UNDERGRADUATE TRANSFER APPLICANT

Rashmi Bhatia

University of Oregon — Bachelor of Architecture (NAAB 5-Year Program)

> *"Find perfection in the imperfect — bridging tactile hand craft with computational precision."*

My architectural training began at Cal Poly San Luis Obispo's 4-week Architecture Summer Career Workshop in Summer 2024, where I fell in love with Cal Poly's "Learn by Doing" tectonic culture. Across my first two years in the University of Oregon's 5-year B.Arch program — alongside my paid professional practice as an **Architecture Intern at Kohler Architects** logging supervised **NCARB Architectural Experience Program (AXP)** hours — I have synthesized rigorous hand drafting, plaster casting, and physical site modeling with Rhino, Grasshopper parametric workflows, laser-cut fabrication, and building construction systems. This portfolio is organized by Cal Poly course equivalencies to demonstrate readiness for direct entry into Cal Poly's third-year B.Arch design sequence.

ACADEMIC STANDING

3.76 UO GPA • 3.97 Arch GPA

PROFESSIONAL PRACTICE (NCARB AXP)

Architecture Intern • Kohler Architects

CAL POLY CONNECTION

Cal Poly Summer Workshop '24

HONORS & LEADERSHIP

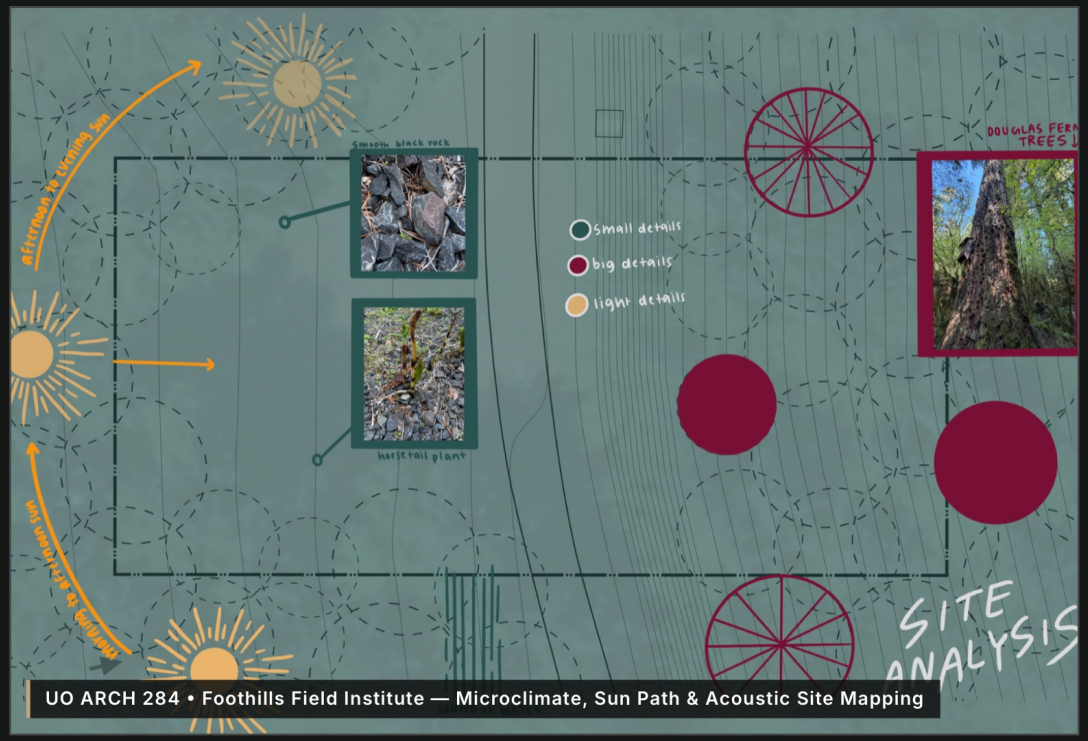
Dean's List • Distinguished Eagle Scout

TRANSFERABLE UNITS BY SPR '27

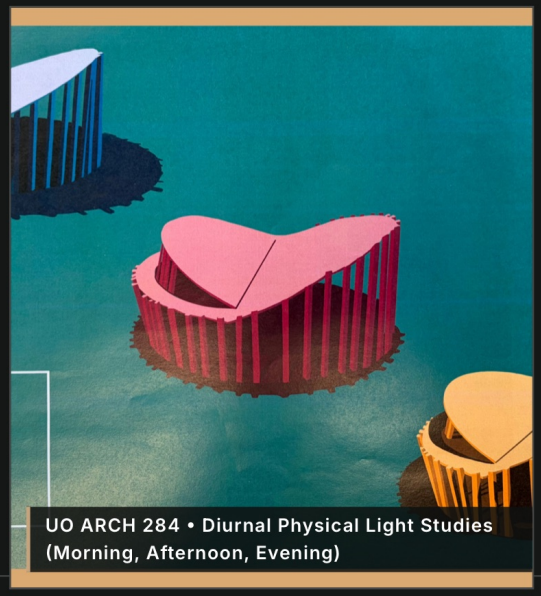
128 Quarter / 85.3 Semester Units

PORTFOLIO & CONTACT

rashmi-bhatia.com • 510-518-7596



UO ARCH 284 • Foothills Field Institute — Microclimate, Sun Path & Acoustic Site Mapping



