Bud	Good Heart – Wilcox publishers,Portland	2003

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DESIGN OF STRUCTURES-IV
(DETAILING OF STRUCTURAL MEMBER) (DOS IV)

COURSE CODE	25AR3113	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding of limit state design.	2	PO5
CO2	Apply the techniques and Design of reinforcement for a section.	3	PO5
CO3	Apply the Design detailing, and the purpose of one-way and two-way slabs.	3	PO5
CO4	Apply the detailing for special structures such as deep beams, corbels, and shear. walls etc.	3	PO5

Syllabus

Module 1	Introduction, general requirements for structural detailing in concrete, simple theory, steel for reinforcement, general rules for detailing. Concept of Limit state Design, Characteristic strength of steel and concrete, Loads and Loading conditions, Limit state of Collapse and Serviceability.
Module 2	Analysis and Design of reinforcement for a section subjected to torsion, Side face reinforcement. Design and Detailing of a lintel beam & lintel with sunshade. Analysis & Design of Flanged Beams
Module 3	Analysis of slabs spanning in one direction and spanning in two directions. Design & Detailing of a one-way slab, Design & Detailing of a cantilever chajja. Design & detailing of a two-way slab.
Module 4	Detailing for special structures such as deep beams, corbels, walls, shear walls, underground and overhead water tanks, chimneys, bunkers and silos, piles, and pile caps

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Reinforced Concrete Structures Vol-1 & Vol-2	B.C. Punmia	Laxmi Publications, Delhi	2004
2	IS 456-Indian Standard, Plain and Reinforced Concrete	BIS	Bureau of Indian standard	2000
3	Theory of Structures	Punmia, B. C., Jain, A. K. and Jain, A. K.	Laxami Prakashan	1992

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BUILDING SERVICES II
(ELECTRICAL AND ACOUSTICS) (BS II)

COURSE CODE	25AR3114	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the planning techniques and study of electricity, installations, wiring, and principles of distribution and safety.	2	PO4
CO2	Understanding the application of artificial illumination and lighting design for various spaces	2	PO4
CO3	Understanding the knowledge of ventilation principles.	2	PO6
CO4	Applying the properties of sound and architectural acoustics, applicability of acoustic concepts and design, and learning how to create acoustics and analyze the integration of all three services in architectural planning.	3	PO4

Syllabus

Module 1	Electrical Services: Electrical systems – Basic of electricity– single/Three phase supply – protective devices in electrical installation – Earthing for safety – Types of earthing – ISI Specifications. Electrical installations in buildings – Types of wires, wiring systems and their choice – planning electrical wiring for building – Main and distribution boards – Principles of illumination.
Module 2	Illumination and Lighting Design: Visual tasks – Factors affecting visual tasks – Modern theory of light and colour – synthesis of light – Additive and subtractive synthesis of colour – Luminous flux – Candle – solid angle illumination – utilization factor – Depreciation factor –MSCP – MHCP –Laws of illumination. Classification of lighting – Artificial light sources – Spectral energy distribution – Luminous efficiency – Colour temperature – Colour rendering. Design of modern lighting – Lighting for stores, offices, schools, hospitals, and house lighting. Elementary idea of special features required, and minimum level of illumination required for physically handicapped and elderly in building types. Electrical Layout of Simple Buildings: Electrical layout of a simple residential, school, and commercial building.
Module 3	Ventilation: The wind, The effects of topography on wind patterns, Air currents around the building, Air movement through the buildings, air changes, quality of air, use of fans, thermally induced air currents, pressure losses: Buoyancy-driven (Stack effect, Venturi effect) – Use of courtyard. Lab: Types of anemometers and its use. Wind tunnel experiment for wind movement around the buildings, Simple experiments to measure outdoor and indoor wind velocity.
Module 4	Fundamentals of architectural acoustics Fundamentals: Sound waves, frequency, amplitude, decibels, logarithms, measurement versus perception, addition, and subtraction of decibels. NC curves. Material property: Absorption, reflection, scattering, diffusion, transmission, absorption coefficient, NRC, sound transmission class (STC), impact insulation class (IIC). Acoustics of Architectural Spaces: Reverberation time, sound in enclosed space, basic room acoustics concepts and design, design of the auditorium, conference hall, recording studio and classrooms. Environmental noise and its control.

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Auditorium acoustics and architectural design.	M. Barron	Taylor & Francis.	2009
2	The Architecture of Light: Architectural Lighting Design Concepts and Techniques.	R. Concept nine	Sage Publications.	2008
3	Acoustic Absorbers and Diffusers	T. J. Cox and D'Antonio	Taylor & Francis.	2009
4	Architectural Lighting	D. M. Eagan	McGraw Hill.	2002
5	Daylighting for Sustainable Design.	M. Guzowski	McGraw Hill.	1999

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BUILDING MATERIALS AND CONSTRUCTION-III (STAIRCASE, FLOORING AND ADVANCED ROOFING)

(BMC III)

COURSE CODE	25AR2259	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Floor Finishes, Roofing techniques like Vaults, domes and Different slab techniques like one way slab, two-way slab, waffle, Bubble deck slab etc. Staircase components and types. Damp proof material and plastering	2	PO4
CO2	Apply concrete, wooden, stone, tile, etc. for flooring. vault, dome, waffle, bubble deck, hollow core slabs, filler slab, etc. for roofing. wooden, metal, RCC, etc. for staircase types.	3	PO5

Syllabus

Module 1	Flooring, Roofing, Staricase in Buildings: Understand the Floor Finishes, Roofing techniques like Vaults, domes and Different slab techniques like one way slab, two-way slab, waffle, Bubble deck slab, filler slabs etc. Staircase components and types. Damp proof material and plastering Types, Components, applications, material specifications, Preservation.
Module 2	Flooring –Concrete, Wooden, Stone, Tile etc Slabs/Roofing – Vault, Dome, Waffle, Bubble deck, hollow core slabs. Staircase types using the materials Wooden, metal, RCC etc. Construction details as per industry standards.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Modern Carpentry", Good Heart	Wills H Wagner, Howard Bud	Wilcox Publishers, Portland	2003
2	"Construction of Buildings" Volume I&II	Barry	Blackwell Publishing Ltd, Oxford	2005
3	"Timber Construction Manual"	American Institute of Timber Construction (AITC)	Wiley Publishers	2004
4	"Building Construction" Illustrated	D.K.Ching	John Willey & Sons	2008

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BUILDING SERVICES III (HVAC AND FIRE SAFETY) (BS III)

COURSE CODE	25AR3215	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the Thermal Properties of the building material and components and mechanical ventilation	2	PO4
CO2	Understanding the principles, systems, and design criteria of HVAC.	2	PO4
CO3	Understanding the techniques and concepts in fire safety norms in the buildings.	2	PO4
CO4	Apply the techniques of mechanical transportation systems in building plans	3	PO4

Syllabus

Module 1	Thermal Properties of the building material and Components and mechanical ventilation: Behaviour of heat propagation, thermal insulating materials and their coefficient of thermal conductivity. General methods of thermal insulation: Thermal insulation of roofs, and exposed walls. Ventilation: Definition and necessity, the system of ventilation. Principles of air conditioning Air cooling, Different systems of ducting and distribution, Essentials of the air-conditioning system.
Module 2	HVAC: Principles, Systems and Design Criteria: Thermodynamics. Transfer of heat. Refrigeration cycle components. Vapour compression cycle. Refrigerant, Compressor, condenser, evaporator, refrigerant control devices, electric motors, air handling units, cooling towers. Air conditioning systems for buildings of different scales and their requirements- window type, split system, package unit, direct expansion system, chilled water system, fan coil unit, and district cooling systems. Energy efficient systems, environmental aspects, and latest innovations. Design criteria for selection of air conditioning. Configuring/ sizing of mechanical equipment, equipment, and spaces for them. Horizontal and vertical distribution of services for large buildings. Exercise the above through choice, calculations, layout, and drawings.
Module 3	Fire and Safety: Causes of fire in buildings. Stages of fire and how it spreads. Fire drill. Heat/ fire/ smoke detection. Alarm and extinguisher systems. Fire safety standards. General guidelines for egress design for multi-storey buildings. Understanding all the above through product literature/ field visits. Exercise on design of fire safety systems for different building types through choice, calculations, layout, and drawings
Module 4	Mechanical Transportation Systems in Buildings: Lifts and escalators - types and applications. Round trip time for lifts. Design of lift lobby and vertical transportation core. Conveyors, travelators, dumb waiters. Standards for all. Latest technologies in vertical transport systems. Integration of lifts and escalators with building automation systems. Understanding all the above through product literature/ field visits. Design exercise on the above through choice, calculations, layout, and drawings

