

STUDIO Ai+FD

A SPECULATIVE LABORATORY OF FUTURISTIC ARCHITECTURE

THE
FUTURE
LOOKS
BRIGHT

Experiment
Timeline
64 Hours

NIRMAN
ACADEMY

Lab Curriculum

Laboratory Name: **Studio Ai+FD**

Timeline: **64 Hours** (4 Hours per day)

Studio Mentor: **Mr. Ahmad Juvaid**

Foundations of AI in Architecture

Module 1

Session 1 (2 hours): Introduction to AI and its transformative role in architecture.

Key Topics: Generative design, sustainability modelling, and predictive systems.

Session 2 (3 hours): Case studies on AI applications in urban and extra-terrestrial architecture.

Activity: Critical analysis of AI-driven projects.

Session 3 (3 hours): Practical exploration of AI tools in design processes.

Focus: Early experimentation with Rhino Grasshopper for generative forms.



Interior Design with AI Integration

Module 2

Session 4 (8 hours): Creating futuristic interior environments with AI. Focus: Design adaptive, responsive spaces using AI for user comfort, environmental control, and functionality.

Lab Work: Develop interior design and elements that use AI-driven simulations for enhanced user interaction.



Module 3

AI-Driven Extra-terrestrial Design (Option 1)

Session 5 (6 hours): Challenges of Martian and Lunar architecture. Key Topics: Environmental constraints, resource management, and autonomy.

Session 6 (6 hours): Prototyping habitats with AI-assisted generative models.

Lab Work: Develop modular housing systems using Rhino Grasshopper.



Module 4

AI-Driven Urban Futures (Option 2)

Session 7 (6 hours): AI in urban planning: Sustainability and adaptive systems.

Topics: Renewable energy integration, AI-driven mobility, and smart neighbourhoods.

Session 8 (6 hours): Prototyping Futuristic Urban Ideologies
Lab Work:

- Develop visionary urban concepts that challenge conventional planning and architecture.
- Use AI to simulate hypothetical environments for future lifestyles, ecologies, and societies.
- Experiment with ideas like AI-driven modular habitats, self-sustaining ecosystems, and hyper-connected communities.
- Test speculative designs for functionality, adaptability, and scalability in future urban contexts—without anchoring to a specific geography.



Tools for Design and Visualization

Module 5

Session 9 (4 hours): Basics of Rhino Grasshopper for architectural experimentation.
Focus: Create parametric models and simple visualizations.

Session 10 (4 hours): AI-based visualization and simulation tools.
Lab Work: Generate renderings and evaluate AI-influenced outcomes.



Presentation & Documentation Skills

Module 6

Session 11 (8 hours): Preparing architectural design sheets for projects. Topics: Effective layout design, narrative structuring, and visual hierarchy. Lab Work: Drafting and refining project sheets.

Session 12 (4 hours): Report preparation for architectural research. Topics: Writing methodologies, structuring technical reports, and integrating visuals.
Lab Work: Create comprehensive reports to support project outcomes.



Professional Development for Global Careers

Module 7

Session 13 (4 hours): Preparing for careers in multinational companies. Topics: Industry expectations, trends, and skillsets in global architecture.

Session 14 (8 hours): Portfolio and resume development.
Activity: Hands-on session to craft impactful portfolios and professional profiles.



Final Experimentation and Presentations

Module 8

Session 15 (4 hours): Final project synthesis, presentations, and jury reviews.



Key Takeaways

- Understand the practical applications of AI in innovative architectural design.
- Build foundational skills in Rhino Grasshopper for generative processes.
- Learn to prepare polished design sheets and professional architectural reports.
- Create a portfolio that stands out in multinational design firms.
- Explore futuristic design challenges in extra-terrestrial and urban contexts.

JOIN THE JOURNEY TO REDEFINE THE FUTURE OF DESIGN WITH STUDIO Ai+FD

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