



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

DEPARTMENT OF ARCHITECTURE

PROGRAM DEVELOPMENT DOCUMENT

PROGRAM NAME: BACHELOR OF ARCHITECTURE

2023

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 one of the globally renowned architectural schools.

Mission of Department:

To impart higher quality education making the students well equipped to face the challenges of the present & future trends in the architectural field enabling them to be globally competitive and socially responsible architects with intrinsic values.

Mission statements:

M1: Impart quality higher education and research, taking into consideration the local and national scenario of architecture profession.

M2: To make the students well equipped to face the challenges of the present and future trends in the architectural field.

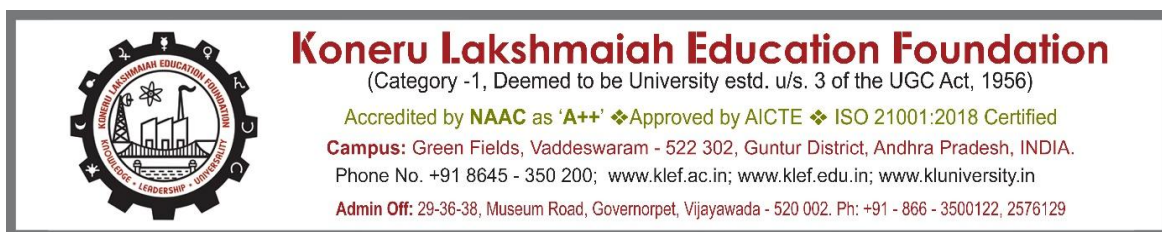
M3: Enabling them to be globally competitive, with a perspective of global trends and practices in architecture and designing fraternity.

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 stimulate artistic sensitivity and creative powers. (SKILL)

PEO2. Strengthen intellectual growth and the capacity to develop creative and responsible solutions to unique and changing problems (EMPL)

PEO3. Acquire leadership capabilities necessary for the competent practice of architecture and lifelong learning. (ETPR)

PEO4. Pursue advanced education, research and development, and other creative and innovative efforts in the field of Architecture. (SKILL)

Program Outcomes (POs):

PO1. Ability to gain knowledge of Humanities, Sciences and Architecture and the application of knowledge in practice.

PO2. Use the elements of Architecture and apply basic principles in Architectural Design.

PO3. Ability to apply theoretical knowledge to achieve Architectural Design solutions.

PO4. Ability to research, review, comprehend and report technological developments happening in the field of Architecture.

PO5. To make the student design aesthetically pleasing, structurally viable buildings and encourage technological advancements in the building construction industry.

PO6. Ability to understand the real-life situation in converting the On-paper design to On-site design of Architectural Practice.

PO7. To make students understand the environmental issues and apply the knowledge for sustainable development



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

- PO8. Recognize the ethical and professional responsibilities and the norms of Architectural practice.
- PO9. Identify and solve the social, economic, and cultural issues in Architectural Design.
- PO10. Communicate effectively and work in interdisciplinary groups according to the project scale.

Program Specific Outcomes (PSOs):

PS01. Ability to enhance creative design skills in attaining design solutions in architecture.

PS02. To understand the design complexity of the designed structure and use appropriate building construction techniques and technology for the structure.

MAPPING OF ACADEMIC GOALS WITH MISSION STATEMENTS:

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S.NO	Description of PEOs	Key Components of Mission			
		M 1	M 2	M 3	M 4
PEO 1	Should be able to stimulate artistic sensitivity and creative powers. (SKILL)	✓		✓	
PEO 2	Strengthen intellectual growth and the capacity to develop creative and responsible solutions to unique and changing problems. (EMPL)		✓		✓
PEO 3	Acquire leadership capabilities necessary for the competent practice of architecture and lifelong learning. (ETPR)	✓	✓	✓	✓
PEO 4	Pursue advanced education, research and development, and other creative and innovative efforts in the field of Architecture. (SKILL).	✓	✓	✓	✓

MAPPING OF PEO'S WITH ACADEMIC GOALS:

PEOs	ACADEMIC GOALS						
	G1	G2	G3	G4	G5	G6	G7
PEO1	✓			✓			✓
PEO2	✓	✓		✓		✓	✓
PEO3						✓	
PEO4	✓		✓		✓		



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

MAPPING OF PEOS WITH MISSION STATEMENTS OF THE DEPARTMENT:

MAPPING OF POs/PSOs with PEOS

S.NO	Key Components of POs and PSOs	Description of PEO			
		Should be able to stimulate artistic sensitivity and creative powers. (SKILL)	Strengthen intellectual growth and the capacity to develop creative and responsible solutions to unique and changing problems. (EMPL)	Acquire leadership capabilities necessary for the competent practice of architecture and lifelong learning. (ETPR)	Pursue advanced education, research and development, and other creative and innovative efforts in the field of Architecture. (SKILL).
		PEO1	PEO2	PEO3	PEO4
PO 1	Ability to gain knowledge of Humanities, Sciences and Architecture and the application of knowledge in practice.	✓	✓	✓	✓
PO 2	Use the elements of Architecture and apply basic principles in Architectural Design.	✓	✓	✓	✓



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PO 3	Ability to apply theoretical knowledge to achieve Architectural Design solutions.	✓	✓	✓	✓
PO4	Ability to research, review, comprehend and report technological developments happening in the field of Architecture	✓		✓	✓
PO5	To make the student design aesthetically pleasing, structurally viable buildings and encourage technological advancements in the building construction industry.	✓	✓		✓
PO6	Ability to understand the real-life situation in converting the On-paper design to On-site design of Architectural Practice		✓	✓	
PO7	To make students understand the environmental issues and apply the knowledge for sustainable development		✓	✓	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PO8	Recognize the ethical and professional responsibilities and the norms of Architectural practice.	✓	✓	✓	
PO9	Identify and solve the social, economic, and cultural issues in Architectural Design.	✓	✓		✓
PO10	Communicate effectively and work in interdisciplinary groups according to the project scale.			✓	✓
PSO1	Ability to enhance creative design skills in attaining design solutions in architecture.	✓		✓	
PSO2	To understand the design complexity of the designed structure and use appropriate building construction techniques and technology for the structure.		✓	✓	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

THRUST AREAS OF ARCHITECTURE

LOCAL <i>AP URBAN</i>	REGIONAL <i>AP URBAN</i>	NATIONAL <i>Council of Architecture</i>	GLOBAL <i>UN Sustainable Development Goals</i>
Infrastructure Development	Housing	Design, Aesthetics	Urbanization
Sustainable Development with cultural aspect.	Energy efficient Infrastructure	Sustainable Development, Sustainable Construction	Sustainable Development
https://crda.ap.gov.in/APCRDADOC/S/GOSACTSRULES/Acts/01~0754CRDA%20Act.pdf - Chapter I, 2 (19), Pg.7 - Chapter III, 10(a) (II), Pg.22 - Chapter III, 10(e) (XI), Pg.27	https://www.apurban.com/ - Under Economic cities https://www.apurban.com/Documents/GOs/GO%20132.PDF - Broad Scope, Pg.2	https://www.coa.gov.in/showfile.php?lang=1&level=1&sublinkid=1023&lid=893 Preface https://www.teriin.org/eventdocs/files/sus_bldg_paper_1342567768.pdf	https://sdgs.un.org/goals Goal 11. Sustainable cities and communities



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

MAPPING OF NEEDS WITH MISSION STATEMENTS:

Local, Regional, National and Global Needs		Mission Statements			
		M1	M2	M3	M4
Local Needs	Infrastructure Development	✓	✓	✓	
	Sustainable Development with cultural aspect.	✓	✓	✓	
Regional Needs	Housing	✓	✓		
	Energy efficient Infrastructure	✓	✓		
National Needs	Design, Design Aesthetics	✓	✓	✓	✓
	Sustainable Development, Sustainable Construction	✓	✓	✓	✓
Global Needs	Urbanization	✓		✓	✓
	Sustainable Development	✓		✓	✓



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COURSE OUTCOMES (COS) INTRODUCED / REVISED IN 2023-2024 CURRICULUM AS PER LOCAL, REGIONAL, NATIONAL AND GLOBAL NEEDS:

Local, Regional, National and Global Needs	Course Outcome (CO)		Course Title
Local Needs	Emerging technologies	An understanding of the qualities of different elements as well as their composite fusions	Architectural Design Studio – 1 (Basic Design): 23AR1153
		An ability to engage and combine the elements of design in spontaneous as well as intentional ways to create desired. qualities and effects	
		Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.	
		Understanding of 3D Composition by involving students in several exercises which will help generation of a form from a two dimensional / abstract idea.	
	Using local materials and construction techniques	Understanding of the building materials -Soils and Bricks	Building Construction-I (Masonry): 23AR2158
		Understanding of the building materials -stones & sand	
		Understanding of the building materials Lime and Cement	
		Understanding of the building materials-Timber & Bamboo	
	Appropriate material and techniques	To understand cutting and sticking for making a model	Model Making Workshop: 23AR1254
		To understand representing hills, Plateau, water bodies, furniture, Cars	
		To understand components of a detailed model	
		To know different materials and apply the acquired knowledge	
		To create model Independently by choosing appropriate material and techniques.	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	Understanding local climate	An understanding of elements of climate, human comfort, and human body heat balance.	Climate Responsive Architecture: 22AR2109
		Understanding the concept of heat transfer in buildings, sun path diagrams and designing shading devices.	
		Understanding air movement for designing buildings accordingly.	
		Understanding climate responsive architecture through case studies.	
	Understanding local topography	Understanding Surveying using Chain and Compass.	Site Survey and Analysis: 23AR2110
		Understanding Surveying using Dumpy Level and Theodolite.	
		Understanding Surveying using Total Station and Alidade.	
		Applying survey practices in field	
	Community and identity	To understand the Vernacular Architecture, its Approaches & Concepts.	Vernacular Architecture: 22AR3120A
		To Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.	
		To Understand the Vernacular Architectural Styles of Southern India.	
		To study and Understand the Influence of Western world on Vernacular Architecture.	
Regional Needs	Emerging technologies	To Understand the Fundamentals of Drawing and Drafting	Architectural Design Studio – 1 (Basic Design): 23AR1153
		To Understand the Construction and Development of Surfaces for various Basic 3D Shapes.	
		To Understand the representation of various building component and related elements	
		To Understand the representation of a building in plan, elevation & sections.	
	Materials construction techniques and	Understanding the building materials - Ferrous & Nonferrous metals	Building Material – II: 23AR1206
		Understanding of the building materials – Cement mortar and concrete & Reinforced cement concrete.	
		Understanding of the building material - Glass.	
		Understanding of the building material - Paints.	
	Aesthetics and ergonomics	To understand the basic design a cumen and anthropometry, ergonomics	Interior Design Studio: 23AR4118A
		To enhance their skills by applying design on cept and theme for	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		Small spaces.	
		Apply the skills in Planning of residential spaces with material usage understanding	
		Apply anthropometry in hospitality related environment.	
	Aesthetics	To Understand the concepts and Scientific Methods of Perspective Drawing and apply Rendering Techniques	Architectural Drawing - II (3D forms and colour): 23AR1255
		To understand the principles of Shade & Shadow and Construct Sciography of Architectural Structures.	
		To Understand identification and measuring of specific Architectural Details of Historically significant Buildings.	
		To understand the presentation techniques of drawings	
	Aesthetics and ergonomics	To understand the basic design acumen and anthropometry, ergonomics	Furniture Design Studio: 23AR4118B
		To enhance their skills by applying design concept and theme to Human scale	
		Apply the skills in Planning of furniture with material usage understanding	
		Study and apply anthropometry in daily use products.	
National Needs	Understanding the climate and environment	Define to articulate basic understanding of the importance of Environmental education and conservation of natural resources. conservation of natural resources and Energy resources.	Ecology & Environment: 22UC0009
		Understand concepts of ecosystems and learn methods for conservation of habitats and biodiversity.	
		Identify critically about individual roles in prevention of pollution. An Environmental Studies will be enabled to do independent research on human interactions with the environment.	
		Recognize the knowledge on environmental legislation, disaster management and EIA process.	
	Indian Knowledge System	To understand Vedic culture and study the origins of Early Hinduism, Jainism, Buddhism, and its rudimentary forms of construction.	History of Architecture - II (Hindu Architecture: 22AR1205
		To understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		To understand and to get knowledge on the temple architecture and temple towns during various periods and empires in South India and North India.	
		To Study and to know the character and Architecture of temples of South India and North India in detail.	
	Comfort	To make student to remember anthropometric data, conduct desktop/case study and understand collected data towards framing parameters for bedroom design.	Architectural Design Studio -II: 23AR1256
		To make student to apply and analyze collected data, to derive concepts, evaluate schematic preliminary design options, and final design presentation of a Bedroom for a cine actor.	
		To make student to remember anthropometric data, conduct desktop/case study and understand collected data towards framing parameters for Coffee Shop design.	
		To make students to derive concepts, schematic preliminary design, and final design presentation of a Shop front for a given context.	
	Materials and construction techniques.	to understand natural materials like stone used in the building construction, method of construction and its application & usage in building industry & types of masonry, its systems & techniques.	Building Construction - I (Masonry): 23AR2158
		To understand the brick as basic building material & application of clay products in construction sector, methods & techniques.	
		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.	
		Students should be able to analyze the different types of brick masonry & construction methods and details of contemporary and traditional work method demonstrate the techniques through study models	
	Understanding of people's spatial need	To understand and analyze the use, the spaces, and the concepts of residential activities.	Architectural Design Studio -III: 23AR2159
		To design a small-scale residential project	
		To understand and analyze the spaces, connectivity, and the standards of Institution buildings. To design an institution-oriented building	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		Time Problem design with minimal design agenda	
	Technology and comfort	To know about the water treatment, distribution, and wastewater treatment methods & disposal. Understanding the building sanitation method and different types of plumbing systems To understand the layouts and sanitary layouts of a residence. To understand the use and installation of various plumbing fixtures and to know the sewerage systems for sanitary conveyance.	Building Services - I (Plumbing and sanitation):22A R2212
	Materials and construction techniques.	To understand the construction of doors and windows in accordance with the type of usage. To understand the uses of wooden trusses and staircases in construction industry/practice To understand the installation of Paneling, soundproof and light weight partitions To understand the techniques of bamboo constructions and the construction techniques of wall and kitchen cabinets	Building Construction - II 23AR2260
	Liveable cities	Fundamentals of Sustainability and its impact on Environment Understanding the new concepts and terminologies of sustainability Understand the importance of site planning and energy, water efficient landscaping as an important tool in sustainable architecture National and International Case studies of Sustainable Architecture through research summary	Sustainable Architecture : 22AR3120B
	Location and topography	To make students understand about the basics of site, it's measuring and drawing methodologies. To explain the importance of analysis of a site required in architectural design and building construction. To make students understand the context of the site with respective to the surrounding land use typology. To discuss about the site planning techniques and layout principles to be followed prior to site designing.	Site Analysis and Planning: 22AR2213
	Understanding of people's spatial need	To memorize anthropometry, circulation patterns, standards various Facilities to be provided. To create and design spatial planning, circulation, and functionally. Good community oriented open spaces–Project	Architectural Design Studio -IV: 23AR2261



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		1	
		To Create and design functional and activity-oriented community spaces-Project2	
		To analyze the architecture, rural planning, infrastructure, and settlement planning of a village (rural settlement). To document the observations and compile the analysis for presentation – Project 3.	
	Culture and people	Understand the Evolution of Dwellings as base of Traditional and Vernacular styles of India.	Contemporary Architecture: 23AR2214
		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.	
		Understand the Theories of current Architect practice and their applicability in meeting present day Needs.	
	Technology and comfort	Study of electricity, installations, wiring and principles of distribution and safety	Building Services - II : 23AR3116
		Know the application of artificial illumination, and lighting design for various spaces	
		Knowledge of ventilation principles	
		Understanding properties of sound and Architectural acoustics, analyzing acoustic concepts and design, and learning how to create acoustics.	
	materials and construction techniques.	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 Construction – III: 23AR3143
		Flooring –Concrete, Wooden, Stone, Tile etc Slabs/Roofing – Vault,Dome, Waffle, Bubble deck, hollow core slabs,filler slab etc. Staircase types using the materials Wooden, metal, RCC etc.	
	Technology and Innovation	To understand and analyse the use, the spaces, and the concepts of different homes for the disabled.	Architectural Design Studio -V: 23AR3144
		To design a Social oriented building –A Home for physically and mentally challenged-Project1	
		To understand and analyze the spaces, connectivity, and the standards of Institution buildings.	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		To design an institution-oriented building – School of Architecture - Project 2 Time Problem - To design an Art center/ Museum	
	Technology and comfort	An understanding of the Thermal Properties of the building material and components and mechanical ventilation Understand the principles, systems, and design criteria of HVAC. Gain knowledge about fire safety norms in the buildings. Understand the mechanical transportation systems in buildings	Building services – III: 23AR3221
	Materials and construction techniques.	Understanding of Cement and Concrete properties. Understanding of Special concrete and Concreting methods. Understanding of the Reinforced Cement Concrete Construction. Understanding of Advanced Application Reinforced Cement Concrete Construction.	Building Construction – IV: 23AR3266
	Improved transparency in the construction industry	An understanding of data required and methods of estimation Ability to estimate various quantities using different methods An understanding of the types of estimates and costing Knowledge of various specifications and terminology used.	Specification, Estimation and Costing: 22AR3222
	Liveability and sustainability	Develop an understanding about space design at local level Develop a skill to integrate various knowledge systems to arrive at a design proposal of an urban scale, the process used for the same Make the students understand the area, scale, design, and implementation factors with the involvement of stakeholders Make the students work on relatively large project for incorporating multidisciplinary domains in the projects for consideration of the same.	Landscape Design Studio: 23AR3224A
	Cost effective	Develop an understanding about space design at local level Develop integrate various knowledge systems to arrive at a design proposal of a practical scale,	Modular Construction Studio: 23AR3224B