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Building Services Handbook	Fred Hall and Roger Greeno	Routledge	2017
2	National Building Code of India 2016- Volume I	Bureau of Indian Standards	BIS	2016
3	The Vertical Transportation Handbook	Robert S. Caporale	Wiley, and Sons	2010
4	Environmental Issues for Architecture	David Lee Smith,	Wiley	2011
5	Building Services Engineering	David V. Chadderton	Spon Press	Spon Press

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BUILDING MATERIALS AND CONSTRUCTION-IV (PARTITIONS, FALSE CEILING AND FALSE FLOORING) (BMC IV)

COURSE CODE	25AR3162	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding Plastics, Glass, Aluminium, Gypsum Board, Fibre Board, particle Board as a building material: types, properties, use, principles and methods of construction. Markey Survey of the material types.	2	PO4
CO2	Apply the knowledge: Glass and Metal cladding of facades and building envelopes, Skylights: Fixing and fabrication details. Walls: Sandwich panel walls, PUF panels etc Partitions, False Ceiling and False Floorings: Types and Construction techniques, Construction details as per industry standards.	3	PO5

Syllabus

Module 1	Plastics as a building material: types, properties, use, energy intensiveness, environmental impact assessment and recycling and up cycling of plastics such as polycarbonates, acrylics, PVC polymer films, and fibre reinforced plastic. Glass as a material: types, properties, use. Glass manufacturing in various types like plate, tinted, decorative, reinforced, laminated glass block, fibreglass, glass murals, partially coloured glass, etching of glass and its applications in building industry for both exteriors and interiors. Glass fabrication techniques, fibre reinforced composite materials and products. Aluminium and other materials: types, properties, use.
Module 2	Glass and Metal cladding of facades and building envelopes: Fixing and fabrication details. UPVC, PVC & FRP: Doors and windows and partitions Skylight in steel and glass: Principles and methods of construction and detailing. Walls: Sandwich panel walls, PUF panels etc Partitions: Fibre board, plaster of Paris, particle board, wood wool, metals, straw and any other materials introduced in the market including acoustic ceiling. False Ceiling and False Floorings: Gypsum board, Wooden, Aluminium, UPVC, PVC etc. Construction details as per industry standards.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Building Construction illustrated"	Francis D.K. Ching	John Wiley & Sons	2000
2	"Building Construction", Vol 1 and 2	W.B. McKay	Longmans, UK	1981
3	"Construction of Buildings", Volume 1&2	Barry	Blackwell Publishing Ltd.,Oxford	2005

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WORKING DRAWINGS-I (WD-I)

COURSE CODE	25AR4166	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Applying teaching methods, instruct students in preparing detailed working drawings for effective execution at construction sites and impart knowledge of the essential components of working drawings, notations, and drawing standards.	2	PO4
CO2	Applying methods of transmittals and record-keeping, integrate services drawings and detail various types of drawings. Apply the latest materials knowledge with specifications for updates.	3	PO8

Syllabus

Module 1	Introduction to working drawings: shop drawings / vendor drawings. An exercise in fundamental elements in a “Working Drawing-Plan” an assignment on a typical standard “Working Plan”. Various formats for working drawing preparation, various types of vendor drawings, such as aluminium composite panels, steel doors, fire rated doors, curtain wall systems, aluminium windows, etc
Module 2	Working drawing details and Drawing: a. Developing Key plans, General Arrangement Plans, Part plans, Roof Plan / Terrace Plan, and the like. b. Excavation drawings, Foundation drawings, Centre-line drawings, Floor Plans, Sections, Elevations. c. Basic internal electrical and plumbing

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Building and Construction Authority. (2005).	CONQUAS-22.	Singapore: The BCA Construction Quality Assessment System.	2005
2	Architectural Drafting and Design. 5th Ed.	Jefferis, A. and Madsen, D.A.	New York: Thomson Delmar Learning.	2005
3	Architecture Annual.	Jeong, K-Y.	Seoul: Archiworld Co.	2010
4	Details in Architecture: Vol. I-V.	Joe, B. (Ed).	Victoria: The Images Publishing group.	2002
5	Plans Sections Elevations – Key buildings of the twentieth century.	Weston, R.	London: Laurence King Publishing.	2004
6	The professional practice of architectural working drawings. 4th Ed.	Osamu, A. W., Linde, R. M. and Bakhoum, N. R.	Hoboken: John Wiley & Sons.	2011

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WORKING DRAWING - II (W D-II)

COURSE CODE	25AR4269	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Applying teaching methods, instruct students in preparing detailed working drawings for effective execution at construction sites and impart knowledge of the essential components of working drawings, notations, and drawing standards.	3	PO4
CO2	Applying methods of transmittals and record-keeping, integrate services drawings and detail various types of drawings. Apply the latest materials knowledge with specifications for updates.	3	PO8

Syllabus

Module 1	An overview of site marking procedure, “techniques/thumb rules” to ensure effective translation from “working drawings” to actual site execution, and developing Site Plan, Site Marking Plan, Site Grading/ Levelling Plan. Integration with schedule of joinery, schedule of hardware, finishing materials, method of dimensioning, appropriate section line markings.
Module 2	Developing elevations, sections, part sections, wall sections integrated with finishing materials, etc. Construction details for lifts, dumb waiters, escalators, travelators. External Plumbing Layout and details. 6. Details of Septic tank. An overview of “all service systems integrated drawings” and the effectiveness of “Building Information modelling – BIM” to achieve the same. “Working drawing titles”, drawing documentation/record keeping, drawing transmittals, revision updating / superseded drawings, and “as built drawings”

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	The BCA Construction Quality Assessment System.	Building and Construction Authority.	CONQUAS-22. Singapore	2005
2	Architectural Drafting and Design. 5th Ed	Jefferis, A. and Madsen, D.A.	New York: Thomson Delmar Learning.	2005
3	Architecture Annual.	Jeong, K-Y.	Seoul: Archi world Co.	2010

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SYLLABUS OF COURSES UNDER

PROJECT RESEARCH AND INTERNSHIP (PRI)

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ARCHITECTURAL DESIGN STUDIO - I
(BASIC DESIGN AND VISUAL ARTS) (ADS-I)

COURSE CODE	25AR1153	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding of the qualities of different elements as well as their composite fusions. An ability to engage and combine the elements of design in spontaneous as well as intentional ways to create desired qualities and effects	2	PO1
CO2	Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings. Understanding of 3D Composition by involving students in a number of exercises which will help generation of a form from a two dimensional / abstract idea.	3	PO1, PO2

Syllabus

Module 1	Properties, qualities and characteristics of point, line, direction, shape, form, colour, texture and Light. Extraction of basic forms from natural and manmade environment. Enquiry into form both geometric and non-geometric entities. Exercises on Visual Composition and Pattern making. Understanding Architectural Aesthetics. Principles such as Balance, Symmetry, Asymmetry, Proportion, Scale, Harmony, Rhythm and Contrast. Exercises on Visual Composition and Pattern making, Logo design, Collage, Abstraction. Composition using different types of Grids – Orthogonal, Radial, etc. Sketching and Sculpting – techniques. Illustrations, Logo and Mural arts – Colour schemes, colouring techniques and Architectural Principles.
Module 2	Study of solids & voids to evolve sculptural forms & spaces; explore play of light & shade and application of colour. Introduction to external & internal forms, analytical appraisal of forms, their quality; Concept of space, interrelationship between space, volume and order; Variations in forms with planer juxtapositions. Anthropometric study and ergonomics human figure (including differently able persons), dimensions of furniture - relationship with human anthropometrics with freehand drawing of human figures, vehicles, trees, buildings etc. to have a better understanding of proportion.

