



School of Planning and Architecture: Vijayawada

(An institution of National Importance under the Ministry of Education, Govt. of India)

Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture

Course:	MDES111: M.Des. Studio – I (Foundation Studio)	Class: M. Des. 1st Year I - Semester 2024-25
Instructors:	Dr. Khuplianlam Tungnung Ar. Pushendra Kumar	Internal Assessment: 50
		External Theory Exam: 50
Contact Periods/ week: 03 periods. (55 min each)		Total Marks: 100
Time Table:	Monday (03 periods)	Credits: 15 (12+3)

Objective: Develop understanding of product design process, sustainable ergonomics, and user-centered design as an approach to improving product-user interaction and relationships towards enhance user experience. Acquire knowledge of materials and manufacturing techniques, and apply sustainable design practices. Cultivate creativity and enable students to use creative tools for idea generation. Develop visual presentation and interaction skills through sketching, rendering, and 3D modelling software.

Week	Lecture Plan	Remarks/Topic of Assignment
Week 1	Introduction to the course and syllabus overview. Module-I: Design product/oeuvre study and critique: Choose a design product/interiors/design elements of an object or oeuvre for everyday use (at home, streets, schools, universities, markets, etc.)	Lecture + Interaction
Week 2	Module-I: Design product/oeuvre study and critique: Study and critique selected case study individually or in	Lecture + Interaction/Tutorial

Week 3	groups based on application of intuitive (qualitative) or quantitative processes and articulate the same based on any or all of the following: <ul style="list-style-type: none">• Design principles (universal design, discoverability, signifiers, use-centered, user-centered design, interactive, etc.)• Sustainable ergonomics (age-group specific design – Kids, Teens, Adult, Elderly)• Materials selection & manufacturing techniques (light weight, durable, tolerance for error)	
Week 4	<ul style="list-style-type: none">• Product design process & methodology (human-centered iterative design or DD process, etc.)• Prototyping and testing (Iterative design process)	Lecture + Interaction/Tutorial
Week 5		Lecture/Interaction/Presentation (Assessment-Rubric based)
Week 6	**Module II: Tour of Rural Community Enhancement – Accessibility to Comfort & Convenience <ul style="list-style-type: none">• Lifestyle survey: Gain insight into the daily lives of rural residents, understanding their routines, challenges, and priorities.• Identify key activities and elements that significantly affect their livelihoods and well-being.• Propose value-added solutions to streamline daily tasks, improve efficiency, and enhance overall quality of life for rural communities.	Interaction with sites: survey, analysis, questionnaires, discussion, sketches, data-collection, etc.
Week 7		Interaction with sites: survey, analysis, questionnaires, discussion, sketches, data-collection, etc.

Week 8	Module II: Tour of Rural Community Enhancement – Accessibility to Comfort & Convenience <ul style="list-style-type: none">• Explore opportunities for innovation and community development, leveraging local resources and cultural practices to create sustainable solutions tailored to the needs of the rural population.• Educational study trip: Cultural heritage village, rural arts and crafts centers, eco-tourism, etc., to get a first-hand experience of rural traditional crafts like bamboo weaving, pottery, handloom, textile manufacturing etc.	Lecture + Interaction/Tutorial
Week 9		Lecture + Interaction/Tutorial
Week 10	<ul style="list-style-type: none">• Present the solutions in a compelling manner, emphasizing their feasibility, scalability, and potential to enhance the overall quality of life in the city.	Lecture/Interaction/Presentation (Assessment-Rubric based)
Week 11	Module-III: Smart City Solutions – Urban Mobility (Land-Air-Water), Smart Home Energy Monitoring/ Control Systems <ul style="list-style-type: none">• Survey & analyse the urban built environment to identify challenges faced by selected residents (user-centered) with a focus on prevalent issues, such as mobility, energy shortage, safety walkability, and accessibility to community or household essentials including parks and markets.	Lecture + Interaction/Tutorial
Week 12		Lecture + Interaction/Tutorial

Week 13	<p>Module-III: Smart City Solutions – Urban Mobility (Land-Air-Water), Smart Home Energy Monitoring/ Control Systems</p> <ul style="list-style-type: none"> Propose sustainable solutions to address these challenges, considering the limitations of available resources, challenges, and the long-term impact on the community and environment. (Eg. Pvt. or rental electric cycles, drones, kickboards, smartphone apps to monitor energy, etc.) 	Interaction/Presentation (Assessment-Rubric based)
Week 14	<p>*Module IV: 8-10 hours' Time Problem - Future Product Design (Imagine its future)</p> <ul style="list-style-type: none"> The basic idea of this problem is to be able to apply the syllabus mandated study areas including: universal design principles, everyday use products, ergonomics, materials and manufacturing, design process and methods, prototyping and testing (qualitative); Select a contemporary product and conduct user research to understand its current usage patterns and user demographics. Generate innovative design concepts envisioning the future of the product, considering technological advancements, societal trends, and user preferences. (Eg. Pen, Knife, TV, Cycle, etc.) Articulate the concepts and present in a compelling manner, highlighting their potential to meet evolving user needs, enhance user experiences, and contribute to future lifestyles and environments. 	Time problem (Assessment: (Assessment-Rubric based). Time, number of hours to be confirmed as required.
Week 15	All modules/topics	Lecture/Interaction/Presentation (Assessment-Rubric based)
Week 16	Preparation/Make-Up Classes, if any required.	

S. No.	Stages of Evaluation	Weightage
1	Assessments (Assignments)	10
2	Mid Semester Examination	20
3	Assessments (Assignments)	10
4	Time-Problem	10
	Total	50

Outcomes: Students will be able to conceptualised and develop a design object/artefact through pertinent design process & methods, incorporate sustainable ergonomics, forms and usability as an approach to improving product-user interaction and relationships towards enhance user experience. Be able to empathize why and how to afford design products or oeuvres that are intuitively conducive to user experiences to afford pleasure, joy, and reduce frustration. Acquire knowledge of materials and manufacturing techniques, and apply sustainable design practices to design and develop products through systematic design thinking and ideation. The studio is expected to develop and cultivate creativity, overcome blocks, and use creative tools for idea generation and development of products in the form of sketching, rendering, and 3D modelling software.

Course Instructors: sd/- (Dr. Khuplianlam Tungnung) (Ar. Pushendra Kumar)	Head of Department: sd/- (Dr. Srinivas Daketi)
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NOTES:

* The type of project and number of hours for time problem is to be confirmed, as required.

**The date and location of Interaction with Sites: survey, analysis, questionnaires, discussion, sketches, data-collection, etc., are to be confirmed and adjustable as per relevant schedules, activities, and convenience of all concerned.