



AI for Designers and Architects: Generative Design and AI Rendering



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Introduction:

AI for designers and architects is reshaping how studios explore concepts, yet many practices adopt image generators without a method: renders that cannot be built, mood boards of unclear origin, and clients unaware that AI shaped the scheme. This Core Concept course gives architects, interior, graphic and product designers a studio method for text-to-image and image-to-image ideation, AI rendering and upscaling, generative and parametric exploration, massing and space planning, and handover into BIM and CAD. Participants assemble an AI-Assisted Concept Package for a case design brief.

Course Objectives:

- Map the stages of a design project where image generation, rendering and generative exploration add value and where designer judgement must lead
- Write structured design prompts and use reference images, sketches and control inputs to steer text-to-image and image-to-image outputs toward a concept
- Produce AI renders, material studies and upscaled visuals from sketches and base models while keeping geometry, scale and lighting consistent
- Set up parametric rules and generative option studies for massing, space planning, layouts and brand identity systems, and rank the options against criteria
- Transfer AI-derived concepts into BIM and CAD workflows through open exchange formats with documented information requirements
- Manage copyright, licensing, client disclosure and quality control of AI-generated design material before it reaches a client

Target Audience:

- Architects responsible for early-stage concepts, massing options and design presentations
 - Interior designers responsible for space planning, material palettes and visualisations for client approval
 - Graphic and brand designers responsible for identity concepts, layouts and campaign visuals
 - Product and industrial designers responsible for form exploration, variants and presentation renders
 - Visualisation and BIM coordinators responsible for moving concept material into production models
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Course Outline:

Day 1: AI in the Design Process and Image Generation Basics

- Design Stage Mapping: Brief, Concept, Development and Presentation Touchpoints for AI
- Latent Diffusion Image Models: Noise, Seeds, Sampling Steps and Guidance Strength
- Studio AI Readiness Audit: Current Visualisation Pipeline and Bottlenecks
- Design Prompt Anatomy: Subject, Style, Materiality, Camera, Lighting and Negative Terms
- Text-to-Image Concept Sketching Lab for an Interior and a Facade Study

Day 2: Image-to-Image Control, Mood Boards and Generative Principles

- Image-to-Image Transformation from Hand Sketches, Line Drawings and Clay Models
- Control Inputs: Depth Maps, Edge Detection and Pose or Segmentation Guides
- AI Mood Board Assembly: Palette, Texture and Precedent Curation
- Generative Design Loop: Goals, Constraints, Option Generation and Designer Selection
- Parametric Rule Setting: Propagation-Based and Constraint-Based Form-Finding

Day 3: AI Rendering, Space Planning and Layout Workflows

- AI Rendering from Base Models: Material Swaps, Daylight Scenes and Entourage
- Inpainting, Outpainting and Upscaling for Presentation-Resolution Visuals
- Massing Study Generator: Plot Ratio, Height, Orientation and Daylight Criteria
- Space Planning Options: Adjacency Matrix, Circulation and Furniture Layout Variants
- AI-Assisted Brand Identity and Page Layout Variants from a Style Seed

Day 4: BIM and CAD Integration, IP and Output Quality Control

- Concept to Model Handover: IFC Exchange and ISO 19650 Level of Information Need
- Buildability Check: Scale, Structure, Code Clearances and Material Feasibility of AI Images
- Copyright, Training Data Provenance, Licensing and Client IP Transfer Clauses
- Client Disclosure Statement and Studio AI Use Policy for Design Deliverables
- Output Quality Control Rubric: Artefacts, Distortions, Consistency and Brand Fit

Day 5: Studio Lab: AI-Assisted Concept Package

- Case Design Brief Analysis: Mixed-Use Lobby, Retail Interior or Product Launch
 - Concept Option Generation and Criteria-Based Shortlisting
 - Render Set, Mood Board and Massing or Layout Diagram Production
 - Presentation Board and Narrative Build for Client Review
 - AI-Assisted Concept Package Pitch and Peer Critique
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Skills You Will Gain:

- Design Prompt Engineering
- Image-to-Image Concept Development
- AI Architectural Rendering
- Generative Option Studies
- Parametric Massing Exploration
- AI-Assisted Space Planning
- Design IP Risk Management
- Visual Output Quality Review

Why Attend This Course:

- Leave with an AI-Assisted Concept Package, including a render set, mood board and option diagrams, built for a case design brief
- Cut the time between brief and first client-ready visuals while keeping scale, materials and buildability credible
- Present AI-shaped work to clients with a clear disclosure statement and licensing position
- Compare studio AI practice with architects, interior, brand and product designers working across different sectors

Conclusion:

Image models and generative tools reward designers who direct them with intent and check what they return. The five days move from mapping AI onto the design stages and building design prompts, through image-to-image control, mood boards and parametric rules, to AI rendering, massing, space planning and layout variants, then to BIM and CAD handover, copyright, client disclosure and quality control. The studio lab closes with an AI-Assisted Concept Package that participants can adapt to live projects.