Course Syllabus
Gyanmanjari Diploma Engineering College
Semester-1

Subject : Paraline Projection - DETID11202

Type of course: Major (Core)

Prerequisite: Basic Knowledge of Geometry.

Rationale: Drafting and graphical representation are essential for accurately conveying design and technical information in fields like architecture, engineering, and design. These skills ensure precision and clarity in drawings, facilitate effective communication, and support the development of creative solutions. Mastery of drafting tools, projection techniques, and rendering methods prepares students for professional roles and advanced studies, bridging the gap between theoretical knowledge and practical application.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					Total Marks
				Theory Marks		Practical Marks		CA	
CI	T	P	C	ESE	MSE	V	P	ALA	
3	-	4	5	60	30	10	20	30	150

Legends: CI-ClassRoom Instructions; T – Tutorial; P - Practical; C – Credit; ESE - End Semester Examination; MSE- Mid Semester Examination; V – Viva; CA - Continuous Assessment; ALA- Active Learning Activities.

Course Content:

Sr. No	Course content	Hrs	% Weightage
1	**Drawing Equipments and Drafting standards** Introduction of drawing table and boards, How to handle paper and pencil, List the tools used for drafting, Describe the scale use for drafting, Describe the use of pencil and different ink pens for drafting.	5	10
2	**Basic of Graphical Representation** Draw different types of lines, List and draw various shapes and forms, Tone- Lights and Shades, Draw various patterns and textures, List and sketch material indication use in construction, Describe different types of annotations, Lettering- free hand lettering small/capital lettering with drafting instrument.	15	35
3	**Paraline Projection** Define orthographic projection, Draw plan, elevations and sections of given objects, Draw isometric and axonometric views of the given object.	15	30
4	**Rendering and Presentation Techniques** Name the mediums required for rendering, Render the drawing and Rendering techniques with various media, Study of various rendering effects, study of rendering effects (sciography, light, and reflection of light.), Study of preparing presentation drawings.	10	25

Continuous Assessment (ALA):

Sr. No	Active Learning Activities	Marks
1	**Drafting Tools Exploration and Practice** Create a drafting toolkit using a variety of equipment. Students will work in groups to identify and use different drafting tools (e.g., scales, pencils, ink pens). They will then draft a simple geometric shape or pattern using the tools provided.	5

2	**Line and Shape Design Challenge** Students design a poster or graphic that uses various types of lines and shapes (e.g., thick/thin lines, vertical/horizontal lines, circles, polygons). They should also include textures and patterns as part of their design.	10
3	**Orthographic and Isometric Drawing Workshop** Provide students with a series of objects or furniture to measure and draw in both orthographic projection (plan, elevation, section) and isometric projection. Students will work on converting measurements into accurate drawings.	10
4	**Rendering Techniques Experimentation** Students will choose a simple drawing and apply different rendering techniques such as graphite shading, color pencils, watercolors, and dry pastels. They will then compare the effects of each medium on their rendering.	5
Total		30

Suggested Specification table with Marks (Theory):60

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	30%	40%	20%	10%	-	-

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcome:

After learning the course the students should be able to:	
CO1	Draw free hand sketches & lettering
CO2	Analyze the effect of colors, shades and shadows.
CO3	Draw and convert 2 dimensional objects into 3 dimensional views & vice versa
CO4	Render & present drawings with various mediums.

List of Practical

Sr. No	Descriptions	Unit No	Hrs
1	Prepare name plate and draw horizontal and vertical lines by using different pencils- H, HB, B, 2B, 4B and 6B	1	06
2	Draw types of lines: Thick & Thin line, Vertical & Horizontal line, slope line, diagonal line, curved line, section line, dotted line, dimension line, construction line and Break line.	2	08
3	Sketch lettering : free hand lettering, lettering with drafting instrument	2	06
4	Draw types of geometrical shapes: Square, rectangle, triangle, circle, polygons (pentagon, hexagon, octagon)	2	06
5	Prepare types of textures (visual)	2	06
6	Draw Orthographic projection of Room with furniture objects	3	10
7	Draw Isometric projection of Room with furniture objects	3	10
8	Prepare a fully rendered presentation drawing of any residential interiors such as living room, bed room or commercial space such as executive's/director's cabin, waiting lounge of a hotel, office work space. (A1 size, white or coloured, plain or textured sheets)	3	08
		Total	60

Instructional Method:

The course delivery method will depend upon the requirement of content and the needs of students. The teacher, in addition to conventional teaching methods by black board, may also use any tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

The internal evaluation will be done on the basis of Active Learning Assignment

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in the laboratory.

Reference Books:

1. Interior Design Visual Presentation: A Guide to Graphics, Models & Presentation Techniques, Second Edition by Maureen Mitton, publisher: Wiley - 2004
2. Interior Color by Design: A Design Tool for Architects, Interior Designers, and Homeowners by Jonathan Poore, Rockport Publishers
3. Basics Interior Design: Retail Design by Lynne Mesher, Ava Publishing
4. Interior Design for Libraries: Drawing on Function & Appeal by Carol R. Brown
5. Smart Materials in Architecture, Interior Architecture and Design by Axel Ritter, publisher: Birkhäuser Architecture