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		the process used for the same	
		Make the students understand the area, scale, design, and implementation factors with the involvement of Modular construction	
		Make the students work on a project for incorporating Modular construction	
	Technology and Innovation	Expose the students to the challenges of designing functionally complicated buildings, having a complex array of activities and services	Architectural Design Studio -VI: 23AR3267
		Design a functionally complex Building (Medium Rise Structure) - PROJECT 1	
		Familiarize the students to the task of coordinating integration of structural design and specialized building services in the framework of architectural design	
		Make students understand advanced construction technology and newer building materials. To Design a functionally complex Building (High Rise Structure) - PROJECT 2	
	Technology and Innovation	Familiarity with the alternative building materials, applying cost. effective materials and techniques to resolve environmental problems.	Appropriate Construction Technologies: 23AR3225A
		Familiarity with indigenous construction materials and techniques for building resilience and disaster mitigation	
		Familiarity with the material and techniques for energy efficient building construction	
		Introduction to Building Information Modelling and application of the same in modern construction industry	
	Productivity	To understand the importance of Building codes in different zones and learning about the terminologies	Building Bye Laws And Office Management 23AR3117
		To learn the different norms from National Building Code of India	
		To learn the basic need of building bye laws of local region and to learn the terminology. To be introduced to Energy Conservation	
		To learn basis office procedure and management techniques in architecture	
	Technology and comfort	Understand the philosophy of building automation systems and subsystems	Building Services - IV: 23AR4126
		Learn about the communication and security systems	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		Learn about the integration of building services into architectural design	
		Learn about the Interaction and integration between building structure, systems, services, management, control, and information technology.	
	Economic development	Understand housing and Housing issues	Housing: 23AR4128A
		Understand Housing, 5-year plans specific to housing	
		Understand Critical Sources of Finance	
		Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends	
	Technology and Innovation	Memorize anthropometry, circulation patterns, importance of services and building techniques	Architectural Design Studio -VII: 23AR4168
		To understand and apply the integration of services into intelligent sustainable building case study	
		To 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 – High Density Project. (Project 2)	
	Cultural promotion	Understand the Background writing and Concept creation for PLAY.	Set Design: 22AR4129B
		Study the Technology and concepts involved in Film set design.	
		Study and making of Background set to resemble the feature, Variation nasality in Lay outing Set	
		Produce a Mock model on Concept allotted and study Lighting and prop Installations.	
	Enhanced documentation	Introduce Working drawings and their significance in the construction of buildings.	Working drawing I (Building structure, civil and masonry): 23AR4130
		Teach students the essential components of working drawings, notations, drawing standards,	
		Strengthen the students' knowledge about preparing working drawings for various building elements.	
		Improve the construction details knowledge.	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	Improved efficiency	Understand the Objectives and Methods of project Management System	Building Construction and Management: 22AR4232
		Understand various Tools and Techniques to facilitate efficient management of Projects	
		Analyze Project cost model and steps involved in cost optimization	
		Applying Scientific Evaluation Techniques to Manage Project Durations and resources with Examples	
	The development of the Smart Cities Mission	Memorize Urban Design terminologies	Urban Design: 23AR4233A
		Understand Users and Activities in a city	
		Understand public spaces, streets & Transport	
		Understand Application of Urban Design	
	Promoting sustainable transportation options:	Study the Basic elements and various category of vehicles depending upon the category of Roads exiting	Transportation Planning: 23AR4234A
		Understanding Various types of Circulation & Users along with their infrastructural needs.	
		Understanding Road Safety & Civic Sense	
		Understanding Traffic & Transportation byelaws & Regulation	
	Smart city Mission	Understand the role of Services at higher scale in Urban level	Urban Design Studio: 23AR4270
		Understand and apply the integration of services into intelligent sustainable building case study	
		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)	
	Reduced loss of life	Understand the necessity for disaster management and measures that are to be followed.	(Disaster Mitigation and Management: 23AR4234B)
		Study the Disaster preparedness and Involving Design Considerations for buildings	
		Study the Design considerations for Disaster management and precautions.	
		Understand the Relief & Rehabilitation for Disasters	
	Enhanced	Train the students to prepare detailed Working	Working



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	documentation	drawings for effective execution at construction site. Teach students the essential components of working drawings, notations, drawing standards, Preparation of integrated services drawings and detailing for various types of drawings and methods of transmittals and record keeping. Update the latest materials knowledge with specifications	drawing II: 23AR4271
	Improved job prospects	Understand the preparation of professional architectural portfolio and resume Apply Academic architectural skills in various projects while working in office 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.	Practical Training: 23AR5172
	Entrepreneurship	Expose students to the daily realities of an architectural practice through the Training Facilitate an understanding of the evolution of an architectural project from design to execution. Enable an orientation that would include the process of development of conceptual ideas, presentation skills. Involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure.	Architecture Professional Practice: 22AR5228
	Dissemination of knowledge	Understanding the Architectural Thesis, Writing Synopsis, Studies Related to Project. Literature study in relation to literatures, Desktop Studies, Case studies. 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.	Architectural Thesis: 23AR5273
Global Needs	Culturally sensitive architecture	Introduction to Architecture and basic understanding of space and form development. To learn the components of building circulation and its relation to architecture. An understanding on architectural aesthetics in designing a building & also understand the key role of principles applied in Architecture.	Theory of Architecture: 22AR1101



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		Students should understand the functioning of design process and its application in architectural buildings through case studies.	
	Culturally sensitive architecture	To Understand Primitive Architecture and Ancient Settlements in pre-Historic times and get knowledge on the Ancient River valley civilizations in the world. Understand the Architecture and Planning of Ancient River Valley Civilizations Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture. To study the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture	History of Architecture - I (Ancient Civilization): 22AR1102
	Aesthetics	To understand the Types, Properties and Application of Colours. To understand the Painting Variations. To understand the Technique of Sculpturing. To explore and apply the Techniques of Sculpturing	Architectural Design Studio – I 23AR1153
	Emerging technologies.	Familiarize the students about the architecture and structural engineering interface. Understanding the concept of forces and structural systems. Analysing the plane trusses Understanding of shear force and bending moments in column. Determination of deflection of beams Understanding of centre of gravity and moments of inertia and its impact on the structures.	Design of Structure I: 23AR1204
	Emerging technologies.	Understanding the concept of simple stresses and strains and elastic properties of solids Understanding the properties of structural timber and bamboo Design of flexure members of timber and design of simple truss.	Design of Structures – II: 23AR2107
	Culturally responsive	Understanding the evolution of early Christian and Medieval periods, its Architecture and socio-political changes. Renaissance and Mannerist Architectures and their practices in Europe, growth of nations and	History of Architecture - III 22AR2108



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		styles of Baroque and Rococo. Understanding 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. Study of Architectural developments during Mughal Dynasty, Study of cross culture influence and evolution of secular architecture in princely states	
	Emerging technologies.	To understand the basics of computer system and their supporting technologies like MS Office.. To create documentation reports, analysis reports, and audio-visual presentations. To reciprocate the tools of 2D visualization to create architectural drawings. To create layouts, plot/print to scale drawings, design and edit 2D graphic images.	Computer Studio - I (MS office, AutoCAD 3D)– I: 23AR2157
	Ideas and Innovation	Understand the importance of Design thinking mindset for identifying contextualized problems Analyse the problem statement by empathizing with user Develop ideation and test the prototypes made Explore the fundamentals of entrepreneurship skills for transforming the challenge into an opportunity	Design Thinking and Innovation - 23UC1203
	Emerging technologies.	Understanding of Basics of RCC design Understanding and designing of columns Understanding and designing of footings and staircases Understanding and analysis a given section for under or over design and load carrying capacity	Design of Structure – I: 23AR1204
	Emerging technologies.	To learn the use of image editing software To create images and animation using graphics and animation software To understand, visualize the space and apply the tools of sketch up or equivalent software To create a detailed 3D model by working in collaboration by application of advanced tools	Computer Studio - II (Image making and 3d making software): 23AR2262
	Emerging technologies.	Understanding of limit state design. Analysis and Design of reinforcement for a section	Design of Structures – II: 23AR2107



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		Design & detailing of one way and two-way slab.	
		Detailing for special structures such as deep beams, corbels, shear walls etc.	
	Global culture and people	Understand Cubism& Constructivism along with various Building styles of Early Modern Architects.	Contemporary Architecture: 23AR2214
		Understand Post Modernism and International Style along with Ideas and Works of Various Architects of that time.	
		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.	
	Liveability	Understand the various elements of Human Settlements and the classification of Human Settlements.	Human Settlements and Planning: 23AR2223
		Understand familiarize the students with Planning concepts and process in Urban and Regional Planning.	
		Understand the changing dynamics of Urban Form and it's planning according to urban transformation	
		Understand the interrelationship between Human Settlements structure and Social Dynamics.	
	Sustainability	To understand the importance of energy efficiency in buildings and strategies involved.	Sustainable Architecture :22AR3120B
		To understand the importance of relevance of water in built environment	
		Introduction to green rating systems and building codes	
		Introduction to simulation and analysis software	
	Technology and Innovation	Familiarity with the advanced construction techniques in RCC and their adaptability to architecture	Appropriate Construction Technologies: 23AR3225A
		Understand and apply various pre-engineered Concrete structures, adaptation in large-span structures, pre-engineered Steel structures, adaptation in steel frames/space frames and their components.	
		Understand and apply different aspects and technologies. involved in the construction of	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		High-rise buildings	
		Introduction to advanced building materials and their application in the contemporary architectural practice	
	Documentation	Familiarity with the photographic knowledge and equipment	Architectural Journalism and Photography: 23AR4128B
		Familiarity with photojournalism and visual communication techniques	
		Application of photographic equipment and techniques	
		Creating visuals for buildings of architectural importance	
	Increased efficiency and sustainability	Understand intelligent buildings' concept and its evolution	Energy Efficient Architecture 23AR3225B
		Understand energy management systems and indoor environment quality of buildings	
		Understand energy conservation technology in buildings and its application	
		Understand and apply building management systems	
	Cultural heritage values	Make students understand about the basics of Conservation in India.	Architectural Conservation: 22AR4129A
		Study the Conservation Practices.	
		Explain the importance & analysis of Urban Conservation	
		Discuss about Conservation planning & Adaptive Conservation.	
	Advancement of knowledge	Understand the importance of reasoning	Dissertation: 23AR4269A
		Select the topic which may eventually culminate in the Architectural Design Thesis in the subsequent semester.	
		Select and apply the concept of reasoning to the chosen topic	
		Analyze the spaces, connectivity, and the standards of sustainable and service intensive building. Case study	
		Write a report on the research done in the topic with appropriate studies.	
	Advancement of knowledge	Students will explore and research topics of their interest; then organize presentations.	Thesis Seminar: 23AR4269B
		To help students improve as speakers. All enrolled students must be present at each seminar. It is expected that students will actively participate by asking questions of the speaker.	
		The seminar process includes topic selection, synopsis submission, research on the topic and finally a presentation. Students can take aid of	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

		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.	
	Improved health	Identify concepts and concerns of perception. Identify and develop the sensitivity to the needs of users and clients	Behavioral Architecture: 23AR4233B



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Distribution of Credits

Sl No	Course Category	Short Name	No. Of courses	Minimum Credits	Contact Hours	As per COA Credits	As per ABET Credit Hours (if applicable)
1	Basic Sciences and Applied Engineering	BSAE	18	57	57	20	NA
2	Professional Core Courses	PCC	13	44	44	130	NA
3	Project	PRI	10	98	98	Part of PC	
4	Professional Electives Courses	PEC	20	27	27	26	NA
6	Open Electives Course	OEC	1	2	2	5	NA
7	Professional Ability Enhancement Compulsory courses	PAEC C	3	36	36	26	NA
8	Skill Enhancement Courses	SEC	5	14	17	13	NA
9	Humanities, Art & Social Sciences	HAS	3	8	6	NA	
Total			74	285	283	260	NA



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Course structure (category wise)

PROFESSIONAL CORE COURSES (PCC)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	22AR1101	Theory of Architecture	3	0	0	0	3	3	Nil
2	22AR1102	History of Architecture - I (Ancient Civilization)	3	0	0	0	3	3	Nil
3	23AR1151	Art and Visual Graphic Studio	0	0	6	0	6	6	Nil
4	23AR1152	Architectural Drawing - I (Basic Geometry)	0	0	6	0	6	6	Nil
5	22AR1205	History of Architecture - II (Hindu Architecture)	3	0	0	0	3	3	Nil
6	23AR1254	Model Making Workshop	0	0	4	0	4	4	Nil
7	23AR1255	Architectural Drawing - II (3D forms and colour)	0	0	4	0	4	4	Nil
8	22AR2108	History of Architecture - III (Medieval periods)	3	0	0	0	3	3	Nil
9	22AR2213	Site Analysis and Planning	2	0	0	0	2	2	Nil
10	23AR2214	Contemporary Architecture	3	0	0	0	3	3	Nil
11	23AR2223	Human Settlements and Planning	2	0	0	0	2	2	Nil
12	23AR3117	Building Bye laws and Office Management	2	0	0	0	2	2	Nil
13	22AR3222	Specification, Estimation and Costing	3	0	0	0	3	3	Nil

BASIC SCIENCES AND APPLIED ENGINEERING (BSAE)

Sn o	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	22AR1103	Building Materials - I (Brick, Stone, Wood)	2	0	0	0	2	2	Nil
2	22UC0009	Ecology & Environment	2	0	0	0	2	2	Nil
3	23AR1204	Design of Structures - I (Plane trusses, shear force and bending moments)	3	0	0	0	3	3	Nil



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

4	23AR1206	Building Materials - II (cement, R.C.C, and Glass)	2	0	0	0	2	2	Nil
5	23AR2107	Design of Structures - II (Design of beams and columns)	3	0	0	0	3	3	Nil
6	22AR2109	Climate Responsive Architecture	3	0	0	0	3	3	Nil
7	23AR2158	Building Construction - I (Masonry)	0	0	4	0	4	4	Nil
8	23AR2211	Design of Structures - III (Design of footings)	3	0	0	0	3	3	Nil
9	22AR2212	Building Services - I (Plumbing and sanitation)	3	0	0	0	3	3	Nil
10	23AR2260	Building Construction - II (Joinery, trusses and staircase)	0	0	4	0	4	4	Nil
11	23AR3115	Design of Structures - IV (Detailing of structural member)	3	0	0	0	3	3	Nil
12	23AR3116	Building Services - II (Electrical, and Acoustics)	3	0	0	0	3	3	Nil
13	23AR3143	Building Construction - III (Steel structures, Partitions and false ceiling)	0	0	4	0	4	4	Nil
14	23AR3221	Building Services - III (HVAC and fire safety)	3	0	0	0	3	3	Nil
15	23AR3266	Building Construction - IV (R.C.C and special concrete)	0	0	4	0	4	4	Nil
16	23AR4126	Building Services - IV (Building automation)	3	0	0	0	3	3	Nil
17	23AR4130	Working Drawing - I (Building structure, civil and masonry)	0	0	4	0	4	4	Nil
18	23AR4271	Working Drawing - II (Detailing)	0	0	4	0	4	4	Nil

PROJECT – PRI

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	23AR1153	Architectural Design Studio – 1 (Basic Design)	0	0	9	0	9	9	Nil
2	23AR1256	Architectural Design Studio -II	0	0	9	0	9	9	23AR1153



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

3	23AR2159	Architectural Design Studio -III	0	0	9	0	9	9	23AR1256
4	23AR2261	Architectural Design Studio -IV	0	0	9	0	9	9	23AR2159
5	23AR3144	Architectural Design Studio -V	0	0	9	0	9	9	23AR2261
6	23AR3267	Architectural Design Studio -VI	0	0	12	0	12	12	23AR3144
7	23AR4168	Architectural Design Studio -VII	0	0	12	0	12	12	23AR3267
8	23AR4131	Research Methodology	2	0	0	0	2	2	Nil
9	23AR4270	Urban Design Studio	0	0	12	0	12	12	23AR4168
10	23AR5273	Architectural Thesis	0	0	15	0	15	15	23AR5172

PROFESSIONAL ELECTIVE COURSES (PEC)

Sn o	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	22AR3117 A	Vernacular Architecture (PE-1)	3	0	0	0	3	3	Nil
	22AR3117 B	Sustainable Architecture (PE-1)	3	0	0	0	3	3	
2	23AR3224 A	Landscape Design studio (PE – 2)	0	0	4	0	4	4	Nil
	23AR3224 B	Modular Construction Studio (PE – 2)	0	0	4	0	4	4	
3	23AR3225 A	Appropriate Construction Technologies (PE-3)	2	0	0	0	2	2	Nil
	23AR3225 B	Energy Efficient Building(PE-3)	2	0	0	0	2	2	
4	23AR4118 A	Interior Design Studio (PE-5)	0	0	4	0	4	4	Nil
	23AR4118 B	Furniture Design Studio (PE-5)	0	0	4	0	4	4	
5	23AR4128 A	Housing (PE-6)	2	0	0	0	2	2	Nil
	23AR4128 B	Architecture Journalism & Photography (PE-6)	2	0	0	0	2	2	
	23AR4128 C	Advanced Building Techniques (PE-6)	0	0	2	0	2	2	
6	23AR3229 A	Architecture Conservation (PE-4)	3	0	0	0	3	3	Nil



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	23AR3229 B	Set Design (PE-4)	3	0	0	0	3	3	
	23AR3229 C	Intelligent Building (PE-4)	3	0	0	0	3	3	
7	23AR4269 A	Dissertation (PE-7)	0	0	4	0	4	4	Nil
	23AR4269 B	Thesis Seminar (PE-7)	0	0	4	0	4	4	
8	23AR4233 A	Urban Design (PE-8)	2	0	0	0	2	2	Nil
	23AR4233 B	Behavioral Architecture (PE - 8)	2	0	0	0	2	2	
9	23AR4234 A	Transportation Planning (PE-9)	3	0	0	0	3	3	Nil
	23AR4234 B	Disaster Mitigation and Management (PE-9)	3	0	0	0	3	3	

SKILL ENHANCEMENT COURSES (SEC)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	23AR2110	Site Survey and Analysis	0	0	0	3	3	3	Nil
2	23AR2157	Computer Studio - I (MS office, AutoCAD 3D)	0	0	0	3	3	3	Nil
3	23AR2262	Computer Studio - II (Image making and 3d making software)	0	0	0	3	3	3	Nil
4	23AR3165	Computer Studio - III (Building Information Modelling)	0	0	0	4	4	4	Nil
5	22UC0021	Social Immersive Learning	0	0	0	4	4	1	Nil

PROFESSIONAL ABILITY ENHANCEMENT COMPULSORY COURSES (PAECC)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	22AR4232	Building Construction and Management	3	0	0	0	3	3	Nil
2	23AR5172	Practical Training / Internship	0	0	30	0	30	30	23AR4270
3	22AR5228	Architecture Professional Practice	3	0	0	0	3	3	Nil