UO ARCH 284 • Diurnal Physical Light Studies (Morning, Afternoon, Evening)



UO ARCH 222 • Rhino 3D Eggcrate Contours & Laser-Cut Tectonic Assembly

Course Equivalency Matrix, Studio Sequence & Portfolio Index

110 QTR UNITS APPLIED • 128 QTR (85.3 SEM) BY SPRING '27

SEMESTER (FALL 2027) & QUARTER (LEGACY) CROSSWALK

PORTFOLIO ORGANIZATION

Designed for Cal Poly Review

Per Cal Poly Architecture Transfer Guidelines, this portfolio presents 1–3 spreads per studio and technical course, pairing iterative process artifacts (field sketches, diagrammatic analysis, laser-cutting beds, midterm review pinups) with resolved orthographic, paraline, physical model, and computational outcomes.

Pages 03–04: UO ARCH 202 Design Skills → *CP ARCH 1101 (131/132)*

Pages 05–07: UO ARCH 283 Design Studio I → *CP ARCH 1101/1102 (132/133)*

Pages 08–10: UO ARCH 284 Design Studio II → *CP ARCH 1102/2201 (251/252)*

Pages 11–12: UO ARCH 222 Digital Methods → *CP ARCH 2201/2241*

Page 13: UO ARCH 383, 450, 470, 491 → *CP ARCH 2201/2202 & 2241/2242*

Pages 14–15: Cal Poly SLO Summer Workshop '24 → *CP ARCH 1101/131*

Page 16: UO ARH 314 (→ *CP ARCH 2221*), Bottu Mag & Fine Art



APPLICANT PROFILE — UO B.ARCH • CAL POLY WORKSHOP ALUM

Note on UO Studio Grading Policy (P*)

University of Oregon B.Arch design studios (ARCH 202, 283, 284, 383, 384) are offered exclusively on a mandatory Pass/No-Pass (P*) basis, where P* certifies C- or better studio mastery. Graded architecture lectures: ARCH 201 (A+), ARCH 222 (A), ARH 314 (A-).