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Architecture - Form Space and Order	Francis D. K. Ching	Van Nostrand Reinhold Co., (Canada),	1979
2	Basic Visual Concepts and Principles for Artists, Architects and Designers	Charles Wall schlacgerm & Cynthia Busic-Snyder	McGraw Hill, New York	1992
3	Acrylic for Sculpture and Design	Lawrence Bunchy	West 33rd Street, New York, N.Y	1972
4	Basics Spatial Design	Exner. V, Pressel. D	Birkhanser	2009
5	Foundations in Architecture: An Annotated Anthology of Beginning Design Project	Owen Cappleman& Michael Jack Jordon	Van Nostrand Reinhold New York	1993

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ARCHITECTURAL DESIGN STUDIO -II (ADS II)

COURSE CODE	25AR1256	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	25AR1153

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply anthropometric data, conduct desktop/case study and understand collected data towards framing parameters for House design and Cafeteria Design Cafeteria Design	3	PO1, PO2
CO2	Create Architectural Details for floated design exercise floated as per the semester complexity, Buildings and the presentation techniques of drawings	6	PO2, PO3

Syllabus

Module 1	Scale and Complexity: Familiarize students with architectural design process through small scale projects involving small span, single space, single use spaces with simple movement, predominantly horizontal, as well as simple function public buildings of small scale. Areas of focus/ concern: Design activity will be limited to the level of visual composition, architectural form and space, aesthetic and psychological experience of form and space in terms of scale, colour, light, texture, etc., function and need: user requirements, anthropometrics, space standards, circulation image and symbolism. Complexity- Up to 1 acres of site, one or two buildings with G+1 Floors max.
Module 2	Typology/ project Shop, exhibition pavilion, snack bar, petrol bunk, fire station, Residence. A House for self, Guest House, Farm house, Villa, Container house, Courtyard house, Tree house, house in an informal settlement etc Requirements: Case study sheets, Concept, Zoning sheets, Design Plan, Elevations, Sections and Sketching as per the project.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Time Saver Standards for Building Types",	Joseph De Chiara, Michael J Crosbie,	McGraw Hill Professional,	2001.
2	"Human Dimension and Interior Space",	Julius Panero, Martin Zelnik,	Whitney Library of Design,	1975

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3	"Time Saver Standards for Interior Design and Space Planning",	Joseph De Chiara, Julius Panero, Martin Zelnik,	McGraw Hill,	2001.
4	"Architects Data,"	Ernst Neuferts,	Blackwell,	2002.
5	Basic Visual Concepts and Principles for Artists, Architects and Designers,	Charles Wallschlacgerm & Cynthia Busic-Snyder,	McGraw Hill, New York	1992.
6	Foundations in Architecture: An Annotated Anthology of Beginning Design Project,	Owen Cappleman & Michael Jack Jordon,	Van Nostrand Reinhold New York,	1993.

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ARCHITECTURAL DESIGN STUDIO -III (ADS III)

COURSE CODE	25AR2158	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	25AR1256

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Applying methods to understand and analyze the use, spaces, and concepts of residential activities, as well as applying methods to understand and analyze the spaces, connectivity, and standards of institution buildings.	3	PO1, PO2
CO2	Create projects with design typologies such as Foundation School/Pre School/Public Health Care Centre/Restaurant/Museum/Library, labelled as Project 1 and Project 2.	6	PO4

Syllabus

Module 1	This studio-based course synthesizes the knowledge gained from other courses and is central to the learning and practice of architecture. This course will engage in using conventional methods and linear processes of design to more exploratory nonlinear methods. The scale and complexity will increase progressively from lower semesters to senior semesters. Areas of concern/ focus: form-space relationships, spatial organization, behavioural aspects, especially those relating to children, site planning aspects, appropriate materials and construction Complexity- up to 4 Acres of site, two to three buildings with G+2 Floors max. Introduction of Contours and slope analysis, Landscape and Building integration.
Module 2	Suggestive Typologies/ projects: Residential buildings, institutional buildings: Foundation School/Pre School/ Public Health Care Centre/ Restaurant /museum/ Library etc.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Time Saver Standards for Building Types",	Joseph De Chiara, Michael J Crosbie,	McGraw Hill Professional,	2001.
2	"Human Dimension and Interior Space",	Julius Panero, Martin Zelnik,	Whitney Library of Design,	1975
3	"Time Saver Standards for Interior Design and Space Planning",	Joseph De Chiara, Julius Panero, Martin Zelnik,	McGraw Hill,	2001.
4	"Architects Data,"	Ernst Neuferts,	Blackwell,	2002.

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ARCHITECTURAL DESIGN STUDIO -IV (ADS IV)

COURSE CODE	25AR2260	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	25AR2158

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Analyze the anthropometry, circulation patterns, standards of various facilities	4	PO1, PO2
CO2	Create the Design after the analysis of the rural planning, infrastructure, and settlement planning of a village (rural settlement) as per the needs of the settlement as Project 1. Propose a design depending on the village documentation and survey that is functionally, good community oriented and open spaces – Project 2	6	PO6, PO10

Syllabus

Module 1	Creating a holistic understanding of the socio-cultural, geographic, and economic aspects that shape the rural environment as well as to expose the students towards the design of simple community-oriented buildings. A comprehensive study of a rural settlement through field visits and introductory lectures that is an exemplar of collective design evolved organically over a period. The students are exposed to conduct conducting various surveys covering, physical, visual characteristics and demographic aspects which helps in understanding vernacular / traditional architecture involving local materials and construction techniques. To emphasis on the importance of designing built form and open spaces that meet the aspirations of the community. To enable the presentation of concepts through 2D and 3D presentation including sketches and model. Complexity: Up to 8 Acres, Contours incorporation, Climate responsive buildings. Introduction to Structure elements like Columns, Foundation in plans. Software's: AutoCAD, Sketchup
Module 2	Project: Projects involving public and community-oriented buildings - multi room, single use, small span, multiple storied, horizontal and vertical movement; active cum passive energy; comprehensive analysis of rural settlement in a hierarchical manner. Area of concern/ focus: Rural settlements and architecture, Community oriented design, Simple public buildings (not more than Ground+ 2 floors) Suggestive Typologies/ projects: Rural projects that involve studies and design at settlement and building level- noon meal centre, Elementary school, Anganwadi, Famers Markets, Art and Craft Village, department store, higher secondary school, Entertainment centre, Sport Complex.

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Sl No	Title	Author(s)	Publisher	Year
1	"Time Saver Standards for Building Types",	Joseph De Chiara, Michael J Crosbie,	McGraw Hill Professional,	2001.
2	"Human Dimension and Interior Space",	Julius Panero, Martin Zelnik,	Whitney Library of Design,	1975
3	"Time Saver Standards for Interior Design and Space Planning",	Joseph De Chiara, Julius Panero, Martin Zelnik,	McGraw Hill,	2001.
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ARCHITECTURAL DESIGN STUDIO -V (ADS V)

COURSE CODE	25AR3163	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	25AR2260

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Analyse the use, the spaces and the concepts of different homes for the disabled. To understand and analyze the spaces, connectivity, and the standards of Institution buildings	4	PO1, PO2
CO2	Design a Social oriented building. A Home for physically and mentally challenged- Project 1 To design an institution-oriented building, School of Architecture, Design Institutions. Project 2 Old age Home, orphan age, School for disabled, Campus Design, theme-based hotels, shopping mall, Resort etc.	6	PO4, PO2

Syllabus

Module 1	To explore the design of buildings addressing the socio – cultural & economic needs of contemporary urban society. Understanding the importance of spatial planning within the constraints of development regulations in force for urban areas. Designing for large groups of people in a socially and culturally sensitive manner, considering aspects such as user perception, crowd behaviour, large scale movement of people, Identity of buildings. Emphasizing on the importance of understanding the relationship between open space and built form, built form to build form and site planning principles involving landscaping circulation network and parking. To explore computer aided presentation techniques involving 2D and 3D drawings and models as required. Scale and Complexity: Buildings and small complexes that address the social and cultural needs of contemporary urban life (residential. Commercial, institutional) with a thrust on experiential qualities; multi bayed, multiple storied and circulation intensive; passive and active energy. Areas of concern/ focus Behavioural aspects and user satisfaction socio-cultural aspects designing for the differently abled Building byelaws and rules. Appropriate materials and construction technique Climatic Conditions and its impact on Design. Complexity: Up to 10 Acres, Contours incorporation, Environment Positive Design, Structural Details in drawings. Introduction to Sustainable Design, Bylaws, Building Services material and innovation exploration Software's: Revit, Sketchup, Rendering Software

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Module 2	Design Typology/ project: Housing Projects- detached, semi-detached, row housing, cluster housing, apartment; housing and facilities for other user groups- old age Home, orphanage, working women's hostel, home for physically and mentally challenged; School for disabled, Campus Design, theme-based hotels, shopping mall, Resort etc.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Campus Planning" - Society for College and University Planning, 1996.	Richard P. Dober,		1996
2	"Campus design in India",	Achyut Kanvinde,	American yearbook,	1969
3	"Site planning",	Kevin Lynch,	MIT Press, Cambridge,	1967
4	"Design Process: A Primer for Architectural and Interior Design",	Sam F. Miller,	Van Nostrand Reinhold	, 1995.