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

HUMANITIES ART AND SOCIAL SCIENCE (HAS)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	23UC1101	Integrated Professional English	0	0	2	0	2	2	Nil
2	23UC1202	English Proficiency	0	0	2	0	2	2	Nil
3	23UC1203	Design Thinking and Innovation	0	0	4	0	4	2	Nil

OPEN ELECTIVE COURSES (OPE)

Sno	Course Code	Course Name	L	T	P	S	Ch	Cr	Prerequisites
1	22UC0011	Gender and Social Equality	2	0	0	0	2	2	Nil



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Program Structure

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

S No	Course Code	Course Title	Category	L	T	P	S	C R	Pre-requisite	New Course/ Revised Course/ Retained Course	Stakeholder feedback based on which change was proposed	Focused on employability/ entrepreneurship / skill development	Justification (Detailed Justification on how the course content maps to employability/entrepreneurship/skill category.)
1	22AR1101	Theory of Architecture	PC C	3	0	0	0	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	22AR1102	History of Architecture - I (Ancient Civilization)	PC C	3	0	0	0	3	Nil	Retained course	–	Employability	Understanding historical design principles informs creative solutions and refines critical thinking for various architecture-related fields.
3	22AR1103	Building Materials - I (Brick, Stone, Wood)	BSAE	2	0	0	0	2	Nil	Revised course	B.V. Lakshmi	Employability	It equips you with the skills to build structures with brick and stone, a valuable foundation for a career in construction.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

4	23A R11 51	Art and Visual Graphic Studio	PC C	0	0	6	0	6	Nil	Reta ined cour se	—	Skill developm ent	It directly develop practical skills in design, construction, and problem-solving.
5	23A R11 52	Archite ctural Drawin g - I (Basic Geomet ry)	PC C	0	0	6	0	6	Nil	Reta ined cour se	—	Skill developm ent	It lays the foundation for spatial reasoning and technical skills essential for architectural design.
6	23A R11 53	Archite ctural Design Studio – 1 (Basic Design)	PC	0	0	9	0	9	Nil	Reta ined cour se	—	Entrepren eurship	It can equip students with the creative problem- solving and project management skills necessary for entrepreneurial ventures in the built environment.
7	23U C11 01	Integra ted Professi onal English	HA S	0	0	2	0	2	Nil	Reta ined cour se	—	Skill developm ent	The Integrated Professional English subject enhances students' communication skills, essential for professional success, by focusing on practical language use in business and technical contexts. It fosters critical thinking and problem-solving abilities through collaborative projects and presentations.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

8	22U C00 09	Ecology & Enviro nment	BSA E	2	0	0	0	2	Nil	Reta ined cour se	—	Employa bility	To inculcate Independent learning skills to the students and also to bring awareness on Environment and Ecology.
9	23U C12 03	Design Thinki ng And Innovat ion	HA S	0	0	4	0	2	Nil	Reta ined cour se	—	Entrepren eurship	Design Thinking and Innovation aligns with the entrepreneurship category in academics as it cultivates critical skills such as creative problem- solving, user- centric product development, and agile project management, essential for entrepreneurial success.
10	23A R12 04	Design of Structu res - I (Plane trusses, shear force and bendin g momen t)	BSA E	3	0	0	0	3	Nil	Revi sed cour se	Acade mic Peers	Employa bility	It equips you with the foundational knowledge to analyze and design structures, a skill highly sought after in the construction industry.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

11	22A R12 05	History of Architecture - II (Hindu Architecture)	PC C	3	0	0	0	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.
12	23A R12 06	Building Materials - II (cement, R.C.C, and Glass)	BSA E	2	0	0	0	2	Nil	Revised course	B.V. Lakshmi	Employability	It equips you with the skills to build structures with timber, bamboo, steel and RCC, a valuable foundation for a career in construction.
13	23A R12 54	Model Making Workshop	PC C	0	0	4	0	4	Nil	Retained course	—	Skill development	It directly develop practical skills in design, construction, and problem-solving.
14	23A R12 55	Architectural Drawing - II (3D forms and color)	PC C	0	0	4	0	4	Nil	Retained course	—	Skill development	It develops spatial visualization skills, which are valuable in many fields.
15	23A R12 56	Architectural Design Studio - II	PRI	0	0	9	0	9	23A R115 3	Retained course	—	Entrepreneurship	It can equip students with the creative problem-solving and project management skills necessary for entrepreneurial ventures in the built environment.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

16	23U C12 02	English Proficiency	HA S	0	0	2	0	2	Nil	Reta ined cour se	—	Skill developm ent	The English Proficiency subject directly enhances employability by developing essential communication skills, which are crucial in almost every professional field. Proficiency in English enables individuals to articulate ideas clearly, engage effectively with diverse teams, and perform well in interviews and written assessments.
17	22U C00 11	Gender and Social equalit y	OE C	2	0	0	0	2	Nil	Add ed cour se	Dean acade mics	Skill developm ent	Gender Equality and topics are added in Human Values course for better learning of Students.
18	22U C00 21	Social Immers ive Learni ng	SEC	0	0	0	4	1	Nil	Add ed cour se	Dean acade mics	Skill developm ent	Social immersive learning fosters communication, collaboration, and empathy, enhancing interpersonal skills crucial for academic success. Through interactive experiences, it cultivates critical thinking, problem-solving, and adaptability, enriching cognitive abilities essential for navigating academic challenges.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

19	23A R21 07	Design of Structures - II (Design of beams and columns)	BSAE	3	0	0	0	3	Nil	Revised course	Academic Peers	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.
20	22A R21 08	History of Architecture - III (Medieval periods)	PC C	3	0	0	0	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.
21	22A R21 09	Climate Responsive Architecture	BSAE	3	0	0	0	3	Nil	Retained course	—	Employability	These skills are increasingly sought after as sustainable design becomes a major focus in the construction industry.
22	23A R21 10	Site Survey and Analysis	SEC	0	0	0	3	3	Nil	Revised course	—	Skill development	These informations are targeted skill development by revealing the specific technical demands and physical environment workers encounter.
23	23A R21 57	Computer Studio - I (MS office, AutoCAD 3D)	SEC	0	0	0	3	3	Nil	Revised course	—	Skill development	It equips students with digital literacy and technical drawing skills valuable in various careers.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

24	23A R21 58	Buildin g Constr uction-I(Maso nry) (BC-I)	BSA E	0	0	4	0	4	Nil	Revi sed cour se	B.V. Lakhs mi	Employa bility	It equips you with the skills to build structures with brick and stone, a valuable foundation for a career in construction.
25	23A R21 59	Archite ctural Design Studio - III	PRI	0	0	9	0	9	23A R125 6	Reta ined cour se	—	Entrepren eurship	It can connect with Entrepreneurship by exploring innovative and marketable building solutions.
26	23A R22 11	Design of Structu res - III (Design of footings)	BSA E	3	0	0	0	3	Nil	Revi sed cour se	Acade mic Peers	Employa bility	Understanding how to design safe and stable footings is a critical skill for civil engineers ensuring employability in building design and construction.
27	22A R22 12	Buildin g Service s - I (Plumb ing and sanitati on)	BSA E	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	It equips you with the skills to design, install, and maintain essential building systems, leading to high employability in construction and related fields.
28	23A R22 60	Buildin g Constr uction-II(Door s, Windo ws, Partitio n,False Celing)	BSA E	0	0	4	0	4	Nil	Revi sed cour se	B.V. Lakhs mi	Employa bility	Understanding flooring, and staircases builds essential skills for constructing safe and functional buildings, enhancing employability in the construction field.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

29	22A R22 13	Site Analysi s and Plannin g	PC C	2	0	0	0	2	Nil	Reta ined cour se	—	Employa bility	It equip you to design functional and successful spaces, making you a valuable asset in construction, architecture, and urban planning fields.
30	23A R22 61	Archite ctural Design Studio - IV	PRI	0	0	9	0	9	23A R215 9	Reta ined cour se	—	Entrepren eurship	It can equip you with the design thinking and project management skills necessary to launch your own architectural practice.
31	23A R22 14	Contem porary Archite cture	PC C	3	0	0	0	3	Nil	New cour se	—	Employa bility	Understanding contemporary architecture positions you for in-demand skills in sustainable design, heritage preservation, and catering to India's unique building needs.
32	23A R22 62	Compu ter Studio - II (Image making and 3d making softwar e)	SEC	0	0	0	3	3	Nil	Revi sed cour se	G. Vidya Sagar	Skill developm ent	It develops skills in creating digital content, which is valuable in many fields.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

33	23A R22 23	Human Settlem ents and Plannin g	PC C	2	0	0	0	2	Nil	Revi sed cour se	B. Kiran Kuma r	Employa bility	Well-planned human settlements create communities with strong infrastructure and access to resources, fostering economic activity and job opportunities.
34	23A R31 15	Design of Structu res - IV (Detaili ng of stru ctural membe r)	BSA E	3	0	0	0	3	Nil	Revi sed cour se	—	Employa bility	Understanding structural member details translates directly to designing and detailing safe, efficient buildings, enhancing your employability in the construction field.
35	23A R31 16	Buildin g Service s - II (Electri cal, and Acousti cs)	BSA E	3	0	0	0	3	Nil	Revi sed cour se	G. Vidya Sagar	Employa bility	It equips you with in-demand skills for designing comfortable, safe, and energy-efficient buildings.
36	23A R31 43	Buildin g Constr uction- III (Stairca se, Floorin g And Advanc ed Roofing)	BSA E	0	0	4	0	4	Nil	Reta ined cour se	—	Employa bility	Understanding flooring, and staircases builds essential skills for constructing safe and functional buildings, enhancing employability in the construction field.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

37	23A R31 17	Buildin g Bye laws and Office Manag ement	PC C	2	0	0	0	2	Nil	New cour se	A. Priya	Entrepren eurship	Understanding building regulations and office space management helps entrepreneurs create a compliant, functional, and attractive workspace.
38	23A R31 44	Archite ctural Design Studio - V	PRI	0	0	9	0	9	23A R226 1	Reta ined cour se	—	Entrepren eurship	It can equip students with the creative problem- solving and project management skills necessary for entrepreneurial endeavors in the design field.
39	22A R31 20A	Vernac ular Archite cture (PE- I)	PEC	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	Vernacular Architecture equips students with specialized knowledge sought after in fields like historic preservation, urban planning, and architectural design firms, enhancing their employability.
40	22A R31 20B	Sustain able Archite cture (PE-1)	PEC	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	sustainable architecture equips students with in- demand skills such as sustainable design principles, energy efficiency techniques, and green building technologies, enhancing their employability in the architecture and construction sectors.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

41	23A R31 65	Computer Studio - III (Building Information Modelling)	SEC	0	0	0	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.
42	23A R32 21	Building Services - III (HVAC and fire safety)	BSAE	3	0	0	0	3	Nil	Revised 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 management industries.
43	23A R32 66	Building Construction-IV (Partitions, False Ceiling And False Flooring)	BSAE	0	0	4	0	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.
44	22A R32 22	Specification, Estimation and Costing	PC C	3	0	0	0	3	Nil	Retained course	–	Skill development	It builds essential planning and budgeting skills applicable to any industry.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

45	23A R32 24A	Landsc ape Design Studio (PE-2)	PEC	0	0	4	0	4	Nil	Reta ined cour se	—	Entrepren eurship	Landscape design studio equips students with the creative problem-solving skills essential for entrepreneurial ventures in the environmental design industry.
46	23A R32 24B	Modula r Constr uction Studio (PE-2)	PEC	0	0	4	0	4	Nil	Reta ined cour se	—	Entrepren eurship	Modular construction studio equips students with entrepreneurial skills by immersing them in real-world projects, fostering creativity, problem-solving, and project management abilities essential for entrepreneurial ventures.
47	23A R32 67	Archite ctural Design Studio - VI	PRI	0	0	1 2	0	1 2	23A R314 4	Reta ined cour se	—	Entrepren eurship	It can equip students with the design thinking and project management skills necessary to become entrepreneurial architects.
48	23A R32 25A	Approp riate Constr uction Techno logies (PE-3)	PEC	2	0	0	0	2	Nil	Revi sed cour se	BOS	Employa bility	Appropriate construction technologies equips students with practical skills sought after in the job market, such as proficiency in sustainable building methods and materials.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

49	23A R32 25B	Energy Efficient Building (PE3)	PEC	2	0	0	0	2	Nil	Revised course	—	Employability	Mastering sustainable construction practices like energy-efficient building methods opens doors to high-demand green jobs.
50	23A R41 18A	Interior Design Studio (PE-5)	PEC	0	0	4	0	4	Nil	Retained course	—	Entrepreneurship	This studio equips students with the practical skills and knowledge needed to establish and manage their own interior design businesses.
51	23A R41 18B	Furniture Design Studio (PE-5)	PEC	0	0	4	0	4	Nil	Retained course	—	Entrepreneurship	This studio equips students with the practical skills and knowledge needed to create innovative and marketable products, fostering entrepreneurial thinking.
52	23A R41 28A	Housing (PE-6)	PEC	2	0	0	0	2	Nil	Revised course	B. Kiran Kumar	Employability	This equips students with practical knowledge in real estate, property management, and urban planning, directly relevant to careers in these fields.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

53	23A R41 28B	Archite cture Journal ism and Photog raphy (PE-6)	PEC	2	0	0	0	2	Nil	Revi sed cour se	A. Priya	Employa bility	This equips students with essential communication, research, and storytelling skills highly sought after in the media and publishing industries.
54	23A R41 28C	Advanc ed Buildin g Techni ques (PE-6)	PEC	0	0	2	0	2	Nil	Revi sed cour se	BOS	Employa bility	This equips students with practical skills and knowledge highly sought after in the construction industry, enhancing their employability.
55	23A R32 29A	Archite ctural Conser vation (PE-4)	PEC	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	This equips students with specialized knowledge and skills highly sought after in the job market, particularly in heritage preservation organizations, architectural firms, and government agencies.
56	23A R32 29B	Set Design (PE-4)	PEC	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	This equips students with practical skills in spatial design, construction techniques, and artistic expression, directly applicable to careers in theater, film, television, and event production.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

57	23A R32 29C	Intelligent Buildings (PE-4)	PEC	3	0	0	0	3	Nil	Reta ined cour se	—	Employa bility	This equips students with expertise in cutting-edge technologies like IoT, automation, and energy management, directly relevant to the evolving job market in fields like architecture, engineering, and urban planning.
58	23A R41 26	Buildin g Service s - IV (Build ing automa tion)	BSA E	3	0	0	0	3	Nil	Revi sed cour se	G. Vidya Sagar	Employa bility	Building automation skills directly translate into employability in the growing field of smart and energy-efficient buildings.
59	23A R41 68	Archite ctural Design Studio - VII	PRI	0	0	1 2	0	1 2	23A R326 7	Reta ined cour se	—	Entrepren eurship	It can equip students with the creative problem-solving and design thinking skills necessary for entrepreneurial ventures.
60	23A R41 30	Workin g Drawin g - I (Build ing structu re, civil and masonr y)	BSA E	0	0	4	0	4	Nil	Reta ined cour se	—	Skill developm ent	Understanding working drawings in building structures, civil engineering, and masonry translates directly to the skills needed for construction and project execution.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

61	23A R41 31	Research Methodology	PRI	2	0	0	0	2	Nil	New course	Tanus hree	Employa bility	It equips you with the critical thinking and problem-solving skills sought by employers across all industries.
62	22A R42 32	Building Construction and Management	PAE CC	3	0	0	0	3	Nil	Reta ined course	—	Entrepren eurship	Building construction and management skills provide a strong foundation for entrepreneurship in the construction industry.
63	23A R42 69A	Dissert ation (PE-7)	PEC	0	0	4	0	4	Nil	Reta ined course	—	Skill developm ent	It enables students to deepen their expertise in a specific field, honing research, analytical, and problem-solving skills highly sought after by employers.
64	23A R42 69B	Thesis Seminar (PE-7)	PEC	0	0	4	0	4	Nil	Reta ined course	—	Skill developm ent	It hone research, analytical, and presentation skills, directly aligning with employability needs across various industries.
65	23A R42 33A	Urban Design (PE-8)	PEC	2	0	0	0	2	Nil	Revi sed course	B. Kiran Kuma r	Employa bility	Urban design shape livable cities, creating high demand for skilled professionals to design sustainable and efficient infrastructure.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

66	23A R42 33B	Behavi oural Archite cture (PE-8)	PEC	2	0	0	0	2	Nil	Revi sed cour se	B. Kiran Kuma r	Employa bility	It equips students with a deep understanding of human behaviour, crucial for success in diverse professional environments.
67	23A R42 70	Urban Design Studio	PRI	0	0	1 2	0	1 2	23A R416 8	Reta ined cour se	—	Entrepren eurship	It can equip students with the design thinking and place making skills needed to become entrepreneurial change makers in shaping their communities.
68	23A R42 34A	Transp ortatio n Plannin g (PE-9)	PEC	3	0	0	0	3	Nil	Revi sed cour se	P. Senthil	Employa bility	This equips students with analytical, problem-solving, and decision-making skills essential for careers in urban planning, civil engineering, and transportation management.
69	23A R42 34B	Disaste r Mitigat ion and Manag ement (PE-9)	PEC	3	0	0	0	3	Nil	Revi sed cour se	P. Senthil	Employa bility	This equips students with practical skills in risk assessment, crisis response, and resource allocation, directly applicable to a wide range of industries such as emergency services, public administration, and urban planning.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

70	23A R42 71	Workin g Drawin g - II (Detaili ng)	BSA E	0	0	4	0	4	Nil	Reta ined cour se	—	Skill developm ent	It hones the technical drawing skills crucial for clear communication and precise manufacturing in any field.
71	23A R51 72	Practic al Trainin g / Interns hip	PAE CC	0	0	3 0	0	3 0	23A R427 0	Reta ined cour se	—	Employa bility	Practical training/internships bridge the theory- practice gap, equipping graduates with in-demand skills and workplace experience desired by employers.
72	22A R52 35	Archite cture Professi onal Practic e	PAE CC	3	0	0	0	3	Nil	Reta ined cour se	—	Entrepren eurship	It equips you with the skills to manage projects, finances, and clients, forming a strong foundation for entrepreneurial ventures in the design and construction industry.
73	23A R52 73	Archite ctural Thesis	PRI	0	0	1 5	0	1 5	23A R517 2	Reta ined cour se	—	Entrepren eurship	Entrepreneurial architects can bridge the gap between design vision and real- world development through innovative building solutions.