CAL POLY FALL 2027 REQUIREMENT	LEGACY QTR CODE	UNIVERSITY OF OREGON / PCC COURSE COMPLETED OR PLANNED	TERM	QTR / SEM UNITS	GRADE / STATUS	PAGES
ARCH 1101 Arch Design 1	ARCH 131, 132	**ARCH 201** Intro to Arch + **ARCH 202** Design Skills + **ARCH 283** Design I	F25 / W26	13.0q / 8.7s	A+ / P* / P*	P03–07
ARCH 1102 Arch Design 2	ARCH 133, 251	**ARCH 284** Architectural Design II + **ARCH 222** Intro Arch Comp Graph	Spr 2026	10.0q / 6.7s	P* / A	P08–12
ARCH 2201 Arch Design 3	ARCH 252	**ARCH 383** Architectural Design III + **ARCH 450** Spatial Composition	Fall 2026	10.0q / 6.7s	IN PROGRESS	P13
ARCH 2202 Arch Design 4	ARCH 253	**ARCH 384** Architectural Design IV + **ARCH 440** Human Context of Design	W27 / S27	10.0q / 6.7s	PRE-REG / PLAN	P13
ARCH 2241 Arch Tech Fund 1	ARCH 241, 242	**ARCH 470 + Lab** Building Construction	Fall 2026	4.0q / 2.7s	IN PROGRESS	P13
ARCH 2242 Arch Tech Fund 2	ARCH 207	**ARCH 491 + Lab** Environmental Control Systems I	Win 2027	4.0q / 2.7s	PRE-REGISTERED	P13
ARCH 2221 World Arch Hist I	ARCH 217	**ARH 314 + Dis** History of World Architecture I (Desired Course)	Fall 2025	4.0q / 2.7s	A- (COMPLETED)	P16
ARCH 2222 World Arch Hist II	ARCH 218	**ARH 315 + Dis** History of World Architecture II (Desired Course)	Win 2027	4.0q / 2.7s	PRE-REGISTERED	P16
ARCE 1121 Structural Princ I	ARCE 211	**ARCH 461** Structural Behavior (Desired Course + Summer '24 Bridges)	Spr 2027	4.0q / 2.7s	PLANNED SPR '27	P14
PHYS 1121 College Physics I	PHYS 121, 122	**PHYS 201 + Lab** & **PHYS 202 + Lab** General Physics I & II	F25 / W26	8.0q / 5.3s	P / P (DONE)	—
MATH 1007 / 1261 Math (GE B4)	MATH 141 / 182	**MATH 112Z** Precalculus II (or **MATH 251** Calculus I)	Spr 2027	4.0q / 2.7s	PLANNED SPR '27	—
Golden Four A2 Written Comm	ENGL 134	**UO WR 121Z** Composition I	Fall 2025	4.0q / 2.7s	A+ (COMPLETED)	—
Golden Four A3 Critical Thinking	ENGL 145	**PCC WR 122Z** Composition II (+ **UO PSY 301** Scientific Thinking)	Sum 2026	8.0q / 5.3s	A / C+ (DONE)	—
Golden Four A1 Oral Comm	COMS 101	**COMM 111Z** Public Speaking	Spr 2027	4.0q / 2.7s	PLANNED SPR '27	—
GE Areas C, D, B2 & Electives	CSU GE Breadth	**PSY 306** (A), **ENG 381M**, **UGST 109**, + **28.0 Cr Passed AP Exams**	2023–2027	37.0q / 24.7s	COMPLETED	—

FIVE CAL POLY EVALUATION PILLARS ADDRESSED ACROSS EVERY SPREAD

1. Portfolio Layout & Graphics: Disciplined architectural grid & hierarchy. | **2. Drawing Communication:** Line weights across graphite, Micron, AutoCAD & Rhino. | **3. Text Descriptions:** Explicit project briefs, media, scales & critique response. | **4. Design Creativity & Rigor:** Iterative evolution from midterm to final. | **5. Technical Competence:** Parametric scripts, laser cutting, structural spans & ECS.

Course 01 (Spread 1/2) — Orthographic Projection: Hand Drafting to AutoCAD Precision

EQUIVALENT TO CAL POLY ARCH 1101 (131/132)

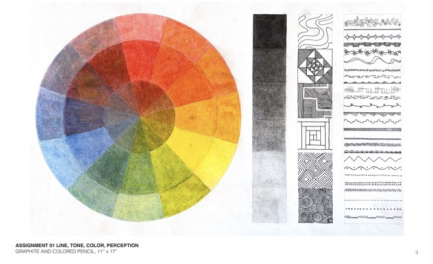
RUBRIC FOCUS: DRAWING COMMUNICATION • LINE HIERARCHY • TECHNICAL COMPETENCE

COURSE & PROJECT BRIEF

Foundations of Architectural Representation

ARCH 202 establishes rigorous conventions of architectural drawing, training the eye and hand to translate three-dimensional form into disciplined two-dimensional orthographic planes before transitioning into digital CAD production.