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ARCHITECTURAL DESIGN STUDIO -VI (ADS VI)

COURSE CODE	25AR3265	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	25AR3163

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Analyse the challenges of designing functionally complicated buildings and having a complex array of activities and services, integration of structural design and specialized building services in the framework of architectural design	4	PO1, PO2
CO2	Design A Functionally Complex Building (Medium Rise Structure Example Hospital, Juvenile Correction Centre, Research and Development Centre), Project 2 Design A Shopping Mall or Students Hostel or Travellers Hostel, Conventional Center,5-star hotel Etc.	6	PO2, PO5

Syllabus

Module 1	The focus of the studio is on functionality and integration of advanced technology and services. The studio enables understanding of the complex mechanisms of designing services intensive buildings in tight urban context, having multiple levels. The special emphases are on utilitarian parameters, space optimisation, conformance with regulatory requirements, integration of structural systems and building services (HVAC, fire, electrical, communication, plumbing etc.) in architectural layout and construction technology. The studio encourages the students to explore modern automation and intelligent systems for building management and energy conservation. They will learn about site planning, Vehicle & Pedestrian traffic then the site, and landscaping in tight spatial context. Complexity: 6 to 12 Acres, Contours incorporation, Sustainable Design Features, Structural Details in drawings, bylaws, Services Introduction to Advanced Building Services, landscape specifications, material and innovation exploration, Energy Simulation Software Software's: Revit, Sketchup, Rendering Software
Module 2	STUDIO EXERCISE Emphasis on the design of services intensive, multi-storeyed, buildings in tight urban spatial context, such as buildings for Health care, Hospitality, Institutional or multifunctional commercial usage, Shopping mall/Students hostel or travellers hostel, Conventional Centre etc

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Hospital Design	Kanvinde A.	American	1969

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ARCHITECTURAL DESIGN STUDIO -VII (ADS VII)

COURSE CODE	25AR4167	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	25AR3265

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Application of the integration of services, sustainable building and anthropometry, circulation patterns.	3	PO4, PO5
CO2	Create and design spatial planning and functionality in Low. Rise. High Density Project. Project 1. To analyze the spaces, connectivity, and the standards of sustainable and service intensive building. Case study. To create design of a sustainable service integrated intelligent. Green building in High Rise (Project 2)	6	PO5, PO6

Syllabus

Module 1	Issues related to housing shortages, basics of housing finance, incremental housing, sites and services schemes, slums and squatter settlements are to be discussed in the class. The students are expected to design in a climate responsive and environment friendly way while planning medium sized housing complexes. The students are especially expected to showcase knowledge on the appropriate technology for low-cost housing, Landscape Design, Disaster Resilient Buildings and Quantity Estimation & Specifications. Complexity: Up to 15 Acres, Contours and slope analysis, Sustainable Design Features, Structural Details in drawings, bylaws, Services, Landscape Specifications, Low-cost housing techniques. Introduction to Green Building Certification and Dynamic facades, Quantity Estimation & Specifications, Rhino. Software's: Revit, Sketchup, Rendering Software, Energy Simulation Software
Module 2	They are expected to be conscious about the need for energy conservation through passive design. They will apply advanced simulation and modelling techniques to orient their buildings and decide energy performance parameters. Sample quantity estimates and specifications are to be prepared. Project typology: Gated Community, Slum Development, stack housing Mixed used high rise, Commercial office like IT office, world trade centre's etc.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Site Planning for Cluster Housing	Untermann, R. and Small, R.	John Wiley & Sons	1977
2	Tall Buildings Artistically Reconsidered	Huxtable, A-L.	University of California Press	1984
3	Typology+: Innovative Residential Architecture	Markus, K., Rollbacher, R., Herrmann, E., Wietzo	Birkhauser	2009

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URBAN DESIGN STUDIO (UDS)

COURSE CODE	25AR4270	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	25AR4167

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Analyse the role of Services at higher scale in Urban level and apply the integration of services into intelligent sustainable building case study case study	4	PO2, PO4,
CO2	Create High Density Urban facility as a solution to the Urban area problems, Current issues. (Project-1) Analyze the spaces, Transformation according lifestyle changes in Urban population, connectivity, and the standards of sustainable and service intensive building. Case study. Create design of a sustainable service integrated intelligent green building High Density Project. (Project 2)	6	PO5, PO10

Syllabus

Module 1	Students are to be exposed to the complexities of large-scale architectural projects, often involving a group of buildings in a public realm, and having multiple stakeholders. Students are encouraged to look beyond the concerns of individual building project to address the interface between public and private realm; and contextualize their design interventions to the surrounding urban environs. The studio enables the students to apply the lessons learnt in the Urban Design class. The students are expected to carry out site analysis and site planning at a real-life location, considering its location context, physical features, views, orientation, volumetric analysis and figure ground study of the built-form characteristics, visual imageries, streetscape and skyline analysis, pedestrian, vehicular circulation pattern, and utility networks. They also try to understand the correlation between physical, socio-cultural, environmental, and socioeconomic dimensions of the built environments, to identify opportunities and constrains associated with large-scale urban interventions. Complexity: Up to 20 Acres, Contours and slope analysis, Context analysis, Survey reports, Environment positive Design, Structural Details in drawings, bylaws, Services, Landscape Specifications. Introduction to Feasibility report and Material/Special study Software's: Rhino, Revit, Sketchup, Rendering Software, Energy Simulation Software
Module 2	Students are then expected to apply this understanding to a realistic site to create physical environments through basic tools of master planning, such as: movement networks, open spaces, suggestive built form, infrastructure network and planning norms. Design exercise could be any medium to large scale project in the public domain, situated within an existing (and preferably compact) urban fabric, such as: redevelopment of commercial areas, waterfront development, transit-hubs, market squares, densification along transit corridors, mixed use complexes. If intervention is in heritage areas,

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	conservation strategies along with revitalization techniques can also be attempted. The projects thus undertaken as group work will have to ultimately contribute ideas for the improvement of the quality of the urban environment. The projects are strictly following the contemporary based lifestyle.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Public Places Urban Spaces	Carmona, M., Heath, T. and Tiesdell, S.	Oxford: Architectural Press	2010
2	Urban Design: A Typology of Procedures and Products	Lang, J. T.	Oxford: Architectural Press	2005
3	The Urban Design Reader	Larice, M. and Macdonald, E. Ed	Routledge Urban Reader Series. Abingdon, Oxon: Routledge	2013
4	Urban form and space.	Krier, R.	London: Academy Editions	1979
5	Good city form. Boston	Lynch, K.	MIT Press.	1984

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ARCHITECTURAL THESIS (AT)

COURSE CODE	25AR5272	MODE	R	LTPS	0-0-15-0	PRE-REQUISITE	25AR5171

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO 1	Applying the Architectural Thesis, Writing Synopsis, Studies Related to Project. Literature study in relation to literatures, Desktop Studies, Case studies.	3	PO1, PO2
CO2	Create a design from the Site Study, Application of Data & Information Collected regarding project topic, Preliminary Drawings production. Creation of final Viable drawings & Building Services, Physical & Virtual Model and Report making.	6	PO4, PO5

Syllabus

Module 1	The Architectural Thesis is the culmination of the development of the student's knowledge, attitudes, and skills over the course of studies in architecture. It is an occasion for exercising conscious choices in the field, based on the student's personal abilities and inclinations, and for testing out his commitment. The student, in consultation with the faculty, is expected to demonstrate through an imaginative approach, his expertise in effecting positive changes in our built environment. Students can choose a topic of their choice in terms of design potential and/ or idea exploration to be taken up for completion. The topic could be project based with specific areas of study/ approach or study/ approach based leading to a project. Complexity: 10 to 30 Acres, Contours and slope analysis, Environment positive Design, Structural Details in drawings, bylaws, Services, Landscape Specifications. Introduction to Feasibility report and Material/Special study Software's: Rhino, Revit, Sketchup, Rendering Software, Energy Simulation Software
Module 2	If the latter, care should be taken to choose topics that can lead to sufficient architectural design component. Students should submit the topic for approval with a rough outline of the nature of the project, area of interest, study and design scope, challenges, possible case studies, methodology and outcome. Tentative topics to study: The areas of study/research/design can include any of the broad areas of the discipline – contemporary needs of society, history, theory, sustainability, structural or service-oriented design, projects that involve complex planning and integration of several aspects, appropriate architecture, urban design, contemporary processes, social housing, urban oriented architectural design, conservation oriented architectural design, etc.