Percentage of Syllabus Revision and New Courses = $(24+5)/73 = 40\%$

Percentage of Courses focusing on Employability = $39/73 = 53\%$

Percentage of Courses focusing on Entrepreneurship = $17/73 = 23\%$

Percentage of Courses focusing on Skill Development or Career advancement = $17/73 = 23\%$



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES (POs) and PROGRAM SPECIFIC OUTCOMES (PSOs)

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
1	22AR1101	Theory of Architecture	CO1	Understand architecture and basics on space and form development.		2		2								
			CO2	Understand components of building circulation and its relation to architecture.	2	2										
			CO3	Understand Architectural aesthetics in designing a building & also understand the key role of principles applied in architecture.		2		2								
			CO4	Apply functioning of design process and its application in architectural buildings through case studies.				3						3	3	
2	22AR1102	History of Architecture - I (Ancient Civilization)	CO1	Understand Primitive Architecture and Ancient settlements in pre-Historic times and get knowledge on the Ancient River valley civilizations in the world.			2						2			2
			CO2	Understand the Architecture and Planning of Ancient River Valley Civilizations			2	2								2
			CO3	Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture			2						2			2
			CO4	Understand the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture			2		2				2			



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
3	22AR1103	Building Materials - I (Brick, Stone, Wood)	CO1	Understand of the building materials Soils and Bricks			2			2						
			CO2	Understand of the building materials Rocks and Stones						2						
			CO3	Understand of the building materials Timber & Bamboo								2				
			CO4	Understand of the building materials Lime.				2		2		2				
4	23AR1151	Art and Visual Graphic Studio	CO1	Understand the Principles of Drawing; Types, Properties and Application of Colors.	2									2		
			CO2	Understand the Painting Variations and Techniques of Sculpturing.			2	2							2	
5	23AR1152	Architectural Drawing - I (Basic Geometry)	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		2	2								2
			CO2	Comprehend the representation of a building in plan, elevation, and sections, and be able to prepare simple measure drawings..			2	2	2							2
6	23AR1153	Architectural Design Studio – 1 (Basic Design)	CO1	Understand 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						2			2	2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Understand and Develop 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							2			2
7	23UC1101	Integrated Professional English	CO1	Understand the language Mechanics in Basic Grammar, Interactive Listening & Speaking	2									2		
			CO2	Apply Integrated Reading skills & Techniques of Writing	2									3		
8	22UC0009	Ecology & Environment	CO1	Understand the importance of Environmental education and conservation of natural resources	2											
			CO2	Understand the importance of ecosystems and biodiversity	2											
			CO3	Understand critically about individual roles in prevention of pollution. An Environmental Studies will be enable to do independent research on human interactions with the environment							2					



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Understand the environmental science knowledge on solid waste management, disaster management and EIA processRecognize the knowledge on environmental legislation, disaster management and EIA process.								2				
9	23UC1203	Design Thinking And Innovation	CO1	Understand the importance of Design thinking mindset for identifying contextualized problems		2				2						
			CO2	Analyze the problem statement by empathizing with user			2				2					
			CO3	Apply and Develop ideation and test the prototypes made					3		3					
			CO4	Understand and Explore the fundamentals of entrepreneurship skills for transforming the challenge into an opportunity							2	2				
10	23AR1204	Design of Structures - I (Plane trusses, shear force and bending moment)	CO1	Understand about the architecture and structural engineering interface. Understanding the concept of forces and structural systems.	2											
			CO2	Understand the concept of forces and structural systems. Analyzing the plane trusses			2								2	
			CO3	Understand of shear force and bending moments in column. Determination of deflection of beams			2									2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Understand of centre of gravity and moments of inertia and its impact on the structures.			2									
11	22AR1205	History of Architecture - II (Hindu Architecture)	CO1	Understand Vedic culture and study the origins of Early Hinduism, Jainism, Buddhism, and its rudimentary forms of construction.	2										2	
			CO2	Understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.				2							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							2	
			CO4	Understand and to know the character and Architecture of temples of South India and North India in detail.	2											1
12	23AR1206	Building Materials - II (cement, R.C.C, and Glass)	CO1	Understand and relate Cement/RCC Building material			2								2	
			CO2	Understand and explain Steel Building material		2									2	
			CO3	Understand and distinguish different glass Building material		2						2			2	
			CO4	Understand different paints in Building material		2									2	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
13	23AR1254	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	2			2	
			CO2	Understand different materials and apply the acquired knowledge and create a model Independently by choosing appropriate material and techniques.							2	2				3
14	23AR1255	Architectural Drawing - II (3D forms and color)	CO1	Understand the concepts and Scientific Methods of Perspective Drawing and apply Rendering Techniques, principles of Shade & Shadow and Construct sciography of Architectural Structures		2										2
			CO2	Understand identification and measuring of specific Architectural Details of Historically significant, Buildings and the presentation techniques of drawings						2						2
15	23AR1256	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					2	2	
			CO2	Create Architectural Details for floated design exercise floated as per the semester complexity, Buildings and the presentation techniques of drawings		2				2				2		2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
16	23UC1202	English Proficiency	CO1	Understand the concepts of grammar, and improve their communication, listening, and writing skills									2			
			CO2	Apply advanced communication skills and techniques for specific purposes										3		
17	22UC0011	Gender and Social equality	CO1	Understand important issues related to gender in contemporary India								2			2	
			CO2	Understand the basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through group discussions.										2	2	
			CO3	Understand how gender discrimination works in our society and how to counter it								2			2	
			CO4	Understand the gendered division of labour and its relation to politics and economics.										2	2	
18	22UC0021	Social Immersive Learning	CO1	Extension Activities and Social Outreach activities (ESO)	3											
			CO2	Technology Clubs (TEC)				3								
			CO3	Liberal arts, creative arts and hobby clubs (LCH)					3							
			CO4	Innovation, Incubation & Entrepreneurship (IIE)			3									
			CO5	Health & Well Being (HWB)						3	3			3		



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
19	23AR2107	Design of Structures - II (Design of beams and columns)	CO1	Understand the concept of simple stresses and strains and elastic properties of solids		2			2					2	2	
			CO2	Developing the design of reinforced concrete beams		2			2					2	2	
			CO3	Developing the design of reinforced concrete columns		2			2					2	2	
			CO4	Understand Structural properties of brick masonry and analysis		2			2					2	2	
20	22AR2108	History of Architecture - III (Medieval periods)	CO1	Understand the evolution of early Christian and Medieval periods its Architecture and socio political changes	2		2									2
			CO2	Understand Renaissance and Mannerist Architectures and their practices in Europe, growth of nations and styles of Baroque and Rococo	2				2							2
			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			2	2								2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Understand of Architectural developments during Mughal Dynasty Study of cross culture influence and evolution of secular architecture in princely states			2		2							2
21	22AR2109	Climate Responsive Architecture	CO1	Understand of elements of climate, human comfort, and human body heat balance	2			2								2
			CO2	Understand the concept of heat transfer in buildings, sun path diagrams and designing shading devices			2		2							2
			CO3	Understand air movement for designing buildings accordingly.				2	2							2
			CO4	Understand climate responsive architecture through case studies.				2	2							2
22	23AR2110	Site Survey and Analysis	CO1	Understand Surveying using Chain and Compass. Understanding Surveying using Dumpy Level and Theodolite.								2			1	
			CO2	Apply survey practices in field using Chain, Compass, Dumpy Level, Theodolite, Total Station and Alidade										2	1	
23	23AR2157	Computer Studio - I (MS office,	CO1	Understand the basics of computer system and their supporting technologies like MS Office.	2	2									2	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
		AutoCAD 3D)	CO2	Apply the learned skills in preparation of documentation reports, analysis reports, and audio-visual presentations.	3	3									3	
24	23AR2158	Building Construction-I(Masonry) (BC-I)	CO1	Understand the material stones, bricks and Soil Soil:Types, Properties, Challenges. Bricks : Compositions, Classifications, Alternative Bricks Stone :Stone classifications, tests, uses, preservations, Artificial stones. Concrete:Masonry						2						
			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						2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
25	23AR2159	Architectural Design Studio - III	CO1	Apply 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		2						2	2	
			CO2	Create projects with design typologies such as Foundation School/Pre School/Public Health Care Center/Restaurant/Museum/Library, labeled as Project 1 and Project 2.				2			3				3	
26	23AR2211	Design of Structures - III (Design of footings)	CO1	Understand of Basics of RCC design	2		2								2	
			CO2	Understand and designing of columns	2		2								2	
			CO3	Understand and designing of footings and staircases	2		2									2
			CO4	Understand and analysis a given section for under or over design carrying capacity	2		2									2
27	22AR2212	Building Services - I (Plumbing and sanitation)	CO1	Understand the processes involved in the distribution, treatment, and disposal of wastewater.							2					
			CO2	Understand the building sanitation method and different types of plumbing systems.								2				
			CO3	Understand the plumbing and sanitary layouts of a residence.								2				



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Understand the use and installation of various plumbing fixtures and sewerage systems for sanitary conveyance.								2				2
28	23AR2260	Building Construction-II(Doors, Windows, Partition,False Celing)	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						
			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						2
29	22AR2213	Site Analysis and Planning	CO1	Understand about the basics of site, measuring and drawing methodologies.		2										



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Understand the importance of analysis of a site required in architectural design and building construction.			2									
			CO3	Understand the context of the site with respective to the surrounding land use typology.			2								2	
			CO4	Understand the site planning techniques and layout principles to be followed prior to site designing.				2				2				
			CO1	Apply of anthropometry, circulation patterns, standards of various facilities		2		2							2	
30	23AR2261	Architectural Design Studio - IV	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				2				2
31	23AR2214	Contemporary Architecture	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.	2		2									



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Understand the Theories of current Architect practices and their applicability in meeting present day Needs.	2				2							
			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			2	2								
			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			2		2							2
32	23AR2262	Computer Studio - II (Image making and 3d making software)	CO1	Understand and learn to use of image editing software, graphics and animation softwares.	2	2				2				2	2	
			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	2	2									3	
33	23AR2223	Human Settlements and Planning	CO1	Understand the various elements of Human Settlements and the classification of Human Settlements.		2										



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	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 its planning according to urban transformation			2						2			
			CO4	Understand the interrelationship between Human Settlements structure and Social Dynamics.			1						2			2
34	23AR3115	Design of Structures - IV (Detailing of structural member)	CO1	Understand of limit state design.		2										
			CO2	Apply the techniques and Design of reinforcement for a section.		3										3
			CO3	Apply the Design detailing, and the purpose of one-way and two-way slabs.			3									
			CO4	Apply the detailing for special structures such as deep beams, corbels, and shear. walls etc.			3									3
35	23AR3116	Building Services - II (Electrical, and Acoustics)	CO1	Understand the planning techniques and study of electricity, installations, wiring, and principles of distribution and safety.	2											
			CO2	Understand the application of artificial illumination and lighting design for various spaces			2									
			CO3	Understand the knowledge of ventilation principles.									2			2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Apply 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			3
36	23AR3143	Building Construction-III (Staircase, Flooring And Advanced Roofing)	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	2										2
			CO2	Apply Flooring ;Concrete, Wooden, Stone, Tile etc Slabs/Roofing :Vault,Dome, Waffle, Bubble deck, hollow core slabs,filler slab etc. Staircase types using the materials Wooden, metal, RCC etc	3	3				3						2
37	23AR3117	Building Bye laws and Office Management	CO1	Understand the importance of Building codes in different zones and learning about the terminologies	2		2								2	
			CO2	Understand the different norms from National Building Code of India	2				2						2	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	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		2	2							2	
			CO4	Understand basis office procedure and management techniques in architecture			2	2							2	
38	23AR3144	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						2		2
			CO2	Create 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								2		2
39	22AR3120A	Vernacular Architecture (PE- I)	CO1	Understand the Vernacular Architecture, its Approaches & Concepts.	2			2								
			CO2	Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.						2				2		



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO3	Understand the Vernacular Architectural Styles of Southern India.			2						2			
			CO4	Understand the Influence of Western world on Vernacular Architecture.			2						2			2
40	22AR3120B	Sustainable Architecture (PE-1)	CO1	Understand the Fundamentals of Sustainability and its impact on Environment							1	1				
			CO2	Understanding the new concepts and terminologies of sustainability						2		2	2			
			CO3	Understand the importance of site planning and energy, water efficient landscaping as an important tool in sustainable architecture							2	2				
			CO4	Apply National and International Case studies of Sustainable Architecture through research summary on GRIHA, LEED and other Certification							3	3	3			3
41	23AR3165	Computer Studio - III (Building Information Modelling)	CO1	Understand interface, workspace, and utilization of tools of 3D modeling software applies the required tools and components in building a 3D model. To create documentation reports, analysis reports, and audiovisual presentations.	2	2									2	2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			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	2					2					2
42	23AR3221	Building Services - III (HVAC and fire safety)	CO1	Understand the Thermal Properties of the building material and components and mechanical ventilation	2										2	
			CO2	Understand the principles, systems, and design criteria of HVAC.	2										2	
			CO3	Understand the techniques and concepts in fire safety norms in the buildings.	2										2	
			CO4	Apply the techniques of mechanical transportation systems in building plans	2										3	
43	23AR3166	Building Construction- IV (Partitions, False Ceiling And False Flooring)	CO1	Understand 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		2	2					



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			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	2	2				
44	22AR3218	Estimation, Costing and Specifications	CO1	Understand of data required and methods of estimation	2											
			CO2	Apply various methods, estimate different quantities.			3									
			CO3	Understand of the types of estimates and costing			2									
			CO4	Understand various specifications and terminology used.							2	2				2
45	23AR3224A	Landscape Design Studio (PE-2)	CO1	Understanding landscape principles and types around the world. Advanced skills in utilizing site analysis techniques, plant selection, and design software to create sustainable and aesthetically pleasing outdoor spaces that enhance the built environment.						2	2	2			2	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Create a skill to integrate various knowledge systems to arrive at a design proposal. Minimum of 2 projects at different levels – Local, Urban. Utilizing traditional and digital methods, while exploring sustainable practices and cultural influences in landscape design Projects typology – Residential landscape, Urban Parks, Terrace gardening etc						3	3		3		2	
46	23AR3224B	Modular Construction Studio (PE-2)	CO1	Apply 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.						2		2				2
			CO2	Create 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	2		2			2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
47	23AR3267	Architectural Design Studio - VI	CO1	Apply the challenges of designing functionally complicated buildings, having a complex array of activities and services. To familiarize the students to the task of coordinating integration of structural design and specialized building services in the framework of architectural design		3		2						2	3	
			CO2	CreateA Functionally Complex Building (Medium Rise Structure Example Hospital, Juvenile Correction Centre, Research And Development Center) , Project 2 Design An Shopping Mall or Students Hostel Or Travellers Hostel, Conventional Center,5 star hotel Etc.		3								2		
48	23AR3225A	Appropriate Construction Technologies (PE-3)	CO1	Understand the alternative building materials, applying cost. effective materials and techniques to resolve environmental problems.		2	2									
			CO2	Understand the indigenous construction materials and techniques for building resilience and disaster mitigation		2	2									2
			CO3	Understand the materials and techniques for energy efficient building construction		2	2									



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Apply Building Information Modelling in modern construction industry						3						3
49	23AR3225B	Energy Efficient Building (PE3)	CO1	Understand the importance of energy efficiency in buildings and strategies involved. Determine SMART, INTELLIGENT etc	2			2							2	
			CO2	Understand the importance of relevance of water in built environment						2					2	
			CO3	Understand Building Envelope installations and Dynamic facades Simulation			2						2			2
			CO4	Understand Lighting, Appliances and Occupant Behaviour and introduction to simulation and analysis software			2						2			2
50	23AR4118A	Interior Design Studio (PE-5)	CO1	Apply and demonstrate proficiency in conceptualizing and executing interior design projects, integrating principles of spatial planning, aesthetics, and functionality effectively.	3		3									
			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				4							



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
51	23AR4118B	Furniture Design Studio(PE-5)	CO1	Understand and demonstrate proficiency in conceptualizing and executing furniture design projects, integrating principles of ergonomics, aesthetics, and functionality effectively.	2		2									2
			CO2	Analyze the skills in Planning of furniture with material usage understanding materials, manufacturing techniques for practical and innovative solutions. Minimum of 2 projects should be done by using prototypes, Detail drawings and utilizing traditional and digital methods, while exploring sustainable practices and cultural influences in furniture design	2				2							2
52	23AR4128A	Housing (PE-6)	CO1	Understand housing and Housing issues	1		2									
			CO2	Understand Housing, 5-year plans specific to housing	1				2							
			CO3	Understand Critical Sources of Finance			2	2								
			CO4	Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends			2	2							2	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
53	23AR4128B	Architecture Journalism and Photography (PE-6)	CO1	Understand basics regarding usage, equipment and varied parameters of smartphone camera, professional camera	2					2				1	1	
			CO2	Apply of photographic equipment and techniques	2									2	2	
			CO3	Analyze with photojournalism and visual communication techniques										2	2	
			CO4	Apply the knowledge gained to visualize and write about buildings of architectural importance										2	2	
54	23AR4128C	Advanced Building Techniques (PE-6)	CO1	Understand and analyze practicing design of structural elements slabs, beams, columns, and foundations.					2						2	
			CO2	understand the Large Span Construction-flat slabs-shell structures, folded plates, portal frames space frame & trusses, tensile structures					2	2						
			CO3	Understand the prefabricated construction & Pre-engineered building. New Material in Construction. Cold form sections, FRP					2						2	
			CO4	understand the Earthquake resistant construction design practices and analyze the Behavior of structures during earth quacks.	2				2							
55	23AR3229A	Architectural Conservation	CO1	Understand about the basics of Conservation in India				2					2			2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
		(PE-4)	CO2	Understand the Conservation Practices			2									
			CO3	Understand the importance & analysis of Urban Conservation			2									
			CO4	Understand about Conservation planning & Adaptive Conservation.				2								
56	23AR3229B	Set Design (PE-4)	CO1	Understand the Background writing and Concept creation for PLAY.									2		2	
			CO2	Understand the Technology and concepts involved in Film set design.			2									
			CO3	Understand and making of Background set to resemble the feature, Variation nasality in Lay outing Set.			2								2	
			CO4	Understand model on Concept allotted and study Lighting and prop Installations.				2								
57	23AR3229C	Intelligent Buildings (PE-4)	CO1	Understand of the Intelligent Buildings and energy management in Design				2								
			CO2	Understand of energy management in Services.			2			2						
			CO3	Understand of building energy conservation Technologies			2	2								
			CO4	Understand of Control systems in buildings						2					2	
58	23AR4126	Building Services - IV (Building	CO1	Understand the philosophy of building automation systems and subsystems						2						