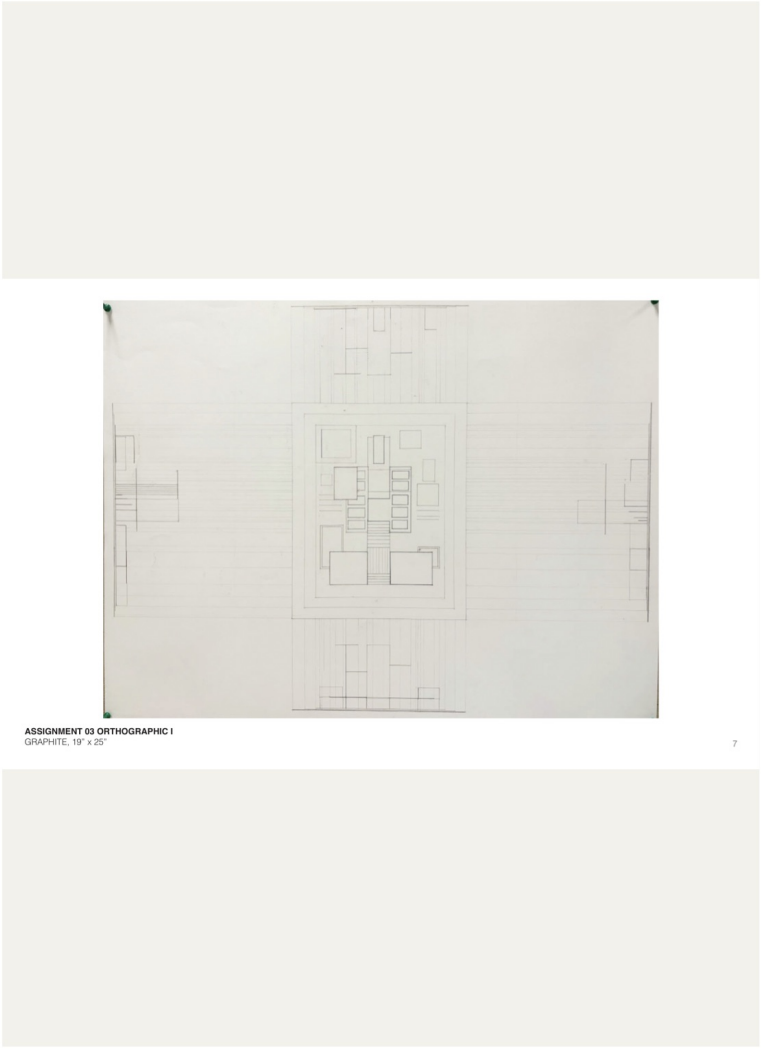
Across Assignments 01, 03, 04, and 07, I investigated how line weight hierarchy (cut profile, spatial edge, surface hatching, and construction regulating lines) communicates section depth and material mass.



PROCESS 01 — GRAPHITE & COLORED PENCIL • 11″ × 17″

Line, Tone, Color & Visual Perception

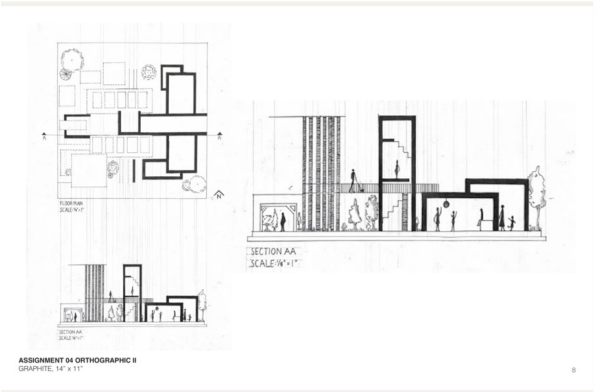
Controlled tonal gradients and chromatic layering calibrating hand pressure and value contrast.



ASSIGNMENT 03 • HAND DRAFTING — GRAPHITE ON VELLUM • 19″ × 25″

Orthographic Projection I — Unfolded Plan, Section & Elevation

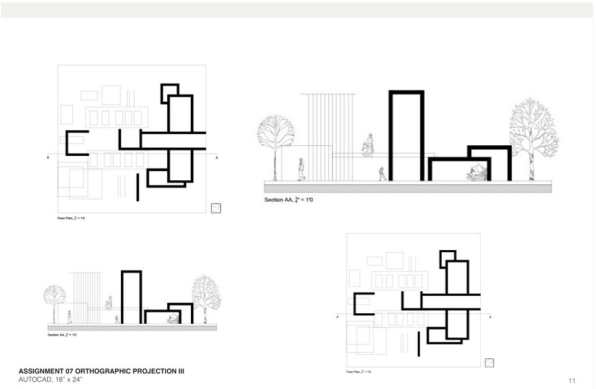
Full-sheet orthographic set drafted by hand with lead holders. Projecting regulating lines directly from the central plan to the four unfolded elevations ensured geometric fidelity and line-weight hierarchy.



