



PHOENICIA UNIVERSITY

The Architectural Toolkit

The instruments architecture students rely on — from the first pencil sketch to the final physical model.

School of Architecture & Design | Foundations of Architectural Practice

1 Why a Toolkit Matters

Before software renders a single wall, an architect's ideas usually pass through a hand-drawn sketch, a carefully drafted line, and a physical model you can hold.

Each tool in this kit exists to support one stage of that process — from a first idea to a final presentation.

FOUR CATEGORIES OF TOOLS

Drawing & Sketching

Generating and communicating ideas quickly, by hand.

Drafting & Measuring

Producing precise, accurate technical drawings.

Model Making

Turning a flat drawing into a physical, three-dimensional form.

Site & Presentation

Documenting real conditions and presenting finished work.

2 Drawing & Sketching

The tools for generating and refining an idea by hand, before anything is final.

Sketchbook

The default surface for generating and refining ideas quickly, before any tool is precise.

Mechanical Pencils (0.3, 0.5, 0.7mm)

Different lead widths let a single pencil switch between fine detail and bolder strokes.

Technical Pens

Produce consistent, uniform line weights for finished ink drawings.

Tracing Papers

Let a drawing be refined in layers, tracing over an earlier version without redrawing it.

Markers & Colored Pencils

Add tone, shading, and material distinction to a sketch or rendering.

Erasers

Precision correction without damaging the surrounding linework.

3 Drafting & Measuring

The instruments that turn a rough idea into a precise, accurate technical drawing.

T-square

Anchors to a drafting board's edge to guide perfectly horizontal lines.

Architectural Scale Ruler & Metal Ruler

Converts real-world dimensions directly onto a drawing at a fixed scale, and provides a straight edge for cutting.

Set Squares (30°, 60° & 45°)

Paired with a T-square to draw precise vertical and angled lines.

Protractor

Measures and lays out exact angles on a drawing.

Compass

Draws precise circles and arcs, and transfers measurements between points.

Measuring Tape

Captures real-world dimensions on site, later transferred to scale on paper.

4 Model Making

The materials and tools for turning a flat drawing into a physical, three-dimensional form.

Foam Board

A lightweight core material for quickly building massing and structural models.

Cardboard

An inexpensive material for early concept models and quick iterations.

Craft Knife / Cutter + Spare Blades

Cuts clean, precise edges into card and foam — a dull blade tears rather than cuts.

Cutting Mat

Protects work surfaces and keeps cuts straight along a grid.

Glue & Adhesives

Bonds model components together — the right adhesive depends on the material being joined.

5 Site & Presentation

The tools for documenting a real site, and presenting a project once it's finished.

Site Notebook

Records field observations, dimensions, and sketches directly at a real site.

Camera / Smartphone (Site Documentation)

Captures a site's real conditions for reference back in the studio.

Meter

Measures long distances on site quickly and accurately.

6 The Digital Layer

Modern architectural practice also depends on digital tools — modeling software, rendering engines, and simulation tools all require serious computing power.

A laptop with a dedicated graphics card is now considered essential kit, just like a sketchbook or a T-square.

WHY IT MATTERS

***Hand tools shape how you think.
Digital tools shape how far that
thinking can go.***



7 The Complete Toolkit at a Glance

Category	What It's For	Key Tools
Drawing & Sketching	Generating and communicating ideas by hand	Sketchbook, technical pens, tracing paper
Drafting & Measuring	Producing precise, accurate technical drawings	T-square, scale ruler, set squares, compass
Model Making	Turning a flat drawing into a physical, 3D form	Foam board, cutting mat, craft knife, glue
Site & Presentation	Documenting real conditions and presenting work	Site notebook, camera, meter



“Less is more.”

— Ludwig Mies van der Rohe, architect