

## Design Visualisation

### Module Information

2022.01, Approved

#### Summary Information

Module Code	4262PDE
Formal Module Title	Design Visualisation
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

#### Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

#### Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	22

#### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

#### Aims and Outcomes

Aims	This module introduces theoretical aspects of a range of visualisation techniques used by designers and develops the fundamental sketching, drawing and rendering skills.
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**After completing the module the student should be able to:**

## Learning Outcomes

Code	Number	Description
MLO1	1	Develop a design visually using a range of hand-generated techniques
MLO2	2	Create effective visuals using sketching and drawing software
MLO3	3	Demonstrate a knowledge of visualisation conventions and aesthetics

## Module Content

Outline Syllabus	<p>Knowledge and understanding: Understanding perspectives; understanding design aesthetics; identifying the trends of design; awareness of branding. Skills and other attributes: Hand generated sketching and drawing; design presentation; computer skills (2D software packages); ideating /concept generation. Freehand sketching and technical drawing: Sketching and drawing tools. Sketching and drawing planning and preparation. Line types and weight, arches, circles and ellipses, proportion and scale, one and two point projection, parallel projection, isometric projection. Shading and colour. Multi view sketches, construction lines, auxiliary and section views, annotations. Material, colour, texture, lighting, shadows, reflections, rendering, composition and backgrounds. Technical drawing methodologies to produce drawing solutions to appropriate drawing standards and conventions. Computer aided 2D sketching: Commercial and open source software for digital sketching and rendering 2D scenes. Underlying concepts e.g.: vector versus raster graphics; compression; file size versus quality; file formats; .PSD; .JPEG; .PNG; etc. Composition: Creating an environment. Focal point; overlapping; negative space (or shape); lines; balance; contrast; proportion. Position of lighting, resultant shadows, reflections and rendering of materials and textures. Compositing: Colour spaces; colour remapping; colour correcting; image manipulation; mattes; image-matte relationship. Digital drawing: Basic shapes and construction; lines; contours; hatching; colour; texture; rough and refined line work; scanning; digitising the drawing; image manipulation; cropping; sizing; filtering. Digital tools: Selection tools; drawing tools; rectangular marquee; move; crop; brush; eraser; paint; bucket; gradient tool; pen tool; etc. Other digital tools: Copy; merged; stroke; transform; image; size. Layers: Background; general layer; text Layer; group.</p>
Module Overview	<p><b>Aims</b>  <b>This module introduces theoretical aspects of a range of visualisation techniques used by designers and develops the fundamental sketching, drawing and rendering skills.</b></p> <p><b>Learning Outcomes</b>  <b>After completing the module the student should be able to:</b></p> <p><b>1 Develop a design visually using a range of hand-generated techniques.</b>  <b>2 Create effective visuals using sketching and drawing software.</b>  <b>3 Demonstrate a knowledge of visualisation conventions and aesthetics.</b></p>
Additional Information	<p>UN Sustainable Development Goals This module includes content that relates to the following UN Sustainable Development Goals: SDG09 – this module investigates advanced design processes used to deliver products to market at a faster rate, boosting industrial productivity in a sustainable manner.</p>

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Test	In-class hand-generated test	50	2	MLO1, MLO3
Portfolio	Digital portfolio	50	0	MLO2, MLO3

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
Fang Bin Guo	Yes	N/A

### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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