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Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Building Type Basics	Stephen A. Kliment	Wiley	
2	The Portfolio – An Architecture Student's Handbook	Igor Marjanovic, Katerina Redi Ray, Lesley NaaNorleLokko	Routledge	2003
3	Climate Responsive Architecture	Arvind Krishnan & Others	TATA McGraw Hill Publishing Company Limited	2007

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SYLLABUS OF COURSES UNDER

SKILL ENHANCEMENT COURSES (SEC)

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SITE SURVEY AND ANALYSIS (SSA)

COURSE CODE	25AR2286	MODE	R	LTPS	0-0-0-3	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding Surveying using Chain and Compass. Understanding Surveying using Dumpy Level and Theodolite.	2	PO1
CO2	Applying survey practices in field using Chain, Compass, Dumpy Level, Theodolite, Total Station and Alidade	3	PO4

Syllabus

Module 1	Introduction: Reading of survey Maps, understanding of features and undulations of Ground. Scales used in Plotting. Study of landforms, topography and contours, slope analysis, grading process; graphic representations of landforms. Principles, definitions, units, scales, symbols, and instruments used in Surveying, common errors in surveying and their corrections. Linear Measurements: Measurements in horizontal plane, linear measurements with chain & tape, setting out & survey stations, survey accessories, survey lines, open & closed traverse, chaining & offsetting, direct & indirect ranging, logbooks, field boundaries, field area estimation. Compass survey, bearings & angles, local attractions, errors in compass survey.
Module 2	Contours in Landforms: Characteristics, contour intervals, direct & indirect methods of contouring, block contour surveys, profile levelling, longitudinal & traverse cross sections, gradients, contouring methods & equipment, plane-table, plotting contours & profiles, estimating areas & volumes. Sloping Landforms and Levelling: Measurements along sloping landforms, principles, definitions, methods, instruments, & staff required for levelling, simple & differential levelling, dumpy level, adjustments, hand signals, reduced levels, rise & fall methods, errors in levelling, level tube & barometric levelling. Precision methods in Landforms Survey & Measurement Theodolite surveying, temporary adjustments, horizontal & vertical angles, closing errors and balancing traverse, automated & digital surveying, Total station, G.P.S, Aerial Photography, digital levels, auto-levels.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Interpretation of Topographic Maps.	Miller, V. C. and Westerback, M. E.	Columbus: Merrill.	(1989).
2	Site Planning.	Lynch, K., and Hack. G.	Cambridge: Maple-Vail Inc.	(1984). 3rd Ed.

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COMPUTER STUDIO- I
(MS OFFICE, AUTOCAD 3D) (CS-I)

COURSE CODE	25AR2185	MODE	R	LTPS	0-0-0-3	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the basics of computer system and their supporting technologies like MS Office.	2	PO4
CO2	Apply the learned skills in preparation of documentation reports, analysis reports, and audio-visual presentations.	3	PO4

Syllabus

Module 1	Technology of small computer system, computer terminology operation principles of P.C, introduction to application software, and graphic system, and use of printers, scanner, plotter, File management, etc. Understanding Bitmap images and Vector Graphics, Image size and Resolution. Basic Tools for Editing and Creating Graphics. Introduction to various software for documentation, presentation & drawing purposes. Simple operations such as creating, editing, formatting, saving, and printing documents. Familiarizing the use of scanners, printers, plotters etc. Introduction to Applications of MS Office in presentation: Microsoft Word, Microsoft Power Point, Microsoft Excel, Adobe Page Maker. Use of spreadsheet and for various architectural calculations-estimation, area calculations, project reports. Preparations of templates for regular repetitive functions.
Module 2	Introduction to AutoCAD as 2D drafting tool Digital drawings tools, drawing lines and shapes, modifying lines and shapes, drawing with accuracy and speed. Organizing plans, sections, and elevations, drawing and printing to scale, text styles and sizes, hatches, and dashed lines. Stencils and blocks, advanced editing tools, and dimensioning drawings. 3D modelling using AutoCAD Introduction to 3D-modelling technique using AutoCAD. 3D basics: Axes, Planes and Faces. 3D Object Modification: Rotate, Mirror, Array and Scale. 3D Boolean operations: Union, Subtract, Intersect

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"The Illustrated AutoCAD 2002 Quick Reference"	Ralph Grabowski,	1st edition, Cengage Learning,	2002
2	"AutoCAD 2000: A Problem-Solving Approach"	Shamtikoo,	DelmarCengage,1999.	2000
3	"CAD for Interiors beyond the basics"	Fiorello. J. A.,	Wiley publications	2011

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COMPUTER STUDIO- II
(IMAGE MAKING AND 3D MAKING SOFTWARE) (CS-II)

COURSE CODE	25AR2287	MODE	R	LTPS	0-0-0-3	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and learn to use of image editing software, graphics and animation software's.	2	PO4
CO2	Apply the tools of sketch up or equivalent software to create a detailed 3D model by working in collaboration by application of advanced tools	3	PO4

Syllabus

Module 1	Introduction of various software available for Architectural presentation such as Photoshop & Coral. Image doctoring and manipulation using computer software for graphics and animation (Photoshop and Flash).
Module 2	Building Modelling and basic rendering techniques, using 3DSMax or Sketchup or equivalent. Advanced Building Modelling and basic rendering techniques, using 3DSMax or Sketchup or equivalent.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Mastering Autodesk Revit 2017 for Architecture"	Marcus Kim, Lance Kirby, Eddy Krygiel	Wiley India	2016
2	"Exploring Autodesk Revit 2017 for Architecture"	Prof Sham Tickoo Purdue Univ	CADCIM, Technologies, 13th Edition	2016

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COMPUTER STUDIO- III
(BUILDING INFORMATION MODELLING) (CS- III)

COURSE CODE	25AR3188	MODE	R	LTPS	0-0-0-4	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand interface, workspace, and utilization of tools of 3Dmodeling software applies the required tools and componentsinbuildinga3D model. To create documentation reports, analysis reports, and audiovisual presentations.	2	PO4
CO2	Understand, visualize the space and apply the tools of BIM software, identify the need of tools of BIM software. To create a detailed 3D model by working in collaboration by application of advanced tools	2	PO4

Syllabus

Module 1	**:** Explain the uses of BIM (building information Modelling), touching upon the Concepts used in 2D Drawing and extending to 3D Modelling, Basic awareness on Interface, Setting up workspace. 3D modelling using Walls – Windows – Doors– floors – Slabs – Staircase – Railing – Furniture. Basic editing of components. Using Cross Sections Tool. Exporting 3D Model to Architectural 2D- Drawings (Plans – Elevations – Sections – Details.).
Module 2	Introduction – Applying materials – Creating and Editing materials – Setting up Camera – Rendering settings – Enhancing final output using Image editing software. Curtain Walls – Columns – beams – Massing – working in collaboration. Adding Architectural Elements – Creating components – Rendering in Cloud. Integration of all services and structural components using Building information modelling.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Mastering Autodesk Revit 2017 for Architecture",	Marcus Kim, Lance Kirby, Eddy Krygiel	Wiley India	2016
2	"Exploring Autodesk Revit 2017 for Architecture"	Prof Sham Tickoo Purdue Univ	CADCIM, Technologies, 13th Edition	2016

