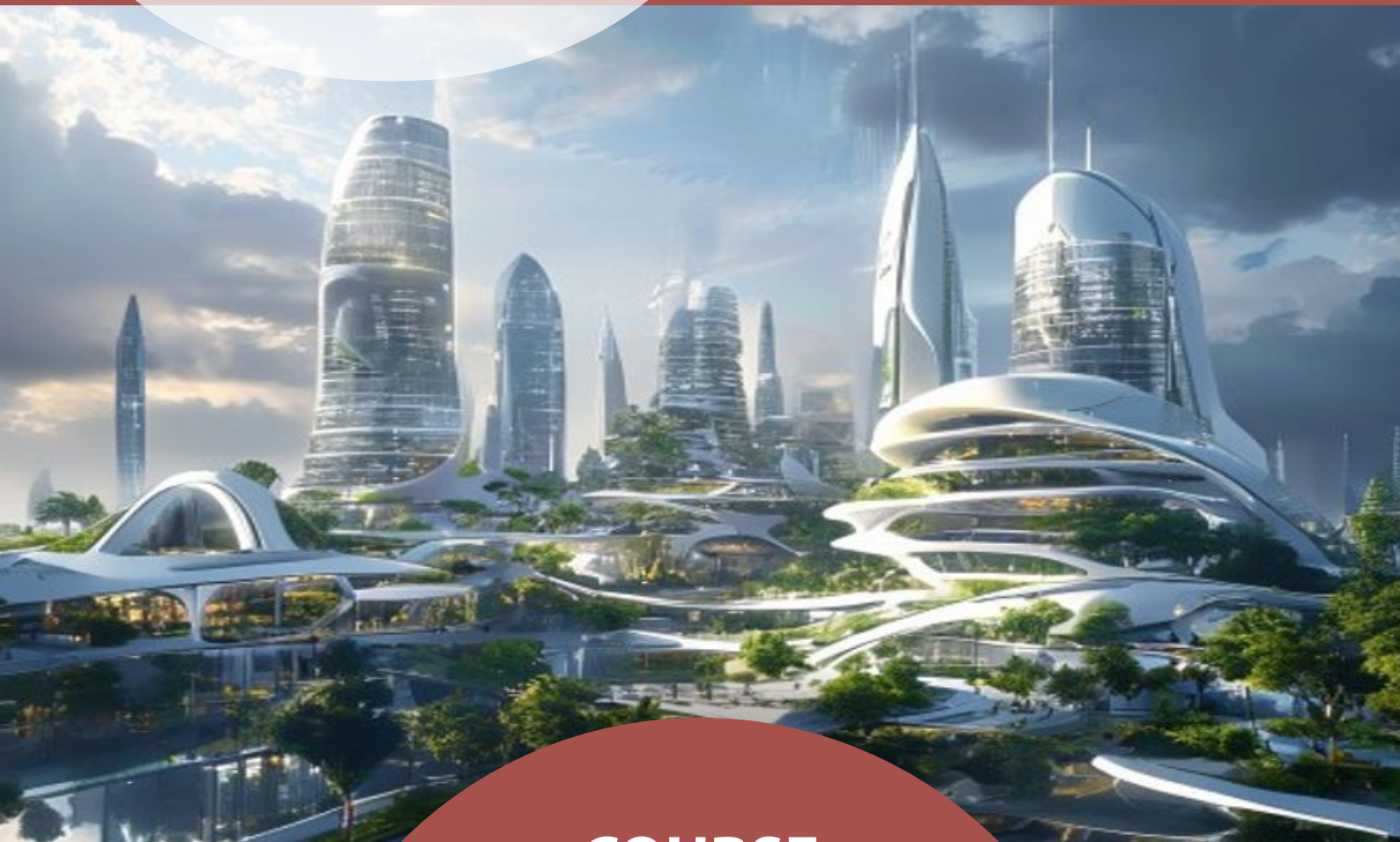




SHARDA
UNIVERSITY
Beyond Boundaries



**SHARDA SCHOOL
OF DESIGN**



COURSE

**AI – Principle
in Architecture
& Design
NV41001**

VALUE ADDED
COURSE BROCHURE
2026-27

ABOUT THE UNIVERSITY

Sharda University is a leading Educational institution based out of Greater Noida, Delhi NCR. A venture of the renowned Sharda Group of Institutions (SGI), The University has established itself as a high quality education provider with prime focus on holistic learning and imbuing competitive abilities in students.

The University is approved by UGC and prides itself in being the only multi-discipline campus in the NCR, spread over 63 acres and equipped with world class facilities.

Sharda University promises to become one of the India's leading universities with an acknowledged reputation for excellence in research and teaching. With its outstanding faculty, world class teaching standards, and innovative academic programmes, Sharda intends to set a new benchmark in the Indian education system.