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
		automation)	CO2	Understand about the communication and security systems systems						2						
			CO3	Apply the integration of building services into architectural design						3						3
			CO4	Apply the interaction and integration between building structure, systems, services, management, control, and information technology.						3						3
59	23AR4168	Architectural Design Studio - VII	CO1	Apply of the integration of services, sustainable building and anthropometry, circulation patterns.		2		2						2	2	
			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)		3		3					3			
60	23AR4130	Working Drawing - I (Building structure, civil	CO1	Understand the essential components of working drawings, including notations and drawing standards	2					2						



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
		and masonry)	CO2	Apply 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			2	2	
61	23AR4131	Research Methodology	CO1	Understand the basics of the research and process.			2	2					2			1
			CO2	Understand about the research methodologies - Quantitative			2						2			1
			CO3	Understand about the research methodologies - Qualitative			2						2			2
			CO4	Apply the research in formulating the scientific manuscripts and make it publishable			2									2
62	22AR4232	Building Construction and Management	CO1	Understand the Objectives and Methods of project Management System			2				2				2	
			CO2	Understand various Tools and Techniques to facilitate efficient management of Projects			2					2			2	
			CO3	Analyze Project cost model and steps involved in cost optimization						3		3			3	
			CO4	Apply Scientific Evaluation Techniques to Manage Project Durations and resources with Examples								3			3	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
63	23AR4269A	Dissertation (PE-7)	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						3	3				2	
			CO2	Analyze the theoretical frameworks and empirical evidence to produce a coherent argument, contributing new insights to their field of study.		2	3									
64	23AR4269B	Thesis Seminar (PE-7)	CO1	Understand and Identify, explore and research topics of their interest; then describe by the organized presentations.	2					3						1
			CO2	Apply the ideas in finding a new solution to the existing problem and interpret via applying the architectural systems						3				2	2	
65	23AR4233A	Urban Design (PE-8)	CO1	Understand Urban Design terminologies		2								2	2	2
			CO2	Understand Users and Activities in a city		2		2					2			2
			CO3	Understand public spaces, streets & Transport		2							2	2		2
			CO4	Understand Application of Urban Design		2		2					2			2
66	23AR4233B	Behavioral Architecture (PE-8)	CO1	Understand concepts and concerns of perception. Identify and develop the sensitivity to the needs of users and clients	2			2						2		2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Understand the designing and planning for urban quality				2						2		2
			CO3	Understand and apply the macro and micro built environment and behavioral aspects				3					3	2		2
			CO4	Apply the relationship between built - environment and perception				3					3			2
67	23AR4270	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 studycase study							2	2				2
			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	2	
68	23AR4234A	Transportation Planning (PE-9)	CO1	Understand Basic elements and various category of vehicles depending upon the category of Roads exiting	2											2



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Understand Various types of Circulation & Users along with their infrastructural needs.			2				2					
			CO3	Understand Road Safety & Civic Sense			2				2					
			CO4	Understand Traffic & Transportation byelaws & Regulation									2			2
69	23AR4234B	Disaster Mitigation and Management (PE-9)	CO1	Understand the necessity for disaster management and measures that are to be followed.			2								2	
			CO2	Understand the disaster preparedness and Involving Design Considerations for buildings			2								2	
			CO3	Understand the study of design considerations for disaster management and precautions.			2								2	
			CO4	Understand the Relief & Rehabilitation for Disasters			2								2	
70	23AR4271	Working Drawing - II (Detailing)	CO1	Apply 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	3				



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO2	Apply 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						3			
71	23AR5172	Practical Training / Internship	CO1	Understand the preparation of professional architectural portfolio and resume. Apply Academic architectural skills in various projects while working in office			2					2				
			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.					3				2			2
72	22AR5235	Architecture Professional Practice	CO1	Understand the daily realities of an architectural practice through the Training					2							
			CO2	Understand the evolution of an architectural project from design to execution.								2				
			CO3	Understand an orientation that would include the process of development of conceptual ideas, presentation skills.									2			



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

S No	Course Code	Course Title	CO NO	Description of the Course Outcome	Program Outcomes										PSO	
					1	2	3	4	5	6	7	8	9	10	1	2
			CO4	Understand and Involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure.						2						2
73	23AR5273	Architectural Thesis	CO 1	Apply the Architectural Thesis, Writing Synopsis, Studies Related to Project. Literature study in relation to literatures, Desktop Studies, Case studies.	2			2								
			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		3			3						3

2023-24 Bachelors of Architecture PDD



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Program Articulation Matrix (Mapping of Courses with POs/SOs/PSOs)

S No	Course Code	Course Title	Category	L	T	P	S	CR	Program Outcomes										PSO	
									1	2	3	4	5	6	7	8	9	10	1	2
1	22AR1101	Theory of Architecture	PCC	3	0	0	0	3		2		2								
2	22AR1102	History of Architecture - I (Ancient Civilization)	PCC	3	0	0	0	3			2						2			2
3	22AR1103	Building Materials - I (Brick, Stone, Wood)	BSAE	2	0	0	0	2			2			2						
4	23AR1151	Art and Visual Graphic Studio	PCC	0	0	6	0	6	2									2		
5	23AR1152	Architectural Drawing - I (Basic Geometry)	PCC	0	0	6	0	6	2		2	2							2	
6	23AR1153	Architectural Design Studio – 1 (Basic Design)	PRI	0	0	9	0	9	2		2									2
7	23UC1101	Integrated Professional English	HAS	0	0	2	0	2									2	2		
8	22UC0009	Ecology & Environment	BSAE	2	0	0	0	2									2			
9	23UC1203	Design Thinking And Innovation	HAS	0	0	4	0	2		2				2						
10	23AR1204	Design of Structures - I (Plane trusses, shear force and bending moment)	BSAE	3	0	0	0	3	2											
11	22AR1205	History of Architecture - II (Hindu Architecture)	PCC	3	0	0	0	3				2					2			2
12	23AR1206	Building Materials - II (cement, R.C.C, and Glass)	BSAE	2	0	0	0	2			2								2	

2023-24 Bachelors of Architecture PDD



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

13	23AR1254	Model Making Workshop	PCC	0	0	4	0	4							2	2				
14	23AR1255	Architectural Drawing - II (3D forms and color)	PCC	0	0	4	0	4							2	2		2		
15	23AR1256	Architectural Design Studio -II	PC	0	0	9	0	9		3		3							3	
16	23UC1202	English Proficiency	HAS	0	0	2	0	2									2			
17	22UC0011	Gender and Social equality	OE	2	0	0	0	2	2	2	2	2								
18	22UC0021	Social Immersive Learning	SEC	0	0	0	4	1	3											
19	23AR2107	Design of Structures - II (Design of beams and columns)	BSAE	3	0	0	0	3	2											
20	22AR2108	History of Architecture - III (Medieval periods)	PCC	3	0	0	0	3	2										2	
21	22AR2109	Climate Responsive Architecture	BSAE	3	0	0	0	3	2			2								2
22	23AR2110	Site Survey and Analysis	SEC	0	0	0	3	3				2				2				2
23	23AR2157	Computer Studio - I (MS office, AutoCAD 3D)	SEC	0	0	0	3	3	2	2									2	
24	23AR2158	Building Construction-I(Masonry) (BC-I)	BSAE	0	0	4	0	4						2						
25	23AR2159	Architectural Design Studio -III	PRI	0	0	9	0	9				3						3	3	3
26	23AR2211	Design of Structures - III (Design of footings)	BSAE	3	0	0	0	3	2		2									
27	22AR2212	Building Services - I (Plumbing and sanitation)	BSAE	3	0	0	0	3							2					
28	23AR2260	Building Construction-II(Doors, Windows, Partition,False Celing)	BSAE	0	0	4	0	4						2						
29	22AR2213	Site Analysis and Planning	PCC	2	0	0	0	2		2										

2023-24 Bachelors of Architecture PDD



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

30	23AR2261	Architectural Design Studio -IV	PRI	0	0	9	0	9		3		3							3	
31	23AR2214	Contemporary Architecture	PCC	3	0	0	0	3	2		2									
32	23AR2262	Computer Studio - II (Image making and 3d making software)	SEC	0	0	0	3	3	2	2									2	
33	23AR2223	Human Settlements and Planning	PCC	2	0	0	0	2		2										
34	23AR3115	Design of Structures - IV (Detailing of structural member)	BSAE	3	0	0	0	3		2										
35	23AR3116	Building Services - II (Electrical, and Acoustics)	BSAE	3	0	0	0	3	2											
36	23AR3143	Building Construction-III (Staircase, Flooring And Advanced Roofing)	BSAE	0	0	4	0	4	2		2									
37	23AR3117	Building Bye laws and Office Management	PCC	2	0	0	0	2	2		2								2	
38	23AR3144	Architectural Design Studio -V	PRI	0	0	9	0	9		4		4								4
39	22AR3120A	Vernacular Architecture (PE- I)	PEC	3	0	0	0	3	2			2								
40	22AR3120B	Sustainable Architecture (PE-1)	PEC	3	0	0	0	3							1	1				1
41	23AR3165	Computer Studio - III (Building Information Modelling)	SEC	0	0	0	4	4	2	2										2
42	23AR3221	Building Services - III (HVAC and fire safety)	BSAE	3	0	0	0	3	2										2	
43	23AR3266	Building Construction-IV (Partitions, False Ceiling And False Flooring)	BSAE	0	0	4	0	4	2		2									2
44	22AR3222	Specification, Estimation and Costing	PCC	3	0	0	0	3	2										2	
45	23AR3224A	Landscape Design Studio (PE-2)	PEC	0	0	4	0	4							2	2	2			2
46	23AR3224B	Modular Construction Studio (PE-2)	PEC	0	0	4	0	4							3		3			

2023-24 Bachelors of Architecture PDD



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

47	23AR3267	Architectural Design Studio -VI	PRI	0	0	12	0	12		3		3						3	3	
48	23AR3225A	Appropriate Construction Technologies (PE-3)	PEC	2	0	0	0	2		2	2									
49	23AR3225B	Energy Efficient Building (PE3)	PEC	2	0	0	0	2	2			2								
50	23AR4118A	Interior Design Studio (PE-5)	PEC	0	0	4	0	4	3		3									
51	23AR4118B	Furniture Design Studio(PE-5)	PEC	0	0	4	0	4	2		2									2
52	23AR4128A	Housing (PE-6)	PEC	2	0	0	0	2	2		2									
53	23AR4128B	Architecture Journalism and Photography (PE-6)	PEC	2	0	0	0	2										2	2	
54	23AR4128C	Advanced Building Techniques (PE-6)	PEC	0	0	2	0	2								2			2	
55	23AR3229A	Architectural Conservation (PE-4)	PEC	3	0	0	0	3								2				
56	23AR3229 B	Set Design (PE-4)	PEC	3	0	0	0	3								2				
57	23AR3229C	Intelligent Buildings (PE-4)	PEC	3	0	0	0	3			2		2							
58	23AR4126	Building Services - IV (Building automation)	BSAE	3	0	0	0	3						2						
59	23AR4168	Architectural Design Studio -VII	PRI	0	0	12	0	12		2		2						2	2	
60	23AR4130	Working Drawing - I (Building structure, civil and masonry)	BSAE	0	0	4	0	4	3						3					
61	23AR4131	Research Methodology	PRI	2	0	0	0	2			2	2					2			
62	22AR4232	Building Construction and Management	PAECC	3	0	0	0	3			2				2				2	
63	23AR4269A	Dissertation (PE-7)	PEC	0	0	4	0	4						2	2				2	
64	23AR4269B	Thesis Seminar (PE-7)	PEC	0	0	4	0	4	2					2						2

2023-24 Bachelors of Architecture PDD



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

65	23AR4233A	Urban Design (PE-8)	PEC	2	0	0	0	2		2							2	2	2
66	23AR4233B	Behavioral Architecture (PE-8)	PEC	2	0	0	0	2	2			2					2		2
67	23AR4270	Urban Design Studio	PRI	0	0	12	0	12							4	4			4
68	23AR4234A	Transportation Planning (PE-9)	PEC	3	0	0	0	3	2			2							2
69	23AR4234B	Disaster Mitigation and Management (PE-9)	PEC	3	0	0	0	3			2							2	
70	23AR4271	Working Drawing - II (Detailing)	BSAE	0	0	4	0	4							3	3			
71	23AR5172	Practical Training / Internship	PAECC	0	0	30	0	30						2	2	2			
72	22AR5228	Architecture Professional Practice	PAECC	3	0	0	0	3								2			
73	23AR5273	Architectural Thesis	PRI	0	0	15	0	15	3	3	3	3							



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER VARIOUS CATEGORIES AS PER THE TEMPLATE IN

Annexure 3

SYLLABUS OF COURSES PROFESSIONAL CORE COURSES – PCC



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

THEORY OF ARCHITECTURE (TOA)

COURSE CODE	22AR1101	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	PO2, PO4
CO2	Understand components of building circulation and its relation to architecture.	2	PO2, PO1
CO3	Understand Architectural aesthetics in designing a building & also understand the key role of principles applied in architecture.	2	PO2, PO4
CO4	Apply functioning of design process and its application in architectural buildings through case studies.	3	PO4, PO10,PSO1

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Reference Books:

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

HISTORY OF ARCHITECTURE - I (ANCIENT CIVILIZATION) (HOA- II)

COURSE CODE	22AR1102	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, PO9, PSO2
CO2	Understand the Architecture and Planning of Ancient River Valley Civilizations	2	PO3, PO4, PSO2
CO3	Understand the Culture and its influence on Architecture in Ancient Greece and Ancient Rome and its impact on Western Architecture	2	PO3, PO9, PSO2
CO4	Understand the Built forms in Ancient Greece and Ancient Roman Empire and its monumental Urban Architecture	2	PO3, PO5, PO9, PSO2

Syllabus

Module 1	Prehistoric / Primitive Architecture: Introduction to Paleolithic & Neolithic Culture. It's Impact on Built forms. Primitive Settlements, Shelters, Megaliths, Memorials and Burial Systems. Ancient Settlements: Jericho, Catal Huyuk, 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, Amphitheaters & Residences.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Module 4	Classical period Greece: Places of importance Athens, Agora, Acropolis, Pathenon, 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. Samdstrop	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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ART AND VISUAL GRAPHIC STUDIO (AVGS)

COURSE CODE	23AR1151	MODE	R	LTPS	0-0-6-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Principles of Drawing; Types, Properties and Application of Colors.	2	PO2, PO10
CO2	Understand the Painting Variations and Techniques of Sculpturing.	2	PO3, PO4, PSO1

Syllabus

Module 1	Drawing: Introduction to art – Types of drawing – Visual effects of drawing– Composition – Approach to sketching – Study of light, shade, and shadow. Exercise involving Indoor and outdoor sketching – Spot sketching- Sketching Human figures & Objects– Sketching Vegetation - Drawing from imagination – Study of 3 D effects – Tools and materials – Illustration.
Module 2	Painting I: Introduction of painting– Properties of colour – Colour schemes – Types of colours - Application and visual effects of colour. Exercise involving Study of colour – Properties of paper, brush, and other tools – Basic washes.
Module 3	. Painting II: Indoor and outdoor painting – Rendering techniques Exercise involving various mediums of colour– Pen and ink– Mixed mediums – Study of multi-colour and 3D effects from nature and built environment.
Module 4	Sculpture: Introduction of sculpture – Sculpture using various materials such as clay, plaster of Paris, paper mâché, and wire.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	The artist drawing book	Moivahuntly	David & Charles, U.K., 1994	1994
2	Pen and Ink Sketching	Caldwell peter	B.T. Bats ford Ltd., London	1995
3	Drawing and Sketching in Pencil	Arthur L. Guphill	Dover Publications Inc.; Dover Ed edition	2007



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DRAWING - I (AD I)

COURSE CODE	23AR1152	MODE	R	LTPS	0-0-6-0	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	PO1, PO3, PS02
CO2	Comprehend the representation of a building in plan, elevation, and sections, and be able to prepare simple measure drawings.	2	PO3, PO4, PO5, PS02

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

HISTORY OF ARCHITECTURE - II (HOA - II)

COURSE CODE	22AR1205	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	PO1, PSO1
CO2	Understand Hindu forms of worship, concept, symbolism and to get knowledge on the metaphysical plan of Temple Architecture.	2	PO4, PSO1
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	PO4, PSO1
CO4	Understand and to know the character and Architecture of temples of South India and North India in detail.	2	PO1, PSO2

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 social importance of temple. Classification of Indian temples - Elements of temple -Metaphysical plan of Temple Architecture Early 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.
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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpeta, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	Temple Architecture - Northern India Brief history of North India and its Characteristics –Different phases of North Indian Temple Architecture -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: Meenakshi Temples, 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	Parameswaranpillai 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

MODEL MAKING WORKSHOP (MMW)

COURSE CODE	23AR1254	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, PO8, PSo1
CO2	Understand different materials and apply the acquired knowledge and create a model Independently by choosing appropriate material and techniques.	2	PO7, PO8, PSo2

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 showing roads, 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DRAWING - II (AD-II)

COURSE CODE	23AR1255	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 sciography of Architectural Structures	2	PO2, PSO2
CO2	Understand identification and measuring of specific Architectural Details of Historically significant, Buildings and the presentation techniques of drawings	2	PO2, PSO2

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 Sciography – Shade, shadow casting on horizontal and vertical surfaces – Ground, different projections/depressions in walls, Chajjas; Sciography 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 Guphill	Watson-Guphill; New edition	1997



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

HISTORY OF ARCHITECTURE- III (HOA -III)

COURSE CODE	22AR2108	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BT L	PO Mapping
CO1	Understand the evolution of early Christian and Medieval periods its Architecture and socio political changes	2	PO1, PSO1
CO2	Understand Renaissance and Mannerist Architectures and their practices in Europe, growth of nations and styles of Baroque and Rococo	2	PO1, PSO1
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	2	PO1, PSO1
CO4	Understand of Architectural developments during Mughal Dynasty Study of cross culture influence and evolution of secular architecture in princely states	2	PO1, PSO1

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. 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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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. CrCrosscultural 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SITE ANALYSIS AND PLANNING (SAP)

COURSE CODE	23AR2110	MODE	R	LTPS	0-0-0-3	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Surveying using Chain and Compass. Understanding Surveying using Dumpy Level and Theodolite.	2	PO8, PSO1
CO2	Apply survey practices in field using Chain, Compass, Dumpy Level, Theodolite, Total Station and Alidade	3	PO10, PSO1

Syllabus

Module 1	Definition of plot, site, land and region, units of measurements. Introduction to survey, methods of surveying, where they are used, Surveying Instruments and their application. Need for surveying. Measuring and drawing out a site plan from the measurements. Computation of area by geometrical figures and other methods. Drawing marking out plan, layout plan and centerline plan. Exercises on the above. Site Analysis Importance of site analysis; Onsite and off-site factors; Analysis of natural, cultural, and aesthetic factors – topography, hydrology, soils, vegetation, climate, surface drainage, accessibility, size and shape, infrastructures available - sources of water supply and means of disposal system, visual aspects; Preparation of site analysis diagram. Study of microclimate: - vegetation, landforms, and water as modifiers of microclimate. Study of landform; - contours, slope analysis, grading process, grading criteria, functional and aesthetic considerations – Case studies and exercises.
Module 2	Site Context Context of the site. Introduction to existing master plans land use for cities, development control Rules. Preparation of maps of matrix analysis & composite analysis. Site selection criteria for housing development, commercial and institutional projects - Case studies. Site Planning Principles Site Design Elements, Analyzing the site and context factors categorically, Organization of elements in consideration with pedestrian and vehicular circulation, Zoning of the site, Connecting Spaces. Open vs Built, Grey vs Grey spaces, Massing and arrangement of activities, types of roads, hierarchy of roads, networks, road widths and parking, regulations. Turning radii & street intersections, Land scape and other site services. Examples of few well-planned projects.

