

**NIRMA UNIVERSITY  
INSTITUTE OF DESIGN  
PRODUCT AND INTERACTION DESIGN  
Semester III**

<b>Institute:</b>	<b>INSTITUTE OF DESIGN</b>
<b>Name of Programme:</b>	<b>BACHELOR OF DESIGN</b>
<b>Course Code:</b>	2DD104CC25
<b>Course Title:</b>	<b>Visualisation &amp; Representation Techniques - I</b>
<b>Course Type:</b>	( <input type="checkbox"/> <b>Core</b> / Value Added Course/Departmental Elective/ Institute Elective/ University Elective/ (Open Elective/ Any other)
<b>Year of introduction:</b>	<b>Academic Year 2025-26</b>

<b>L</b>	<b>T</b>	<b>Practical component</b>				<b>C</b>
		<b>LPW</b>	<b>PW</b>	<b>W</b>	<b>S</b>	
			<b>6</b>			<b>3</b>

**Course Learning Outcomes (CLO):**

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

1. **Understand, Apply and analyze** perspective drawing principles (one-point, two-point, and three-point) to create accurate and compelling representations of product forms in space. (BL2, BL3, BL4)
2. **Create and evaluate** sketches that effectively communicate product details, features, and functionality using shading, rendering, and annotation techniques. (BL5, BL6)
3. **Develop and refine** sketching skills as a tool for ideation, communication, and visual problem-solving within the product design process. (BL5, BL6)

**Total Teaching hours: 90**

<b>Unit</b>	<b>Content</b>	<b>Teaching hours</b>
<b>Unit 1</b>	<b>Perspective Drawing</b> <ul style="list-style-type: none"> <li>• Introduction to perspective drawing principles: Horizon line, vanishing points, eye level.</li> <li>• One-point perspective: Sketching objects and interiors in one-point perspective.</li> <li>• Two-point perspective: Sketching objects and buildings in a two-point perspective.</li> <li>• Three-point perspective: Sketching objects and environments with a focus on dramatic viewpoints.</li> <li>• Sketching complex forms and objects in perspective.</li> </ul>	<b>20</b>

<b>Unit 2</b>	<b>Rendering and Communication</b>	40
	<ul style="list-style-type: none"> <li>● Advanced shading and rendering techniques: Light and shadow, highlights, reflections.</li> <li>● Material representation: Sketching different materials (metal, plastic, glass, wood).</li> <li>● Annotation and labeling: Using text and arrows to communicate product features and dimensions.</li> <li>● Exploded views and cutaway drawings: Communicating internal components and mechanisms.</li> </ul>	
<b>Unit 3</b>	<b>Sketching for the Design Process</b>	30
	<ul style="list-style-type: none"> <li>● Sketching as a tool for ideation and brainstorming.</li> <li>● Thumbnail sketching and quick visualizations.</li> <li>● Sketching for client presentations and communication.</li> </ul>	

<b>Self-Study</b>	
<b>Suggested Readings/References</b>	<ul style="list-style-type: none"> <li>● Ching, F. D. K. (2015). <i>Drawing: A creative process</i>. John Wiley &amp; Sons.</li> <li>● Hanks, K., &amp; Belliston, L. (1992). <i>Draw! A visual approach to thinking, learning and communicating</i>. Crisp Publications.</li> <li>● Laseau, P. (2000). <i>Freehand sketching: An introduction</i>. Waveland Press.</li> <li>● Eissen, K., &amp; Steur, R. (2007). <i>Sketching: Drawing Techniques for Product Designers</i>. Bis B.V., Uitgeverij (BIS Publishers).</li> <li>● Robertson, S. (2013). <i>How to Draw: Drawing and Sketching Objects and Environments from Your Imagination</i>. Design Studio Press.</li> </ul>

w.e.f. Academic Year 2025-26 and onwards