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SYLLABUS OF COURSES UNDER

PROFESSIONAL ABILITY ENHANCEMENT COMPULSORY COURSES (PAECC)

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BUILDING CONSTRUCTION AND MANAGEMENT (BCM)

COURSE CODE	25AR4223	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Objectives and Methods of project Management System	2	PO7
CO2	Understand various Tools and Techniques to facilitate efficient management of Projects	2	PO7
CO3	Understand Project cost model and steps involved in cost optimization	2	PO7
CO4	Applying Scientific Evaluation Techniques to Manage Project Durations and resources with Examples	3	PO7

Syllabus

Module 1	Introduction to Project Management: Project management concepts-objectives, planning, scheduling Controlling and role of decision in project management. Traditional management system, Gantt's approach, Load chart. Progress Chart, Development of bar chat, Merits and Demerits.
Module 2	Project Programming and Critical Path Method: Project Network-Events Activity, Dummy, Network Rules, Graphical Guidelines for Network, Umbering the events, Cycles, Development of Network-planning for Network Construction, Models of Network construction, steps in development of Network. Work Break Down Structure, hierarchies. Concepts: critical path method-process, activity time estimate, Earliest Event time, Latest allowable Occurrence time, start and finish time of activity, float, critical activity, and critical path-problems.
Module 3	Analysis: Cost model-Project cost, direct cost, indirect cost, slope curve, Total project cost, optimum duration contracting the network for cost optimization. Steps in cost optimization, updating, resource allocation-resource smoothing, resource levelling.
Module 4	Programming Evaluation Review Technique: Pert network, introduction to the theory of probability and statistics. Probabilistic time estimation for the activities for the activities of PERT Network. Computerized Project Management: Introduction: Creating a new project, building task. Creating resources and assessing costs, Refining your project. Project Tracking-Understanding tracking, recording actual. Reporting on progress. Analysing financial progress.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Construction project management - Guidelines, Bureau of Indian Standards	BIS	BIS (2009),	
2	Construction Project Management: Theory and Practice,	Jha, K N	Pearson Education India	2015

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3	Guidance on Project Management,	ISO	International Organization for Standardization.	2013
4	Project Management Body of Knowledge (PMBOK),	Project Management Institute	PMI	2017
5	Project Management: The Managerial Process	Erik Larson and, Clifford Gray	McGraw Hill Education; Sixth edition (1 July 2017)	

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PRACTICAL TRAINING / INTERNSHIP (PT)

COURSE CODE	25AR5171	MODE	R	LTPS	0-0-30-0	PRE-REQUISITE	25AR4270

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the preparation of professional architectural portfolio and resume. Apply Academic architectural skills in various projects while working in office	2	PO9
CO2	Evaluate attributes of project, based on discussions with Chief Architect and clients. Site supervision during execution and coordination with the agencies involved in the construction process.	5	PO10

Syllabus

Module 1	Practical Training will be done in offices/ firms in India in which the principal architect is registered with the Council of Architecture. If students opt for offices/ firms abroad, they need to check that the Principal Architect is registered with the Country/ Region's Approving Authority. The students are expected to work on presentation/ working drawings, specifications, and quantity estimation. The students are also expected to familiarize themselves with coordination of structural and services drawing with architectural drawings. It is desired that the students undertake site visits and understand construction practices.
Module 2	The progress of practical training will be assessed periodically internally through submission of logbooks along with work done by the students in terms of drawings, reports, etc., along with the regular progress report from the employers. The students are also required to submit a report describing various concepts learnt during training, experiences of site visit and estimation / costing activities etc.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	NA			

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ARCHITECTURAL PROFESSIONAL PRACTICE (A.P.P)

COURSE CODE	25AR5225	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Expose students to the daily realities of an architectural practice through the Training	2	PO8
CO2	Facilitate an understanding of the evolution of an architectural project from design to execution.	2	PO8
CO3	Enable an orientation that would include the process of development of conceptual ideas, presentation skills.	2	PO8
CO4	Involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure.	2	PO10

Syllabus

Module 1	**Introduction:** Architecture profession Importance of Architecture Profession, role of Architects in the society, Architects' Act 1972, Amendments & Provisions, registration of architects, relations with clients, contractors, consultants, public authorities. Ways of getting works; types of works, works partly executed by other architect; precautions to take before taking up the work; conditions of engagement between the architect and client. Role of Council of Architecture and Indian Institute of Architects, functions, constitution, and rules & regulations. Code of professional conduct & Ethics, Social responsibility, Publications.
Module 2	**Scope of Work:** Practicing Architecture Scope of work of an architect, Schedule of services, drawings to prepare, Terms & conditions of engagement, letter of appointment. Private practice, types of offices/firms, responsibilities & liabilities. Salaried appointment in public & private sector jobs, Architectural Competitions procedure. Scale of charges, applicable building byelaws, municipal approvals, development controls, zoning regulations, NBC, Master plan, Zonal plan.
Module 3	**Architect's Office:** Architect's Office Architect's office management, organization structure, responsibility towards employees, consultants & associates, maintenance of accounts, filing of records, balance sheet, Income tax, Service tax, Professional tax. Copy rights and patenting, correspondence, documentation, drawings, conducting meetings, Clerk of works, inspection, works measurement, certificate of payment to contractors, applicable legislations, registration of properties, stamp duty; insurance for new work and additions; insurable value of property, claim for damages.
Module 4	Arbitration, Valuation and Easements Need/Scope of Arbitration, Indian Arbitration act, arbitrators, umpires, appointment, conduct, powers, duties, Sole/Joint arbitrators,

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	Arbitration procedure, awards & impeachment. Techniques/elements of valuation, factors affecting valuation of land/building, compensation on acquisition, lease renewal/extension, standard rent, Cost of sale, Purchase & Mortgage. Easements, types, rights & features; acquisition/extinction/protection; Interim/permanent/ mandatory injunctions. dilapidation, insurance, estate development. Consumer protection act. Architectural profession in the global market International Architectural competitions, Globalization, meaning & advantages, WTO/GATS, their relevance to architectural profession in India, Architectural practices in US, UK, Middle East & South Asian countries, Pre-requisite for Indians to work in other countries & vice versa, impact of IT

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Architectural Practice and Procedure 1.	Apte, V. S.	Pune: PadmajaBhide.	2008
2	The architect in practice. 9th Ed.	Chappell, D. M. And Willis, A.	Oxford: Blackwell Publications.	2005
3	TQM and ISO 9000 for architects and designers.	Charles, E.	New York: McGraw-Hill.	1996
4	Architects (Professional conduct) Regulations, Architectural Competition guidelines	COA	Council of Architecture Publications .	1989
5	Handbook of Professional Documents.	COA	Council of Architecture.	2005
6	The Beginner's Guide to Real Estate Investing	Eldred, G. W.	John Wiley & Sons.	2008
7	Architect? a candid guide to the profession.	Lewis, R. K.	Cambridge: MIT Press.	1985
8	Professional practice.	Namavati, R.	Mumbai: Lakhani Book Depot.	1984
9	Valuation of Real Properties.	Rangwala, S. C.	charotar Publications.	-
10	The Discipline of Architecture.	Piotrowski, A. and Williams, J.	University of minnesota Press.	2001
11	Architect's Practice.	Scott, J. J.	London: Butterworth. &'WTO and GATT	1985

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SYLLABUS OF COURSES UNDER

HUMANITIES ART AND SOCIAL SCIENCES (HAS)

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LANGUAGE SKILLS (LS)

COURSE CODE	25UC1103	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the essential listening, speaking, and reading skills	2	PO10
CO2	Apply and produce essential writing and non-verbal communication skills	3	PO10

Syllabus

Module 1	Techniques of Effective Listening, Listening and Comprehension Probing Questions, Barriers to Listening. Speaking: Pronunciation, Enunciation, Vocabulary Fluency, Common Errors Reading :Techniques of Effective Reading, Gathering Ideas and Information from a Given Text
Module 2	WritingWriting: Clearly State the Claims, Avoid Ambiguity, Vagueness, Unwanted Generalizations, and Oversimplification of Issues, provide Background Information, Effectively Argue the Claim, Provide Evidence for the Claims. , Non- verbal Communication