ABOUT SCHOOL

Sharda School of Design (SSD) prepares the students for the real world they can make a lasting impact in designing the future and have an exciting and rewarding career. The students at SSD have crafted the world as renowned landscape architects, urban planners, urban designers, and history preservationists. The school's nationally accredited degree programs, world-class faculty, and state-of-the-art facilities connect to provide the students with a broad range of opportunities in both the public and private sectors of the industry. SSD leads the students through both practical and theoretical learning until they can master in an innovative design that reflects art and science. The school has forged numerous connections and partnerships with schools and professionals in countries around the world.

The faculty comprises academicians from internationally renowned universities such as the School of Planning & Architecture, B.I.T Mesra, National Institute of Fashion Technology (NIFT), Sheffield University, Nottingham Trent University and Delhi College of Art, University of Delhi as well as leading Architectural practitioners and Planning professionals from all over the country.

Vision of Department

- To be at the Centre of Excellence in Art & Design Education to shape future-ready professionals catering the needs of the design industry and the society .

Mission of Department

- To create a global center of innovation and excellence in art and design industry.
- Promoting in-depth research in art and design studies for sustainable practices.
- To inculcate critical, analytical, cognitive, speculative and creative problem-solving skills.
- To develop a sense of social and professional ethics and values.
- To develop the essence of craftsmanship, future technological and vocational skills.

ABOUT COURSE

This course introduces undergraduate students in Fashion Design, Communication Design, Interior Design and Visual Arts to the fundamentals of data literacy through a no-code, hands-on approach. Students will learn how data is collected, structured, cleaned, visualized, and interpreted to support creative problem-solving and informed design decisions. The course explores different types of design-related data and familiarizes students with intuitive digital tools for managing and analyzing information without requiring programming skills.

The course emphasizes practical applications of data in design by enabling students to collect real-world datasets, organize information using spreadsheets, create meaningful visualizations, and develop dashboards that communicate insights effectively. Through AI-assisted and no-code tools such as ChatGPT, Google Sheets, Canva Graphs, Flourish, and Tableau Public, students will learn to transform raw data into compelling visual narratives that strengthen design concepts and creative workflows.

By the end of the course, students will be able to apply data-driven thinking in design projects, use AI-assisted tools to generate and communicate meaningful insights, and integrate data visualization and storytelling into professional design practices. The course equips learners with the skills to make evidence-based creative decisions while fostering ethical awareness and critical thinking in the use of data and AI within the design process.

RESOURCE PERSON

Mr. Satvinder Singh Walia is a distinguished Creative Design, Motion Media, and Interactive Media professional with over 21 years of combined industry and academic experience. An Autodesk Certified Professional, he has extensive expertise in multimedia, digital design, BIM, CAD, and digital fabrication. Throughout his career, he has delivered professional training and creative solutions for leading organizations, including RedHat, CII, Cisco, Intel, and MTNL. He has also served as Head – Creative & Digital Design at Arena Animation and as an Assistant Professor at the Institute of Design Engineering & Architecture, Rai University.

Mr. Walia has received numerous national and international accolades for his outstanding contributions to creative media and filmmaking. He is a four-time recipient of the Creative Guru Award for Best Film (2009–2012) conducted by Aptech Ltd. and has won First Prize for his short films at Digital Winds, Russia (2011 & 2012).

His academic and research contributions include the publication "3D Architectural Visualization: The Future of Architectural Design" (ISSN: 1006-6748) and multiple published design patents, including innovative designs for Coasters, Trays, a Parametric Bench without Legs, and Multipurpose Shelves.

Currently pursuing an M.A. in Journalism and Mass Communication (IGNOU), Mr. Walia also holds an Advanced Diploma in Multimedia and a Bachelor of Arts. His areas of interest include Creative Design, Multimedia, BIM, CAD, Digital Design Fabrication, Motion Graphics, and Interactive Media, making him an accomplished mentor and resource person for interdisciplinary design and technology education.

ABOUT THE DEPARTMENT

Department of Art & Design established in 2012 at Sharda University, as a multi-disciplinary department has been working tirelessly towards creating global design citizens. Holding their hands, driving them towards innovation through future aligned design thinking & design process, with continuous industry interactions through experiential project-based learning. Its aim is to establish Sharda as a premier center of Design education, where Students are surrounded by an environment of design intuitively based on strenuous research with an aim of developing a new generation of designers, who not only fill the gap of creative entrepreneurs but integrate social and environmental concern to become responsible designers with a mission of

- **Industry-based learning** within the classroom projects as the core of practical teaching, which will include continuous interaction with industries and industry experts to train students as confident Professionals for the future who are initiators & leaders.
- **Related Study Program (RSP)** as research projects based on complete business model by studying, analyzing crafts, connecting business with social impacts while exploring to the maximum and putting them on the forefront of the competitive design industry. Create craft-based design patents from RSPs as well as convert craft documentation into Publications & sources of innovation, combining craftsmanship with technology.
- **Sharda Design Center (SDC)**, used as a vehicle to connect industry with students, business with fresh minds and an instrument to establish Sharda as a multi-disciplinary design interaction center.