Reference Books

Sl No	Title	Author(s)	Publisher	Year
1	Surveying	B.C. Punmia, Ashok K. Jain, Ashok Kr. Jain, Arun Kr. Jain	Firewall Media,	2005
2	Text of surveying	P.B.Shahani	Oxford and IBH Publishing Co	1980
3	“Urban Planning Design Criteria	Joseph De.Chiarra and Lee Coppleman	Van Nostrand Reinhold C	1982
4	Site engineering for landscape Architects	Storm Steven	John wiley & Sons Inc	2004
5	Landscape Planning for Energy Conservation	Gray, O., Robinetl	Van Nostrand Reinhold, New York	1984



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

CONTEMPORARY ARCHITECTURE (CA)

COURSE CODE	23AR2214	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Architecture and Planning of various Cities during Medieval Age. Understand the Culture and Built Forms in Pre – Independence (Colonial Rule) and Post-Independence of India.	2	PO1, PO3
CO2	Understand the Theories of current Architect practices and their applicability in meeting present day Needs.	2	PO1, PO5
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	2	PO3, PO4
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	2	PO3, PO5, PSO1

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. 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 2	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., Redefining Traditional and Indian Vernacular styles. Change of Role of Courtyard, opening in the buildings, Natural lighting, Neighbourhood & High-rise Buildings designing. Contemporary public buildings study.
Module 3	Early Modern Architecture: Study of various movements. Baroque-Rococo, Cubism, Constructivism, Brutalist Architecture, Neo-Classism etc., Study of works of Architects:



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	Philip Johnson, Robert Venturi, Frank Lloyd Wright, Mies Vand Rohe, Oscar Niemeyer, Alver Alto, Le Corbusier, Louis Khan, Richard neutral, Richard Neutra, Richard Meier. 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 4	Alternative Practices and Ideas African Architecture, Critical regionalism, works and ideas of Hassan Fathy, Geoffrey Bawa, Tado Ando, Laurie baker and Paulo soleri. 22nd Century Architecture Expressionism, 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, FloatingArchitecture, 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
4	Charles Correa	Kenneth Frampton	The Perennial Press	1998
5	Balkrishna Doshi, An Architecture for India	William Jr. Curtis	Rizzoli	1988



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING BYE LAWS AND OFFICE MANAGEMENT (BBOM)

COURSE CODE	23AR3117	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	PO1,PO3, PSO1
CO2	Understand the different norms from National Building Code of India	2	PO1,PO5, PSO1
CO3	Understand the basic need of building bye laws of local region and to learn the terminology. To be introduced to Energy Conservation	2	PO1,PO3, PO4, PSO1
CO4	Understand basis office procedure and management techniques in architecture	2	PO3, PO4, PSO1

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	Office management: Architectural office, architect, contractor, client relationships Office correspondence, filing and record keeping Human resource management. Scale of charges

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 Urban Development D	Government of Andhra Pradesh	2016



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ESTIMATION, COSTING AND SPECIFICATIONS (ECS)

COURSE CODE	22AR3218	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand of data required and methods of estimation	2	PO1
CO2	Apply various methods, estimate different quantities.	3	PO3
CO3	Understand of the types of estimates and costing	2	PO3
CO4	Understand various specifications and terminology used.	2	PO7, PSO2

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, center line method, partly center 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 labor 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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Reference Books:

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

HUMAN SETTLEMENT AND PLANNING (HSP)

COURSE CODE	23AR2223	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 its planning according to urban transformation	2	PO3, PO9
CO4	Understand the interrelationship between Human Settlements structure and Social Dynamics.	2	PO3, PO9, PSO2

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 (Neighborhood 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, Christaller 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 social reference 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.,



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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, Second Master Plan,	Madras Metropolitan Development Authority	Madras Metropolitan Development Authority	2007



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER PROFESSIONAL ELECTIVE COURSES (PEC)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE1: VERNACULAR ARCHITECTURE (VA)

COURSE CODE	22AR3120A	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	PO1, PO4
CO2	Understand the Vernacular styles of Buildings in Western, Northern & North-Eastern India.	2	PO6, PO10
CO3	Understand the Vernacular Architectural Styles of Southern India.	2	PO3, PO9
CO4	Understand the Influence of Western world on Vernacular Architecture.	2	PO3, PO9, PSO2

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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Haveli – Wooden Houses and Mansions of Gujarat	V.S. Pramam	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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE1: SUSTAINABLE ARCHITECTURE (SA)

COURSE CODE	22AR3120B	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Fundamentals of Sustainability and its impact on Environment	2	PO7, PO8
CO2	Understanding the new concepts and terminologies of sustainability	2	PO6, PO8, PO9
CO3	Understand the importance of site planning and energy, water efficient landscaping as an important tool in sustainable architecture	3	PO7, PO8
CO4	Apply National and International Case studies of Sustainable Architecture through research summary on GRIHA, LEED and other Certification	3	PO7, PO8, PO9, PSO2

Syllabus

Module 1	Fundamentals of Sustainable Architecture - Characteristics of sustainable architecture, Sustainable buildings, parameters of sustainable buildings.
Module 2	Concepts and Terminology of Sustainable Architecture - fundamentals of passive designing and climatology, thermal comfort, visual comfort, acoustic comfort, Climate Consultant. Green buildings definitions and categories, indicators of green buildings rating systems, Terminologies related to sustainable buildings- carbon footprint, life cycle analysis, Urban Heat Island, Development Footprint
Module 3	Site planning and Energy, Water Efficient. Water – estimating the use, reductions in consumption, recycling, reuse, landscape requirement, strategies, and technology for water conservation. Site development- site selection, UHI, Public Transport, vegetation, development footprint, storm water runoff, SRI- Application in Design Studio and Marking according to their application.
Module 4	Research Summary on Sustainable Architecture Rating Systems – Case studies on National and International Projects of GRIHA, IGBC, LEED ETC.

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE2: LANDSCAPE DESIGN STUDIO (LDS)

COURSE CODE	23AR3224A	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understanding landscape principles and types around the world. Advanced skills in utilizing site analysis techniques, plant selection, and design software to create sustainable and aesthetically pleasing outdoor spaces that enhance the built environment.	2	PO6, PO7, PO8, PSO1
CO2	Create a skill to integrate various knowledge systems to arrive at a design proposal. Minimum of 2 projects at different levels – Local, Urban. Utilizing traditional and digital methods, while exploring sustainable practices and cultural influences in landscape design Projects typology – Residential landscape, Urban Parks, Terrace gardening etc.	6	PO4, PO7, PO9, PSO1

Syllabus

Module 1	Understand and Apply Design Principles: Students will be able to demonstrate a fundamental understanding of design principles and apply them effectively in landscape design projects. They will develop skills in creating visually appealing compositions, balancing elements, and establishing focal points in outdoor spaces. Conduct Site Analysis and Synthesize Findings: Students will learn how to conduct a thorough site analysis, considering factors such as topography, climate, soil conditions, and existing vegetation. They will be able to synthesize this information to inform design decisions and create site-specific solutions that are sensitive to the local context.
Module 2	Communicate and Present Design Concepts: Students will refine their skills in effectively communicating and presenting their design concepts. They will learn to use visual representation techniques such as sketches, renderings, and digital tools to clearly convey their ideas. They will also develop the ability to articulate design intentions and concepts through written and oral communication, enabling effective collaboration with clients and stakeholders. Create Functional and Sustainable Design Solutions: Students will develop the ability to design outdoor spaces that are not only aesthetically pleasing but also functional and sustainable. They will learn to incorporate elements such as hardscapes, planting schemes, circulation patterns, and amenities to enhance usability and meet the needs of the users while considering environmental sustainability.

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE2: MODULAR CONSTRUCTION STUDIO (MCS)

COURSE CODE	23AR3224B	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply 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, PO8, PSO1
CO2	Create 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	PO6, PO7, PO9, PSO1

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE3: APPROPRIATE CONSTRUCTION TECHNOLOGIES

COURSE CODE	23AR3225A	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the alternative building materials, applying cost. effective materials and techniques to resolve environmental problems.	2	PO2, PO3
CO2	Understand the indigenous construction materials and techniques for building resilience and disaster mitigation	2	PO2, PO3, PSO1
CO3	Understand the materials and techniques for energy efficient building construction	2	PO2, PO3
CO4	Apply Building Information Modelling in modern construction industry	3	PO6, PSO2

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE3: ENERGY EFFICIENT BUILDINGS (EEB)

COURSE CODE	23AR3225B	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the importance of energy efficiency in buildings and strategies involved. Determine SMART, INTELLIGENT etc	2	PO1, PO4, PSO1
CO2	Understand the importance of relevance of water in built environment	2	PO6, PSO1
CO3	Understand Building Envelope installations and Dynamic facades Simulation	2	PO9, PO3, PSO2
CO4	Understand Lighting, Appliances and Occupant Behaviour and introduction to simulation and analysis software	2	PO9, PO3, PSO2

Syllabus

Module 1	Concepts: Smart Buildings, intelligent Buildings and Net Zero buildings etc – Concepts, terminology, opportunities, challenges and case studies around the world, Industry 4.0 – IOT, AI etc.
Module 2	Energy Efficiency in built environment: Energy Efficiency through techniques and technology, passive design strategies and renewable energy implementation- HVAC and Energy Management, Energy Audit.
Module 3	Building Envelope: Role of Building Envelope, Types of insulation material, Principles of Insulation installation, Thermal Bridging, Advances in Building Envelope Design in Energy Conservation. Dynamic Façade as per climate and location - Simulation
Module 4	Lighting, Appliance and Occupant Behaviour: Principles, Appliances and Equipment, Smart Technologies for energy Monitoring and control, Human Factors, Strategies for encouraging Energy conscious Behaviour , Case studies and Best Practices

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Energy-efficient Electrical Systems for Buildings	Moncef Krarti	CRC Press	2023
2	Sustainability through energy-efficient buildings	Amritanshu Shukla	Taylor & Francis; CRC Press	2018
3	Heating and cooling of buildings: principles and practice of energy efficient design	T. Agami Reddy, Jan F. Kreider, Peter S. Curtiss, Ari Rabl	Taylor & Francis	2017



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpeta, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE4: ARCHITECTURAL CONSERVATION (AC)

COURSE CODE	23AR3229A	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, PO9, PSO1
CO2	Understand the Conservation Practices	2	PO3
CO3	Understand the importance & analysis of Urban Conservation	2	PO3
CO4	Understand 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 Archeological 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 reuse of 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 of Virginia;	1990
3	a Richer Heritage: Historic Preservation in the Twenty-First Century	Robert E. Stipe	Univ. of North Caroling press	2003



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE4: SET DESIGN (SD)

COURSE CODE	23AR3229B	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Background writing and Concept creation for PLAY.	2	PO9, PSO1
CO2	Understand the Technology and concepts involved in Film set design.	2	PO3
CO3	Understand and making of Background set to resemble the feature, Variation nasality in Lay outing Set.	2	PO3, PSO1
CO4	Understand model on Concept allotted and study Lighting and prop Installations.	2	PO4

Syllabus

Module 1	DANCE/ DRAMA/ LECTURE/ THEATRE: Background study of the Event Scenario. Historical Evolution of the stage, degree of encirclement in various types of stage designs such as open air, arena, thrust in and proscenium stages, Script and story board, Terminology and Theory of Stage Design, Technical aspects like Sound, Lighting and Colour scheme, Visualization of and creation of sets e.g. with backdrops and scenery, Set design with appropriate props, Costume design and make up, Expenses.
Module 2	FILM SET DESIGN: Film set designs with response to camera positioning and movement, Indoor and outdoor shooting, Film sets as a creation of virtual environment appropriate for the scenery and shots, Support structure for film set erection for indoor and outdoor shooting, Architects role in cinematography: visualization, story board frames, Proportions, Computer generated stage set up: Mixing and editing, Exploring various materials of stage props, Budget
Module 3	SET LAYOUTING: Principles of layout for creating effective visual signage and explore the unique problems, technique, theory, and approaches of signage in film, theatre, and other forms of mediated exhibition. Introduction to design application for building signage.
Module 4	TABLETOP SET UP: Stop motion Animation and computerized animation, Concepts or story, Tabletop miniature box model, Lighting and special effects, Voice over, music and mixing, Overall editing and final presentation, Costing. EVENT STAGE: Concept and design, Ambience lighting and special effects, Stage props: Videowall presentation, sound and acoustics, Cost and estimation.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Stage Design: A Practical Guide	Gary Thorne	Crowood	2011
2	Theatre Design: Behind the Scenes with the Top Set, Lighting, and Costume Designers	Babak A.	Rotovision	2006



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE4: INTELLIGENT BUILDINGS (IB)

COURSE CODE	23AR3229C	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand of the Intelligent Buildings and energy management in Design	2	PO4
CO2	Understand of energy management in Services.	2	PO3, PO6
CO3	Understand of building energy conservation Technologies	2	PO3, PO4
CO4	Understand of Control systems in buildings	2	PO6, PSO1

Syllabus

Module 1	Intelligent Buildings: Concept, Definition, intelligent Architecture and structure, evolution of intelligent buildings, IB assessment criteria – intelligent homes. Energy Management in Design: Natural building design consideration – Energy efficient strategies – Contextual factors – Longevity and process Renewable energy sources and design- Advanced building Technologies- Smart buildings
Module 2	Energy Management in Services: Energy in building design – Energy efficient and environment friendly building – Thermal phenomena – thermal comfort – indoor air quality – passive heating and cooling systems – Energy Analysis – Active HVAC systems- Preliminary Investigation – energy audit – types of energy audit – Energy flow diagram – Energy consumption/unit production – identification of wastage – priority of conservative measures – Maintenance of management program.
Module 3	Building Energy Conservation Technologies: Standards of energy efficiency in building. Trends in energy consumption. Energy audit: evaluation of energy performance of existing buildings, use of computer models, impact of people behavior.
Module 4	Energy efficiency in buildings: approaches, materials and equipment, operating strategies, evaluation methods of energy savings. Optimum Selection of energy sources. Air-to-air energy recovery. Control Systems in Buildings: Introduction to automatic control systems, control issues related to energy conservation, interior air quality and thermal comfort in buildings – ventilation. Classification of HVAC control system: selection and sizes of sensors, actuators, and controllers. Practical HVAC control system Designing and turning controllers – Building automation systems, design for security.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Environmental control system	MooreF	McGraw Hill, Inc	1994
2	Wind and Light: Architectural design strategies	Brown, G Z, Sun	john willey	1985



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE5: INTERIOR DESIGN STUDIO (IDS)

COURSE CODE	23AR4118A	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, PSO1
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, PO4, PO5, PS01

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 softwares 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	



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE5: FURNITURE DESIGN STUDIO (FDS)

COURSE CODE	23AR4118B	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and demonstrate proficiency in conceptualizing and executing furniture design projects, integrating principles of ergonomics, aesthetics, and functionality effectively.	3	PO1, PO3, PSO2
CO2	Analyze the skills in Planning of furniture with material usage understanding materials, manufacturing techniques for practical and innovative solutions. Minimum of 2 projects should be done by using prototypes, Detail drawings and utilizing traditional and digital methods, while exploring sustainable practices and cultural influences in furniture design	4	PO1, PO5, PSO2

Syllabus

Module 1	Furniture Concept Presentation: Students will develop a concept for a furniture piece inspired by a specific design style or theme. They will create sketches, mood boards, and a written rationale to present their concept to the class. Prototype Construction: Students will select their preferred furniture concept from the previous assignment and create a physical prototype using appropriate materials and construction techniques. They will document their process with photographs and written reflections on challenges and successes.
Module 2	Design Critique and Iteration: Students will participate in a peer critique session where they present their prototypes to classmates and receive feedback on design, functionality, and aesthetic appeal. They will then use this feedback to refine their designs and create a revised prototype.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	The Atlas of Furniture Design	Mateo Kries	Vitra Design Museum	2019
2	Handbook of Specialty Elements in Architecture	Andrew Alpern	McGrawhill Co	1982



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE6: HOUSING (HSG)

COURSE CODE	23AR4128A	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, PO3
CO2	Understand Housing, 5-year plans specific to housing	2	PO1, PO5
CO3	Understand Critical Sources of Finance	2	PO3, PO4
CO4	Understand Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, and trends	2	PO3, PO4, PSO1

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 Rural & Urban areas.
Module 4	Study of user profiles, Planning – Physical, Administration, Socio-Cultural, Sustainable, Financial, Future forecasts, 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	Geofrey K. Payne	John Wiley and Sons, Chichester	1984
3	Housing by people	John F.C. Turner	Marison Boyars, London,	1976



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE6: ARCHITECTURE JOURNALISM AND PHOTOGRAPHY

COURSE CODE	23AR4128B	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand basics regarding usage, equipment and varied parameters of smart phone camera, professional camera	2	PO1, PO6, PO 10, PSO1
CO2	Apply of photographic equipment and techniques	3	PO1, PO 10, PSO1
CO3	Analyze with photojournalism and visual communication techniques	4	PO 10, PSO1
CO4	Apply the knowledge gained to visualize and write about buildings of architectural importance	3	PO 10, PSO1

Syllabus

Module 1	History of the field: From early architectural critiques to the digital age. The importance of Architectural Journalism: Public awareness, fostering discourse, and holding architects accountable. The Architectural Landscape: Key players, publications, and online platforms.
Module 2	Writing for different audiences: Architects, public, specific demographics. Crafting compelling narratives: Storytelling techniques for architectural journalism. The Art of Description: Bringing buildings to life with vivid language. Identifying relevant sources: Architectural reviews, interviews with architects, historical documents. Conducting effective interviews: Asking insightful questions and gathering information. Ethical considerations in Architectural Journalism. Writing Different Formats: Feature Articles: In-depth analysis of a specific building or architect. Architectural Reviews: Critically evaluating a new design or project. News Reporting: Covering current events and trends in the world of architecture.
Module 3	Photography and Visual Storytelling: The power of photography in architectural journalism: Capturing the essence of a building. Working with photographers and understanding architectural photography techniques. Integrating visuals with your writing for maximum impact. Social media and Digital Platforms: The rise of architectural journalism in the digital age: Blogs, podcasts, and online publications. Utilizing social media to engage with audiences and promote your work. The future of Architectural Journalism: Exploring new technologies and trends.
Module 4	Case Studies: Analyzing successful examples of Architectural Journalism from different publications and formats. Deconstructing the writing: Identifying key elements and techniques used by prominent architectural journalists..