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	EMPOWER	Andrian Doff, Craig Thaine, Herbert Puchta, Jeff Stranks, Peter Lewis-Jones	Cambridge University Press	2022
2	PRACTICAL ENGLISH USAGE, 4TH EDN: Michael Swan's guide to problems in English (Practical English Usage, 4th edition)	Michael Swan	OXFORD	2022
3	Word Power Made Easy	Norman Lewis	OXFORD	2022

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COMMUNICATION SKILLS (CS)

COURSE CODE	25UC2105	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	To Understand the essential career skills, including resume writing, interview techniques	2	PO7
CO2	Apply a comprehensive understanding of essential team skills, preparing them for successful collaboration and contribution in professional team environments.	3	PO7

Syllabus

Module 1	Career Skills
Module 2	Advanced Communicative Listening & Speaking

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Empower 3rd Edition	Andrian Doff, Craig Thaine, Herbert Puchta, Jeff Stranks, Peter Lewis-Jones	Cambridge	2022
2	The Cambridge Guide to English Usage	Pam Peters	Cambridge	2020
3	Academic English	Letty Chan	Hong Kong : Hong Kong University Press ; London : Eurospan distributor	2021

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ACTIVITY BASED LEARNING-1 (Architectural Reading and Reflection)

COURSE CODE	25AR3273	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
Students will independently select and read any five books related to architecture or its allied disciplines. They will analyze and synthesize the content into individual reports or synopses, reflecting on the themes, ideologies, and implications of the texts in architectural practice and thought.

ACTIVITY BASED LEARNING-1 (Architectural Project Documentation)

COURSE CODE	25AR3274	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
An architectural project from concept to construction and user occupancy.

ACTIVITY BASED LEARNING-1 (Material to product documentation)

COURSE CODE	25AR3275	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
A material-based workshop (e.g., wood or metalwork), with documentation of items produced and the process involved.

ACTIVITY BASED LEARNING-1 (Design project documentation)

COURSE CODE	25AR3276	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
Two inspirational buildings, detailing their design intent, planning ideologies, column grids, spatial organization, and elements of landscape integration.

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ACTIVITY BASED LEARNING-2 (Architectural Ethnography)

COURSE CODE	25AR4277	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
Students will create a video documentation exploring the distinct features, ideologies, and design philosophies of North and South Indian architecture. Emphasis will be on temple architecture, urban patterns, material usage, cultural contexts, and symbolic elements. The video must reflect a comparative or thematic understanding of architectural expression across regions.

ACTIVITY BASED LEARNING-2 (Creative Representation)

COURSE CODE	25AR4278	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
Students will participate in at least three cultural competitions (e.g., dance, singing, painting, skit, design-competitions) representing the School of Architecture in events organized by recognized national and state-level organizations (e.g., NASA, ZONASA, NIASA, cultural fests, intercollegiate arts festivals, etc.).
Proof of participation through certificates, photos/videos, or event brochures is mandatory.

ACTIVITY BASED LEARNING-2 (Advance Landscape Architecture)

COURSE CODE	25AR4279	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
This course explores landscape systems thinking, regenerative design, and ecological infrastructure across varied site contexts. Students will engage with advanced concepts such as landform manipulation, stormwater management (bioswales, retention ponds), and performative landscape strategies. Emphasis is placed on integrating urban ecology, climate-responsive planting, and landscape urbanism into complex urban and peri-urban environments.

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ACTIVITY BASED LEARNING-3

(Advanced Building construction and materials)

COURSE CODE	25AR5180	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
This course focuses on next-generation construction systems, material innovation, and performance-driven detailing. Topics include cross-laminated timber (CLT), glass-reinforced concrete (GRC), façade engineering, energy-efficient envelope systems, and integrated services coordination. Students will learn to evaluate materials based on embodied energy, life-cycle assessment, and explore adaptive reuse through case-based technical explorations.

ACTIVITY BASED LEARNING-3

(Low-Cost Housing materials and specifications)

COURSE CODE	25AR5181	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
This course introduces affordable, durable, and locally available materials suitable for low-cost housing. Students will study cost-effective construction methods, specifications, and design techniques that balance quality with affordability. The focus is on sustainability, community needs, and enhancing living conditions through efficient material usage and design detailing.

ACTIVITY BASED LEARNING-3

(Urban and Environmental Planning - URDPFI and Acts)

COURSE CODE	25AR5182	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	Nil

Course Description: -
Focusing on the URDPFI Guidelines, environmental planning principles, and key urban policies, this course equips students to understand the regulatory and planning frameworks shaping Indian cities. It covers land use planning, development controls, environmental impact, and statutory acts, enabling students to propose contextually grounded and compliant urban design solutions.

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SYLLABUS OF COURSES UNDER

FOREIGN LANGUAGE (FL)

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FRENCH LANGUAGE (FLG)

COURSE CODE	25FL3054	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Acquire a working knowledge of the basic elements of the French language viz. letters, vowels, accents, articles, useful expressions, etc.	2	PO7
CO2	Classify questions and respond in the affirmative or negative with ?tre and avoir and form plurals	2	PO1
CO3	Utilize and apply the adjectives and essential verbs.	3	PO7
CO4	Construct and use in speech, vocabulary, reading, questions and answers	3	PO7

Syllabus

Module 1	Les alphabet, les articles ,les articles indefinis,la negation, les chiffres , les joiurs de la semaine, les mois de l\'annee,les articles conttactes
Module 2	les pronoms sujects,faites de la phrases presentez-vous,les auxiliries comme AVOIR,ETRE,ALLER, les mots interrogatifs , la famille ,la contraire
Module 3	la conjugation du verbe premiere et ddeuxieme et troisieme les adjectifs interrogatifs , les adjectifs demonstratifs,les adjectifs possessifs
Module 4	les professions, le pronom ON,les questions generale,le futue sample,la passe recent.le futur proche.nationalities,les animaux,les loisirs

Reference Books:

1 Le NouvelEsprit, M?thodedeFran?ais,Tome Un,publi?parLangersInternational, poisson -quinton, 01, goyal.

2 Cours deLangue etdeCivilisationFran?aises,TomeUn,publi? parHachette, vergne-sirieys, 04, goyal.

3 Bonjour Tristesse", Fran?oise Sagan, Bonjour Tristesse (Folio) (French Edition), Gallimard.

4 L'?tranger", Albert Camus, L'?tranger (Folio) (French Edition), Gallimard

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GERMAN LANGUAGE (GLG)

COURSE CODE	25FL3055	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	classify their understanding of greeting wishes, alphabets and numbers learning. To understand the greetings in formal and informal way	2	PO7
CO2	Apply their knowledge of essential daily expressions, present, past and future tense.Conjugating the verbs in the Singular and Plural groups, Past participle tense and the futertense and relations with the verbs	3	PO1
CO3	Utilize their understanding with suitable prepositions, questions, and possessive pronouns, and the importance of four German cases. Prepositions in Akkusativ and Dativ	3	PO7
CO4	Develop their knowledge about how to move in public places, such as shopping centres, restaurants, tourist places, etc, and preparation of them for German A1 level examination.	3	PO9

Syllabus

Module 1	Introduction to multiplication concepts (may be a bit advanced for beginners). Simple multiplication problems with pictures or manipulatives might be introduced.Learn the upper and lowercase letters of the German alphabet (A-Z, a-z). Practice pronunciation of each letter.
Module 2	Sein Form: Used for statements about existence, location, and becoming (e.g., "Ich bin Student" - I am a student). Haben Form: Used for statements about possession, action, and completion (e.g., "Ich habe ein Auto" - I have a car).
Module 3	Building German sentences? Cases (Nominative, Accusative, Dative, Genitive) are key! They show the role of nouns and pronouns (like "ich," "mein Buch"). Prepositions (in, auf) and questions (Wo? Wer?) require specific cases too. Understanding cases unlocks clear and flexible sentence structures!
Module 4	Understand about how to move in public places such as shopping centres restaurants tourist places etc and preparation of them for German A1 level examination. A1 German for navigating public places: Learn basic greetings ("Guten Tag") and phrases ("Entschuldigung, wo ist...?" - Excuse me, where is...?). Practice ordering ("Ein Kaffee, bitte" - One coffee, please) and asking permission ("Darf ich hier sitzen?" - May I sit here?). Remember key vocabulary for shops ("Gesch?ft"), restaurants ("Restaurant") and tourist spots ("Sehensw?rdigkeit").