1. Course Code	NV41001
2. Course Title	AI Principles in Architecture & Design
3. Credits	Audit
4. Contact Hours (L-T-P)	30 Hours
Course Type	Value added course
5. Course Objective	To introduce students from Design, Architecture, and Planning backgrounds to data literacy through non-coding, hands-on learning. This part helps learners understand how data is collected, cleaned, interpreted, and visualized — using intuitive tools to support design decisions and creative outputs.
6. Course Outcomes	After completion of this course, students will be able to: CO1: Understand different types of data used in design fields. CO2: Collect and structure real-world datasets using no-code tools. CO3: Clean and organize datasets visually without scripting. CO4: Interpret data patterns through visualizations for design decision-making. CO5: Create dashboards and storytelling outputs from structured data. CO6: Apply AI-assisted tools to present meaningful data-driven insights for creative design projects.
7. Course Description	This course introduces students to the language of data without coding, helping them bridge the gap between design thinking and data literacy. Tailored for students in Fashion Design, Communication Design, Interior Design, Visual Arts, and Architecture, this part explores how design decisions are increasingly data-driven—from trend prediction to layout optimization and spatial analysis. Through intuitive, no-code tools like Google Sheets, Canva Graphs, Flourish, Tableau Public, and ChatGPT, students will learn how to collect, clean, visualize, and interpret data, making it a core component of their design workflows. The course emphasizes storytelling through data, allowing students to support their creative concepts with measurable insights and impactful dashboards. This part is essential for developing a data-aware design mindset, which is increasingly expected in both creative agencies and planning firms.
8. Outline syllabus	
	Duration Hours
Unit 1	Data Foundations for Designers
	What is data? Types of data: numerical, categorical, spatial, visual Examples from: Fashion Design: Fabric type stats, trend timelines. Communication Design: Engagement rates, sentiment. Interior Design: Space usage logs, lighting frequencies. Architecture: Occupancy data, material specs. Visual Arts: Color usage, viewer reaction stats. Data ethics & ownership. AI Tools: ChatGPT for data insight generation, AI add-ons in Google Sheets, and Canva AI for visual representation of patterns.
Unit 2	Data Collection Methods
	Secondary data: How to find open datasets (Kaggle, city portals, museum archives). Using ChatGPT to simulate small datasets. Manual collection methods via observational logging. Tools: Google Forms, Typeform, ChatGPT. Hands-on: Collect design-related data and organize in a spreadsheet.
Unit 3	Structuring and Cleaning Data Visually
	Spreadsheets as data canvases. Common errors: missing values, typos, format issues Filtering, sorting, validating inputs using: Google Sheets, Excel Use-case cleaning exercises per domain. Fashion: Product style cleanup. Architecture: Site measurement table. Tools: Google Sheets AI, Excel AI add-ons. Visual Arts: Artworks dataset by genre.

8. Outline syllabus		Duration Hours
Unit 4	Data Visualization for Creative Interpretation	
	What makes a good visual representation? Charts: Bar, Pie, Line, Scatter, Heatmap Design-led insights. Interior: Layout efficiency. Communication: Message reach. Fashion: Color trend evolution. Tools: Canva AI Graph Maker, Flourish, Tableau Public (no-code). Hands-on: Create a small report with 2–3 visual charts.	CO4
Unit 5	Dashboards, Visual Summaries, and AI-Assisted Insights	
	Combining visuals into dashboards. Narrative insights: Telling a story from your data. Using AI to summarize insights (ChatGPT, Google Sheets AI). Presenting visuals in a design context. Tools: ChatGPT, Google Sheets AI, Canva Dashboard Templates. Hands-on: Create a dashboard (PDF/poster) for any one domain project.	CO5,CO6
Course Outline	This course is structured into five units that progressively introduce students to the essentials of working with data in creative disciplines without any coding. The journey begins with Unit 1, which familiarizes students with the fundamentals of data in design, including the types, sources, and ethical use of data relevant to fields such as fashion, architecture, interiors, communication design, and visual arts. Unit 2 focuses on data collection techniques using no-code tools like Google Forms, Typeform, and ChatGPT, allowing students to create, simulate, and gather datasets for design-related scenarios. Unit 3 builds on this foundation by teaching data cleaning and structuring using Google Sheets and Excel—students learn to identify errors, sort and format entries, and prepare data for analysis. In Unit 4, students explore the art of visualizing data using platforms like Canva Graphs, Flourish, and Tableau Public, learning how to create clear and insightful charts to support design decision-making. Finally, Unit 5 guides students through the creation of dashboards and visual summaries, incorporating AI-assisted tools like ChatGPT and Google Sheets AI to craft compelling data narratives and presentations that enhance their design concepts. Together, these units ensure students become data-aware designers capable of integrating measurable insights into their creative processes without writing a single line of code.	
Mode of Examination	Practical and project-based	
Weightage Distribution	CA	
	100%	
References		
Text book/s*	Knaflic, C. N. (2015). Storytelling with Data. Wiley Few, S. (2012). Show Me the Numbers: Designing Tables and Graphs to Enlighten	
Other References	Official documentation: Google Sheets, Canva Graphs, Flourish, Tableau Public. Online platforms: Kaggle, Open Design Data Library, ArchDaily Stats. AI support tools: ChatGPT, Google Sheets AI features.	