Reference Books:

S.no	Title	Author	Year	Publisher
1	Reporting on Architecture	Nora Richter Greer	2009	Routledge
2	Writing for Design Professionals	Karen A. Simmons	2010	Laurence King Publishing
3	Places Journal	Places Inc.	1983	Places Inc.
4	Architectural Photography, 4th Edition:	Adrian Schulz	2018	Rocky Nook



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE6: ADVANCED BUILDING TECHNIQUES (ABT)

COURSE CODE	23AR4128C	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and analyze practicing design of structural elements slabs, beams, columns, and foundations.	2	PO5, PO 10
CO2	understand the Large Span Construction-flat slabs-shell structures, folded plates, portal frames space frame & trusses, tensile structures	2	PO5, PO6
CO3	Understand the prefabricated construction & Pre-engineered building. New Material in Construction. Cold form sections, FRP	2	PO5, PSo1
CO4	Understand the Earthquake resistant construction design practices and analyze the Behaviour of structures during earth quacks.	2	PO5

Syllabus

Module 1	Advanced construction method in RCC, prestressed concrete beams, slabs, frames, lift slab construction. Post tensioning, multi storied building frames, circular slabs, and beams. Uses of rapid hardening cement, Ready mix concrete, light weight concrete.
Module 2	Folded plates like prismatic, V type, trough type, pyramidal, prismatic. Shell structure, cyclonic shell, hyperbolic paraboloid. Construction techniques for erection of space frames, suspended roofs, membrane structure, cable structures.
Module 3	Studies on large span structures, multistoried buildings, marine structures, special application steel structures.
Module 4	Advanced building materials, plastic, PVC, metals, synthetic boards, fireproof/ resistant boards/ tiles, acoustic materials, composite panels and their application, non-load bearing gypsum blocks, etc.

Reference Books:

S.no	Title	Author	Year	Publisher
1	Construction Technology	R. Chudley	Pearson	2005
2	Building, Planning, and scheduling	Gurcharan Singh	Standard Publication	2009



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE7: DISSERTATION (DIS)

COURSE CODE	23AR4269A	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	3	PO6, PO7, PSO1
CO2	Analyze the theoretical frameworks and empirical evidence to produce a coherent argument, contributing new insights to their field of study.	4	PO2, 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

PE7: THESIS SEMINAR (TS)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COURSE CODE	23AR4269B	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand and Identify, explore and research topics of their interest; then describe by the organized presentations.	2	PO1, PO6, PSO2
CO2	Apply the ideas in finding a new solution to the existing problem and interpret via applying the architectural systems	3	PO6, PO10, PSO1

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

PE8: URBAN DESIGN (UD)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COURSE CODE	23AR4233A	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Urban Design terminologies	2	PO2, PO10, PSO1
CO2	Understand Users and Activities in a city	2	PO2, PO4, PO9, PSO2
CO3	Understand public spaces, streets & Transport	2	PO2, PO9, PO10
CO4	Understand Application of Urban Design	2	PO2, PO4, 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

PE8: BEHAVIORAL ARCHITECTURE (BA)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COURSE CODE	23AR4233B	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand concepts and concerns of perception. Identify and develop the sensitivity to the needs of users and clients	2	PO1, PO4, PO10, PSO2
CO2	Understand the designing and planning for urban quality	2	PO4, PO10, PSO2
CO3	Understand and apply the macro and micro built environment and behavioral aspects	2	PO4, PO9, PO10, PSO2
CO4	Apply the relationship between built - environment and perception	3	PO4, PO9, PSO2

Syllabus

Module 1	Concepts And Concerns of Perception: Definition - Visual perception - perceptual constancy, objective and spatial vision, attention and awareness, methods of vision perception and science. Developing Sensitivity to The Needs of Users and Clients Architectural assumptions and Environmental Designs, Designs and social practices, involvement of clients and user in Designs and built environment, realities of clients and public their impact projects and designs.
Module 2	DESIGNING AND PLANNING FOR URBAN QUALITY: Quality of urban environment and living - past, present, and future trends, role of urban design in urban environment, planning for quality living in urban areas.
Module 3	Macro And Micro Built Environment and Behavioral aspects: Relationship of built environment to society, spatial relationship within built - environment, influence of physical environment on human behavior, influences of built environment on human behavior
Module 4	Built - Environment and Perception: Case studies of tall buildings, low raise neighborhoods, interior and exterior elegance of built environment, local and regional level landscape.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Visual perception	Yantis. S	Psychology Press	2001
2	Urban Design as public policy	Johathan Batnett	Haxper and row Publications	1983
3	Planning for urban quality	Parfeet M and Power G	Rent Ledge	1977

PE9: TRANSPORTATION PLANNING (TSP)

COURSE CODE	23AR4234A	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	-----------	------	---	------	---------	---------------	-----



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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	Understand Various types of Circulation & Users along with their infrastructural needs.	2	PO3, PO7
CO3	Understand Road Safety & Civic Sense	2	PO3, PO7
CO4	Understand Traffic & Transportation byelaws & Regulation	2	PSO2, PO9

Syllabus

Module 1	Role of Roads & Its network, Type of Users & their Behavior, 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.
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:

Sl No	Title	Author(s)	Publisher	Year
1	Introduction to Traffic Engineering	R. Srivasa rao.	Hutchinson, London,	1968
2	Road Signages and signs	Ministry of Road Transport and Highways	Government of India, New Delhi	1999
3	Street Design Guidelines	UTTIPEC	Government of India, New Delhi	2007



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PE9: DISASTER MITIGATION AND MANAGEMENT (DMM)

COURSE CODE	23AR4234B	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, PSO1
CO2	Understand the disaster preparedness and Involving Design Considerations for buildings	2	PO3, PSO1
CO3	Understand the study of design considerations for disaster management and precautions.	2	PO3, PSO1
CO4	Understand the Relief & Rehabilitation for Disasters	2	PO3, PSO1

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 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER

BUILDING SCIENCE AND APPLIED ENGINEERING (BSAE)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING MATERIAL –I

COURSE CODE	22AR1103	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO #	CO Description	BTL	PO Mapping
CO1	Understand of the building materials Soils and Bricks	2	PO3, PO6
CO2	Understand of the building materials Rocks and Stones	2	PO6
CO3	Understand of the building materials Timber & Bamboo	2	PO8
CO4	Understand of the building materials Lime.	2	PO4, PO6, PO8

Syllabus:

Module 1	Bricks and Clay: Fundamentals and types of soil. Bricks: Composition of good brick, properties and uses of bricks, classification of bricks, shape of bricks, firebricks, and substitutes for bricks. Clay products: Tiles, terra cotta, stoneware, earthenware, porcelain, and clay block their properties and uses.
Module 2	Rocks and Stone: 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. Artificial stone and their uses.
Module 3	Timber & Bamboo: Timber: Classification of trees, structure of trees, Defects in timber, Storage of timber, Uses of timber, characteristics, seasoning of timber, Defects and diseases, Decay of timber, Preservation, Fire resistance, Conservation of timber.
Module 4	Bamboo: Anatomy of Bamboo, Properties, strength, processing, harvesting, working of Bamboo tools – Treatment and preservation of Bamboo and uses of Bamboo. Cane, Propagation Roofing materials – Thatch, grass, Bamboo, reeds. Lime: Basic definitions, types of binding sources of lime, classification of lime, properties, and uses of various types of limes, Lime mortar and surkhi

Reference Books:

S.NO	Title	Author	Year	Publisher
1	Construction Materials and Processes	Don A. Watson	1972	McGraw Hill.
2	Building Construction Vol, 1 and 2,	W.B. McKay	1981	Longmans, UK,.
3	Building Construction	S.C Rangwala	2000	Charotar Publishing House, India
4	A Textbook of Building Construction	S.K. Sharma	1998	Chand & Co Ltd., New Delhi.
5	Timber Construction Manual	American Institute of Timber Construction (	2004	Wiley Publishers



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ECOLOGY AND ENVIRONMENT (E&E)

COURSE CODE	22UC0009	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 enable 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

DESIGN OF STRUCTURES - I

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

COURSE CODE	23AR1204	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	PO1
CO2	Understand the concept of forces and structural systems. Analyzing the plane trusses	2	PO3 , PSO1
CO3	Understand of shear force and bending moments in column. Determination of deflection of beams	2	PO3 , PSO2
CO4	Understand of centre of gravity and moments of inertia and its impact on the structures.	2	PO3

Syllabus

Module 1	Introduction to Forces and Structural Systems: 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, conditions of statically determinacy, Degree of Indeterminacy. Types of supports and support reactions, Determination of support reactions for statically determinate structures, Analysis of forces, moments, and couples in structures.
Module 2	Analysis of a 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING MATERIALS II

COURSE CODE	23AR1206	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course outcomes

CO#	Course Outcome	BTL	PO Mapping
CO1	Understand and relate Cement/RCC Building material	2	PO3, PSO1
CO2	Understand and explain Steel Building material	2	PO2, PSO1
CO3	Understand and distinguish different glass Building material	2	PO2, PO8, PSO1
CO4	Understand different paints in Building material	2	PO2, PSO1

Syllabus:

Module 1	Cement: Cement: Composition, Manufacturing, Properties of cement – Uses of Cement – Tests for cement, Cement mortar, Introduction to RCC. Metals: Ferrous metals - Properties and uses of cast iron, wrought iron, pig iron and steel. Market forms of steel: structural steel, stainless steel, steel alloys –properties and uses.
Module 2	Non-Ferrous metals - Properties and uses of aluminum, zinc, lead, copper etc., Aluminum windows and doors, aluminum and its uses in interiors, aluminum frames, partitions, glazing & panels.
Module 3	Glass: Composition of glass, brief study on manufacture, treatment, properties, and uses of glass. Types of glass - float glass, cast glass, glass blocks, and foamed glass. Decorative glass, solar control, toughened glass, wired glass, laminated glass, fire-resistant glass, glass blocks, structural glass - properties and application in building industry, glazing and energy conservation measures.
Module 4	Painting, Varnishing Miscellaneous Materials: Painting: Characteristic of an ideal paint, types of paints, defects in painting, painting on different surfaces. Varnishing: Varnish types, Process of varnishing. Miscellaneous materials like Epoxy, Melamine, Putty, Foams, Bitumen etc.,

Reference Books:

S.no	Title	Author	Year	Publisher
1	Engineering Materials	S.C.Rangwala	1997	Charotar Publishing House, India
2	Building Materials	S.K Duggal	1997	Oxford and IBM Publishing Co, Pvt. Ltd.
3	Building Materials	P.C Varghese	2005	Prentice Hall of India Pvt. Ltd., New Delhi
4	Materials for Architects and Builders	Arthur Lyons	1997	An introduction Arnold, London
5	Construction Materials and Processes	Don A.Watson	1986	McGraw Hill Co.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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

COURSE CODE	23AR2107	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the concept of simple stresses and strains and elastic properties of solids	2	PO2, PO5, PO10, PSO1
CO2	Developing the design of reinforced concrete beams	3	PO2, PO5, PO10, PSO1
CO3	Developing the design of reinforced concrete columns	3	PO2, PO5, PO10, PSO1
CO4	Developing the Structural properties of brick masonry and analysis	3	PO2, PO5, PO10, PSO1

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 steel 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 flitched 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

CLIMATE RESPONSIVE ARCHITECTURE (CRA)

COURSE CODE	22AR2109	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand of elements of climate, human comfort, and human body heat balance	2	PO1, PO4, PSO2
CO2	Understand the concept of heat transfer in buildings, sun path diagrams and designing shading devices	2	PO3, PO5, PSO2
CO3	Understand air movement for designing buildings accordingly.	2	PO4, PO5, PSO2
CO4	Understand climate responsive architecture through case studies.	2	

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING CONSTRUCTION-I (MASONRY) (BC-I)

COURSE CODE	23AR2158	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 Soil – Types, Properties, Challenges. Bricks – Compositions, Classifications, Alternative Bricks Stone - Stone classifications, tests, uses, preservations, Artificial stones. Concrete- Masonry	2	PO6
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	PO6, PSO2

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 pyramidal & 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 pyramidal & 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

DESIGN OF STRUCTURES – III

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

COURSE CODE	23AR2211	MODE	R	LTPS	3-0-0-0-	PRE-REQUISITE	NIL
-------------	----------	------	---	------	----------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand of Basics of RCC design	2	PO1, PO3, PSO1
CO2	Understand and designing of columns	2	PO1, PO3, PSO1
CO3	Understand and designing of footings and staircases	2	PO1, PO3, PSO2
CO4	Understand and analysis a given section for under or over design carrying capacity	2	PO1, PO3, PSO2

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 behavior, and bi-axial behavior. 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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

COURSE CODE	22AR2212	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the processes involved in the distribution, treatment, and disposal of wastewater.	2	PO7
CO2	Understand the building sanitation method and different types of plumbing systems.	2	PO8
CO3	Understand the plumbing and sanitary layouts of a residence.	2	PO8
CO4	Understand the use and installation of various plumbing fixtures and sewerage systems for sanitary conveyance.	2	PO8, PSO2

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, 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	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 Neighborhood - 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 Neighborhood.

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)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING CONSTRUCTION-II (JOINERY, TRUSSES ROOFS, FORMWORK)

(BC II)

COURSE CODE	23AR2260	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	PO1
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	PO3, PSO2

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 (paneled, louvered, glazed and sliding windows) - Doors (paneled, 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by **AICTE** ♦ **ISO 21001:2018 Certified**

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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

COURSE CODE	23AR3115	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand of limit state design.	2	PO2
CO2	Apply the techniques and Design of reinforcement for a section.	3	PO2
CO3	Apply the Design detailing, and the purpose of one-way and two-way slabs.	3	PO3
CO4	Apply the detailing for special structures such as deep beams, corbels, and shear. walls etc.	3	PO3

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING SERVICES II

(ELECTRICAL AND ACOUSTICS) (BS II)

COURSE CODE	23AR3116	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the planning techniques and study of electricity, installations, wiring, and principles of distribution and safety.	2	PO1
CO2	Understand the application of artificial illumination and lighting design for various spaces	2	PO3
CO3	Understand the knowledge of ventilation principles.	2	PO9, PSO2
CO4	Apply 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	PO9, PSO2

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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by **AICTE** ♦ **ISO 21001:2018 Certified**

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING CONSTRUCTION-III ((STEEL STRUCTURES, PARTITIONS AND FALSE CEILING)(BMC III)

COURSE CODE	23AR3143	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	PO1, PO2, PSO2
CO2	Apply Flooring –Concrete, Wooden, Stone, Tile etc Slabs/Roofing – Vault,Dome, Waffle, Bubble deck, hollow core slabs,filler slab etc. Staircase types using the materials Wooden, metal, RCC etc.	3	PO1, PO2, PSO2

Syllabus

Module 1	Flooring, Roofing, Staircase 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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

COURSE CODE	23AR3221	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	Nil
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the Thermal Properties of the building material and components and mechanical ventilation	2	PO1, PSO1
CO2	Understand the principles, systems, and design criteria of HVAC.	2	PO1, PSO1
CO3	Understand the techniques and concepts in fire safety norms in the buildings.	2	PO1, PSO1
CO4	Apply the techniques of mechanical transportation systems in building plans	3	PO1, PSO1

Syllabus

Module 1	Thermal Properties of the building material and Components and mechanical ventilation: Behavior 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING CONSTRUCTION-IV ((R.C.C AND SPECIAL CONCRETE) (BMC IV)

COURSE CODE	23AR3266	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	Nil
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand 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, PO7, PO8
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	PO6, PO7, PO8

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING SERVICES – IV (BUILDING AUTOMATION) (BS-IV)

COURSE CODE	23AR4126	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the philosophy of building automation systems and subsystems	2	PO7
CO2	Understand about the communication and security systems	2	PO7
CO3	Apply the integration of building services into architectural design	2	PO7, PSO2
CO4	Apply the interaction and integration between building structure, systems, services, management, control, and information technology.	2	PO7, PSO2

Syllabus

Module 1	Building Automation Systems & Controls: Philosophy. Introduction to System configuration, system modules, distributed systems, communication protocol and on-line measurements. Fire protection, security, and energy management. Control objectives. Sensors, controllers, and actuators. Understanding the concept of Microprocessor based controllers & digital controls. Examples of subsystems such as - Digital Addressable Lighting Interface (DALI) and how it's useful to Architects.
Module 2	Communication and Security Systems: Voice communication systems, local area network, wireless LAN, Digital TV, CCTV, digital CCTV, teleconferencing, cellular phone system, and CABD. SMATV. Data networking. Short- and long-haul networks. Wideband network. Office automations. Public address/sound reinforcement systems. Digital public address system. Modern security systems.
Module 3	Integration of Services into Architectural Design: Introduction to Smart Building concept. Principles of grouping and integrating of horizontal and vertical distribution of all services in a multi- storeyed building/ large building. Services to include vertical transportation, electrical, communication, air conditioning and fire safety.
Module 4	Interaction and integration between building structure, systems, services, management, control, and information technology. Different Application & Design software available. Integrating service requirements into architectural design in an appropriate typology involving a simple scale project through sketches/ drawings.