Reference Books:

1 Studio D A1, Deutsch als Frems Sprache , Kursbuch und Arbeitsbuch, Cornlesen, 2000, Goyal Publishers & Distributors Pvt.Ltd. New Delhi.

2 Collins, easy learning German Grammar & Practice , Harpercollins Specials, 2004, Goyal Publishers & Distributors Pvt.Ltd..

3 Tangram aktuell 1 Kursbuch + Arbeits buch , Huebner , 2007, Goyal publishers and Distributors pvt.Ltd.

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JAPANESE LANGUAGE (JLG)

COURSE CODE	25FL3058	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Classify Hiragana, Katakana, and basic Kanji characters used in greetings and simple scripts	2	PO7
CO2	Apply their knowledge of essential daily expressions, numbers, months, dates, time, body parts, colors, and common vocabulary to effectively communicate in basic everyday situations	3	PO1
CO3	Utilize their understanding of present, past, and future tenses, along with the ability to construct interrogative sentences, to express themselves in various timeframes and ask questions effectively in different conversational contexts. pen_spark	3	PO7
CO4	Develop their knowledge of verbs, including negative conjugations, and prepositions to discuss hobbies, deliver self-introductions, and navigate basic interview scenarios in Japanese	3	PO9

Syllabus

Module 1	Greetings and writing script- Hiragana , katakana and basic Kanji
Module 2	Daily uses expressions , Numbers , Months, date , time, Body parts and colors name, daily uses vocabularies
Module 3	Present tense , Past tense, Future tense , Interogative sentances
Module 4	Verbs , Negative verbs , Propositions , Hobbies , self introduction, Intrerview preparation in Japanese

Reference Books:

1 Minna no Nihongo - N5 Level, 3A Corporation, 2nd Edition, Goyal Publosher.

2 Genki: An Integrated Course in Elementary Japanese", Eri Banno, Yoko Ikeda, Yutaka Ohno, 3rd Edition, The Japan Times.

3 Japanese from Zero, George Trombley and Yukari Takenaka, 7th Edition, YesJapan Corporation.

4 Remembering the Kanji, James W. Heisig, 2nd Edition, University of Hawaii Press.

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SYLLABUS OF COURSES UNDER

UNIVERSITY COURSE (UC)

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HUMAN VALUES, GENDER EQUALITY AND PROFESSIONAL ETHICS(HVGE&PE)

COURSE CODE	25UC0026	MODE		LTPS	2-0-0-0	PRE-REQUISITE	NIL

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding the basic concepts of value education.	2	PO5
CO2	Gain basic understanding of the principles in harmony among the human beings	2	PO5
CO3	Gain knowledge in the concept of Harmony in the family and society	3	PO5
CO4	Acquire knowledge in the concepts of harmony in the nature	4	PO5

Syllabus

Module 1	Introduction to Human Values: Understanding Value, Self-exploration as the Process for identifying *Value*, Continuous Happiness and Prosperity - The Basic Human Aspirations, Right Understanding, Relationship and Physical Facilities, Happiness and Prosperity – Current Scenario, Method to fulfil the Basic Human Aspirations; Harmony in the Human Being: Understanding the Human Being as Co-existence of Self ('I') and Body, Discriminating between the Needs of the Self and the Body, The Body as an Instrument of 'I', Understand Harmony in the Self('I'), Harmony of the Self ('I') with the Body,
Module 2	Understanding Harmony in the Family and Society: The Basic Unit of Human Interaction, Values in Human-to-Human Relationships, Vision for the Universal Human Order; Harmony in the Nature (Existence): Understand Harmony in the Nature, Interconnectedness, Self-regulation and Mutual Fulfilment among the Four Orders of Nature, realizing 'Existence is Co-existence' at All Levels, The Holistic Perception of Harmony in Existence.

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Module 3	What is Gender, and Why Should We Study It? Gender Equality Milestones, The Context Today; Socialization: Making Women, Making Men: Preparing for Womanhood, Preparing for Manhood, Different Masculinities, Unrecognized and Unaccounted For, Wage Differentials between Women and Men, Women in the Working Environment; Being Boy: A Village Boyhood, School Days, College Styles, Ek Ladki Ko Dekha Toh; Sexual Harassment: SAY NO! Sexual Harassment, not 'Eve-Teasing', Consent and Relationships, Coping with Everyday Harassment; Becoming Man: A Dangerous Model of Masculinity, Changing Masculinities, Imprints of Masculinity, Mothers, Fathers and Family.
Module 4	Implications of the Values and Gender Equality – a Look at Professional Ethics: Natural Acceptance of Human Values, Definitiveness of (Ethical) Human Conduct, A Basis for Humanistic Education, Humanistic Constitution and Universal Human Order, Competence in Professional Ethics, Holistic Technologies, Production Systems and Management Models - Typical Case Studies, Strategies for Transition towards Value-based Life, Women in the Working Environment and Profession

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	A Foundation Course in Human Values and Professional Ethics. First Edition,	Gaur, R. R., Sangal, R., & Bagaria, G. P.	Excel Books	2010
2	2., small is beautiful: A study of Economics as if People Mattered,	E F Schumacher	Blond & Briggs, Britain	1973
3	How the Other Half Dies	Sussan George	Penguin press,reprinted	1986, 1991.
4	"Towards A World of Equals ABilingual Textbook on Gender",	Suneetha, Uma Bhrugubanda, DuggiralaVasanta, Rama Melkote, Vasudha Nagaraj, Asma Rasheed, Gogu Shyamala, Deepa Sreenivas and Susie Tharu	Telugu Akademi, Hyderabad,	2015

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DESIGN THINKING AND INNOVATION (DTI)

COURSE CODE	25UC1203	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil

Course Outcomes

CO#	CO Description	BTL	PO/PSO Mapping
CO1	Understand the importance of Design thinking mindset for identifying contextualized problems	2	PO9
CO2	Analyze the problem statement by empathizing with user	4	PO7
CO3	Develop ideation and test the prototypes made	3	PO3
CO4	Explore the fundamentals of entrepreneurship skills for transforming the challenge into an opportunity	2	PO10

Syllabus

Module 1	Introduction to Design Thinking and Innovation: Introduction to design thinking and its principles, Design definitions andstories, desirability, feasibility, viability, mystery, heuristics, algorithm, requirements, patterns, connect, blind spots; Laws of Design Thinking: less is more, last 2% equals 200%, theory of prioritization; Design mind: definitions, 5 forces ofgrowth (SEPIA), 5 frictional forces (DCAFE), 3 capacity levers (VAL), Design thinking for contextualized problem-solving, Incorporating sustainable development goals into design thinking,
Module 2	Design Thinking Process: Overview of the design thinking process, Design framework (L0); Empathy research:understanding user needs and perspectives, Persona development: creating user profiles; Customer journey mapping:visualizing user experiences, Define phase: asking the right questions and problem statement formulation. Customer journey mapping: visualizing user experiences Define phase: asking the right questions and problem statement formulation
Module 3	Ideation, Prototyping and Testing: Ideation techniques, brainstorming and generating creative ideas, Identifying patterns and anti-patterns in ideation, Evaluation of ideas using different criteria (10/100/1000 gm): Prototyping and testing: translating ideas into tangible prototype

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Module 4	Entrepreneurial Innovation: Introduction to innovation management, Basics of business models and their role in innovation, Financial estimation for innovation projects: Pitch decks: creating persuasive presentations for innovation, Considerations for intellectual property rights (IPR) in innovation.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Design Thinking in Classroom	David Lee	Ulysses Press	2018
2	The Art of Innovation Lessons in Creativity from IDEO	Tom Kelley	IDEO	2001
3	The Design Thinking Play Book	Michael Lewrick, Patrick Link & Larry Leifer	Wiley Press	2018
4	Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation	Tim Brown	Harper Business	2009
5	Unmukt- Science and Art of Design Thinking	Arun Jain	Arun Jain and School of Design Thinking	2019