Reference Books:

Sl No	Title	Author(s)	Year	Publisher
1	Intelligent Buildings: An introduction	Clements-Croome, Derek,	2014	Routledge,
2	Intelligent Buildings and Building Automation,	Shengwei Wang,	2010	Spon Press,



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

WORKING DRAWINGS-I (W D-I)

COURSE CODE	23AR4130	MODE	R	LTPS	0-0-4-0-	PRE-REQUISITE	NIL
-------------	----------	------	---	------	----------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the essential components of working drawings, including notations and drawing standards.	3	PO1, PO6
CO2	Apply 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	PO7, PO10, PSO2

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, Center-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 Bakhoun, N. R.	Hoboken: John Wiley & Sons.	2011



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

WORKING DRAWING - II (W D-II)

COURSE CODE	23AR4271	MODE	R	LTPSIN	0-0-4-0	PRE-REQUISITE	NIL
-------------	----------	------	---	--------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply 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	PO7, PO8, PO10
CO2	Apply 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	PO3, PO6, PO9

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, travelers. External Plumbing Layout and details. 6. Details of Septic tank. An overview of “all service systems integrated drawings” and the effectiveness of “Building Information modeling – 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: Archiworld Co.	2010



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER PROJECT COURSES (PRI)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO – I (BASIC DESIGN)

(ADS-I)

COURSE CODE	23AR1153	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand 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	PO2, PO7, Po10
CO2	Understand and Develop 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	PO1, PO2, PO4, PS02

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.

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -II (ADS II)

COURSE CODE	23AR1256	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	23AR1153
-------------	----------	------	---	------	---------	---------------	----------

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	2	PO2, PO5, PO10,PSO1
CO2	Create Architectural Details for floated design exercise floated as per the semester complexity, Buildings and the presentation techniques of drawings	6	PO2, PO6, PO10,PSO2

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, color, light, texture, etc., function and need: user requirements, anthropometrics, space standards, circulation image and symbolism. Complexity- Upto 1 acres 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
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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -III (ADS III)

COURSE CODE	23AR2159	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	23AR1256
-------------	----------	------	---	------	---------	---------------	----------

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply 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	PO2, PO4, PO10, PSO1
CO2	Create projects with design typologies such as Foundation School/Pre School/Public Health Care Center/Restaurant/Museum/Library, labeled as Project 1 and Project 2.	6	PO2, PO7, PSO1

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, behavioral aspects, especially those relating to children, site planning aspects, appropriate materials and construction Complexity- upto 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 Center/ 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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -IV (ADS IV)

COURSE CODE	23AR2261	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	23AR2159
-------------	----------	------	---	------	---------	---------------	----------

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply of anthropometry, circulation patterns, standards of various facilities	3	PO2, PO4, PO10, PSO1
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	PO2, PO4, PO9, PO10, PSO2

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: Upto 8 Acres, Contours incorporation, Climate responsive buildings. Introduction to Structure elements like Columns, Foundation in plans. Softwares: 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, Elementry school, Anganwadi, Famers Markets, Art and Craft Village, department store, higher secondary school, Entertainment centre, Sport Complex.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -V (ADS V)

COURSE CODE	23AR3144	MODE	R	LTPS	0-0-9-0	PRE-REQUISITE	23AR2261
-------------	----------	------	---	------	---------	---------------	----------

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	3	PO2, PO4, PO10, PSO1
CO2	Create 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	PO2, PO10, PSO2

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: Upto 10 Acres, Contours incorporation, Environment Positive Design, Structural Details in drawings. Introduction to Sustainable Design, Bylaws, Building Services material and innovation exploration Softwares: Revit, Sketchup, Rendering Software
----------	--



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -VI (ADS VI)

COURSE CODE	23AR3267	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	23AR3144
-------------	----------	------	---	------	----------	---------------	----------

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Analyze the challenges of designing functionally complicated buildings, having a complex array of activities and services. To familiarize the students to the task of coordinating integration of structural design and specialized building services in the framework of architectural design	4	PO2, PO4, PO10, PSO1
CO2	Create A Functionally Complex Building (Medium Rise Structure Example Hospital, Juvenile Correction Centre, Research And Development Center) , Project 2 Design An Shopping Mall or Students Hostel Or Travellers Hostel, Conventional Center, 5 star hotel Etc.	6	PO2 ,PSO2

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 Softwares: 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 Center etc

Reference Books:

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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL DESIGN STUDIO -VII (ADS VII)

COURSE CODE	23AR4168	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	23AR3267
-------------	----------	------	---	------	----------	---------------	----------

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply of the integration of services, sustainable building and anthropometry, circulation patterns.	3	PO2, PO4, PO10, PSO1
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	PO2, PO4, PO9

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: Upto 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. Softwares: 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 centres 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

URBAN DESIGN STUDIO (UDS)

COURSE CODE	23AR4270	MODE	R	LTPS	0-0-12-0	PRE-REQUISITE	23AR4168
-------------	----------	------	---	------	----------	---------------	----------

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	4	PO7, PO8, PSO2
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	PO3, PO10, PSO1

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 constraints associated with large-scale urban interventions. Complexity: Upto 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 Softwares: 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, 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpeta, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

RESEARCH METHODOLOGY (RM)

COURSE CODE	23AR4131	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the basics of the research and process.	2	PO4, PO3, PO9
CO2	Understand about the research methodologies - Quantitative	2	PO3, PO9
CO3	Understand about the research methodologies - Qualitative	2	PO3, PO9, PSO2
CO4	Apply the research in formulating the scientific manuscripts and make it publishable	3	PO3, PSO2

Syllabus

Module 1	Understand the fundamentals of research and its significance in academic and professional settings.
Module 2	Describe quantitative research methodologies and their application in data collection and analysis. Examples: Survey Research, Experimental research, Longitudinal research, Secondary Data Analysis etc.
Module 3	Explain qualitative research methodologies and their relevance in exploring complex phenomena and subjective experiences. Examples: Interviews, Focus group, Observation, Content analysis etc .
Module 4	Analyze and critique journal articles to evaluate research methods, findings, and conclusions.

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	"Research Methodology: A Step-by-Step Guide for Beginners"	Ranjit Kumar	SAGE Publications	2020
2	"Research Design: Qualitative, Quantitative, and Mixed Methods Approaches"	John W. Creswell	SAGE Publications	2017
3	"Research Methodology: Methods and Techniques"	C.R. Kothari	New Age International	2017



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL THESIS (AT)

COURSE CODE	23AR5273	MODE	R	LTPS	0-0-15-0	PRE-REQUISITE	23AR5172
-------------	----------	------	---	------	----------	---------------	----------

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO 1	Apply the Architectural Thesis, Writing Synopsis, Studies Related to Project. Literature study in relation to literatures, Desktop Studies, Case studies.	3	PO4, PO1, PO2, PO3
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	PO1, PO3, PO6, PSo1

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 Softwares: 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.

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	2007



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER SKILL ENHANCEMENT COURSES (SEC)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SITE SURVEY AND ANALYSIS (SSA)

COURSE CODE	23AR2110	MODE	R	LTPS	0-0-0-3	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand Surveying using Chain and Compass. Understanding Surveying using Dumpy Level and Theodolite.	2	PO8, PSO1
CO2	Apply survey practices in field using Chain, Compass, Dumpy Level, Theodolite, Total Station and Alidade	3	PO10, PSO1

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.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SOCIAL IMMERSIVE LEARNING (SIL)

COURSE CODE	22UC0021	MODE	R	LTPS	0-0-0-4	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Apply effective communication and collaboration skills to work with diverse populations in addressing social issues within the community.	3	PO10
CO2	Build technological solutions to real-world problems or challenges with peers to achieve common goals.	3	PO6
CO3	Plan effectively to communicate ideas and collaborate with others to achieve artistic or recreational goals.	3	PO10
CO4	Develop innovative solutions by thinking critically and creatively within a collaborative social immersive learning environment	3	PO6
CO5	Identify the strategies to promote personal well-being for healthy living through social interaction and shared experiences.	3	PO6

Syllabus

Module 1	Extension Activities and Social Outreach activities (ESO)
Module 2	Technology Clubs (TEC)
Module 3	Liberal arts, creative arts and hobby clubs (LCH)
Module 4	Innovation, Incubation & Entrepreneurship (IIE)
Module 5	Health & Well Being (HWB)

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	SOCIAL IMMERSIVE LEARNING KL	KL	KL	2023



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COMPUTER STUDIO- I (CS-I)

COURSE CODE	23AR2157	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	PO1, PO2, PSO1
CO2	Apply the learned skills in preparation of documentation reports, analysis reports, and audio-visual presentations.	2	PO1, PO2, PSO1

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,	1 st 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



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COMPUTER STUDIO- II (C S-II)

COURSE CODE	23AR2262	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 softwares.	2	PO1, PO2, PSO1
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	PO1, PO2, PSO1

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, 13 th Edition	2016



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

COMPUTER STUDIO- III (C A- III)

COURSE CODE	23AR3165	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 3D modeling software applies the required tools and components in building a 3D model. To create documentation reports, analysis reports, and audiovisual presentations.	2	PO1, PO2, PO10, PSO2
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	PO1, PO2, PO7, PSO2

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, 13 th Edition	2016



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER PROFESSIONAL ABILITY ENHANCEMENT COMPULSORY COURSES (PAECC)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

BUILDING CONSTRUCTION AND MANAGEMENT (BCM)

COURSE CODE	22AR4232	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	PO3, PO7, PSO1
CO2	Understand various Tools and Techniques to facilitate efficient management of Projects	2	PO3, PO8, PSO1
CO3	Analyze Project cost model and steps involved in cost optimization	4	PO6, PO8, PSO1
CO4	Apply Scientific Evaluation Techniques to Manage Project Durations and resources with Examples	3	PO8, PSO1

Syllabus

Mod ule 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.
Mod ule 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.
Mod ule 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 leveling.
Mod ule 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
3	Guidance on Project Management,	ISO	International Organization for Standardization.	2013
4	Project Management Body of Knowledge (PMBOK),	Project Management	PMI	2017



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

PRACTICAL TRAINING / INTERNSHIP (PT)

COURSE CODE	23AR5172	MODE	R	LTPS	0-0-30-0	PRE-REQUISITE	23AR4270
-------------	----------	------	---	------	----------	---------------	----------

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	PO3, PO8
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	PO5, PO9, PSo2

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	Architects (Professional conduct) Regulations, Architectural Competition guidelines	Council of Architecture	Council of Architecture Publications	.1989
2	Working Drawings and how to Make and Use Them	Lewis M.Haupt	Antique Reprints	2016



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ARCHITECTURAL PROFESSIONAL PRACTICE (A.P.P)

COURSE CODE	22AR5235	MODE	R	LTPS	3-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the daily realities of an architectural practice through the Training	2	PO5
CO2	Understand the evolution of an architectural project from design to execution.	2	PO8
CO3	Understand an orientation that would include the process of development of conceptual ideas, presentation skills.	2	PO9
CO4	Understand and Involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure.	2	PO6, PSO2

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, 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;



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

	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.	-



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER HUMANITIES ART AND SOCIAL SCIENCES (HAS)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

INTEGRATED PROFESSIONAL ENGLISH

COURSE CODE	23UC1101	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO #	CO Description	BTL	PO Mapping
CO1	Understand the language Mechanics in Basic Grammar, Interactive Listening & Speaking	2	PO1, PO10
CO2	Apply Integrated Reading skills & Techniques of Writing	3	PO1, PO10

Syllabus:

Module 1	Basic Grammar - Countable and uncountable nouns, present simple and continuous, past simple and continuous – classroom practice – Understand and interpret Texts and work place situations B)Structural Pattern - Present continuous for future arrangements State verbs, Regular and irregular verbs, Voice, Modal verbs – Reporting on going tasks in the corporate world C)Descriptive and Qualitative Patterns: Adjectives and Adverbs classroom practice) Time Expressions, Comparatives and superlatives , Pronouns, Conditionals, Phrases and clauses (Including Relative).
Module 2	Formal contexts: Being a PA, describing changes in a company Taking orders over the phone. Listening & Speaking: Participate in conversation with proper contextual language markers, turn taking. Classroom practice- Presenting context, reason, problem – Case analysis (short). Body Language: Dos and Don'ts of one-to-one interaction, Telephone interaction Video/ web conferencing. Culture specific practices.
Module 3	Work Etiquette- situation, ambience, team skills, time management and leadership ability. Understand and assimilate main ideas and specific details. (250-300 words text of moderate difficulty). read for general understanding, interpreting, factual or specific information, for grammatical accuracy and information transfer. Understand the general meaning of corporate context and office correspondence. Understand short reports of predictable nature.
Module 4	Internal Correspondence. Making notes on routine matters, such as, taking/ placing orders Emails: Types of emails, salutations, vocabulary used in formal and informal (Including beginnings and endings). Writing straight-forward, routine letters of factual nature.



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

ENGLISH PROFICIENCY

COURSE CODE	23UC1202	MODE	R	LTPS	0-0-2-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the concepts of grammar, and improve their communication, listening, and writing skills	2	PO9
CO2	Apply advanced communication skills and techniques for specific purposes	3	PO10

Syllabus:

Module 1	300 Word list (25 per week for 12 weeks), Voice & Error Identification, Reported Speech & Error Identification, Error Identification (Overall),
Module 2	Phrases & Clauses, Simple, Complex, & Compound Sentences & Error Identification, Active Listening Skills & Notetaking,
Module 3	Self- confidence, Self-Awareness, Self-Control, SWOC, Speed Reading Test, Word Perception-Quick horizontal eye movement (spelling), Vertical Reading & Word Perception-Semantic
Module 4	Language Laboratory Interactive: Debate, Blindfold, Role-Play, Situation Reaction Test— Build an Island nation.

Textbook:

1	Dictionary of Technical Terms	Dr. Meenakshi Raman and Dr. Sangeetha Sarma
2	Technical Communication.	Oxford University Press: Delhi.2016.
3	The Ultimate Verbal and Vocabulary Builder.	Texas Lighthouse Review.2000
4	Interactive Vocabulary Drills.	Rajeev Vasisth
5	Language Laboratory Teacher Manual	KLEFU



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

DESIGN THINKING AND INNOVATION

COURSE CODE	23UC1203	MODE	R	LTPS	0-0-4-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand the importance of Design thinking mindset for identifying contextualized problems	2	PO2, PO6
CO2	Analyze the problem statement by empathizing with user	4	PO3, PO7
CO3	Apply and Develop ideation and test the prototypes made	3	PO5, PO7
CO4	Understand and Explore the fundamentals of entrepreneurship skills for transforming the challenge into an opportunity	2	PO8, PO7

Syllabus:

Module 1	Design thinking an overview, Design Thinking for Contextualized Problem-Solving: Problem Selection/Definition Need for Cultural Relevance (Time, Space, and Environment).
Module 2	Empathy: definition, Empathic research: framing interview questions, focus groups, procedure to conduct skilled interviews, Insights from Empathetic research, define: Developing user personas, nuggets from insights, laying customer journey maps, POV statements and POV questions to define user needs.
Module 3	Ideate: Techniques to generate, shortlist and evaluate Ideas: Rapid Estimation form and Solution concept form. Prototyping and Testing: Products vs. Services, Rough Prototypes, Testing Techniques, User Experience High-Fidelity Prototypes.
Module 4	Entrepreneurial Innovation: Innovation Management, Business Model Basics, Financial Estimation, Pitch Decks, IPR Considerations.

Textbook:

Michael Lewrick, Patrick Link & Larry Leifer: The Design Thinking Play Book. Wiley Press: 2018



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

SYLLABUS OF COURSES UNDER OPEN ELECTIVE COURSES (OEC)



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governmepet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129

GENDER AND SOCIAL EQUALITY (GSE)

COURSE CODE	22UC0011	MODE	R	LTPS	2-0-0-0	PRE-REQUISITE	NIL
-------------	----------	------	---	------	---------	---------------	-----

Course Outcomes

CO#	CO Description	BTL	PO Mapping
CO1	Understand important issues related to gender in contemporary India	2	PO8, PSO1
CO2	Understand the basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through group discussions.	2	PO10, PSO1
CO3	Understand how gender discrimination works in our society and how to counter it	2	PO8, PSO1
CO4	Understand the gendered division of labour and its relation to politics and economics.	2	PO10, PSO1

Syllabus

Module 1	UNDERSTANDING GENDER: Socialization: Making Women, Making Men, Preparing for Womanhood, Growing up Male, First lessons in Caste, Different Masculinities. GENDER AND BIOLOGY: Missing Women: Sex Selection and Its Consequences, Declining Sex Ratio.
Module 2	Demographic Consequences. Gender Spectrum: Beyond the Binary Two or Many? Struggles with Discrimination. GENDER AND LABOUR: Housework: the Invisible Labor, Women's work: Its politics and Economics, Fact and Fiction. Unrecognized and Unaccounted work.
Module 3	Additional Reading: Wages and Conditions of Work. ISSUES OF VIOLENCE: Sexual Harassment: Say No! Sexual Harassment, not Eve-teasing- Coping with Everyday Harassment, Domestic Violence: Speaking Out, Is Home a Safe Place? -When Women Unite [Film]. Rebuilding Lives. Additional Reading: New Forums for Justice. Thinking about Sexual Violence..
Module 4	GENDER: CO - EXISTENCE : Just Relationships: Being Together as Equals Mary Kom and Onler. Love and Acid just do not Mix. Love Letters. Mothers and Fathers

Reference Books:

Sl No	Title	Author(s)	Publisher	Year
1	Telugu Akademi,	Menon	Zubaan-Penguin Books	2015
2	Seeing like a Feminist	Nivedita	Zubaan-Penguin Books	2005



Koneru Lakshmaiah Education Foundation

(Category -1, Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by **NAAC** as 'A++' ♦ Approved by AICTE ♦ ISO 21001:2018 Certified

Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2576129