ASSIGNMENT 04 — GRAPHITE • 14″ × 11″

Orthographic Projection II — Complex Massing

Multi-level orthographic study resolving interlocking volumes, stair circulation, and aperture alignment.



ASSIGNMENT 07 • DIGITAL CAD — AUTODESK AUTOCAD • 18″ × 24″

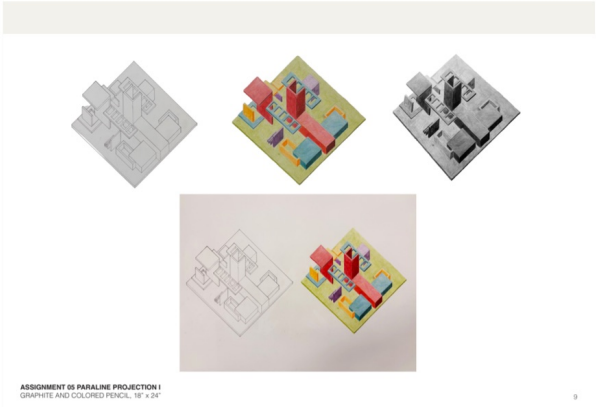
Orthographic Projection III — Analog-to-AutoCAD Translation

Translating hand-drafting standards into AutoCAD layer states, CTB plot-style line weights, and multi-viewports.

Course 01 (Spread 2/2) — Paraline Axonometrics, Perspective Collage & 3D Analytical Diagrams

EQUIVALENT TO CAL POLY ARCH 1101 (131/132)

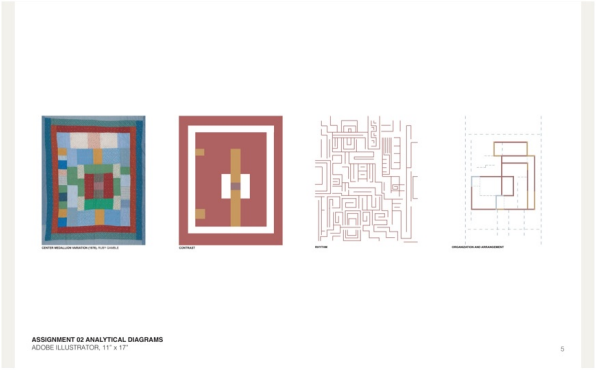
RUBRIC FOCUS: SPATIAL DIAGRAMMING • PARALINE CONSTRUCTION • MIXED MEDIA



ASSIGNMENT 05 GRAPHITE & COLORED PENCIL • 18″ × 24″

Paraline Projection I — Cutaway Axonometric

Isometric and plan-oblique projections combining graphite drafting with chromatic value coding to reveal interior spatial volumes and structural walls simultaneously.



ASSIGNMENT 02A • 2D ANALYSIS ADOBE ILLUSTRATOR • 11″ × 17″

Analytical Diagrams — Vector Spatial Abstraction

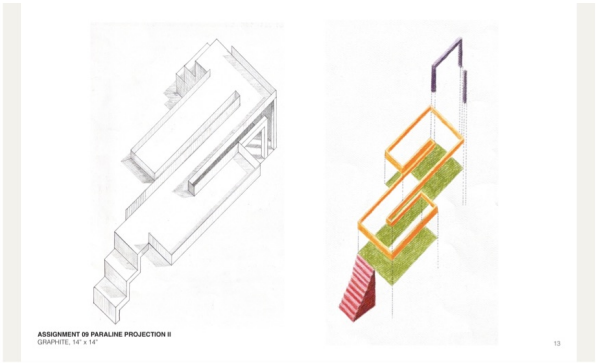
Distilling architectural proportion, circulation axes, and programmatic zoning into vector diagrams.



ASSIGNMENT 06 GRAPHITE, COLORED PENCIL & PAPER COLLAGE • 18″ × 24″

Perspective Projection I — Constructed Two-Point & Collage

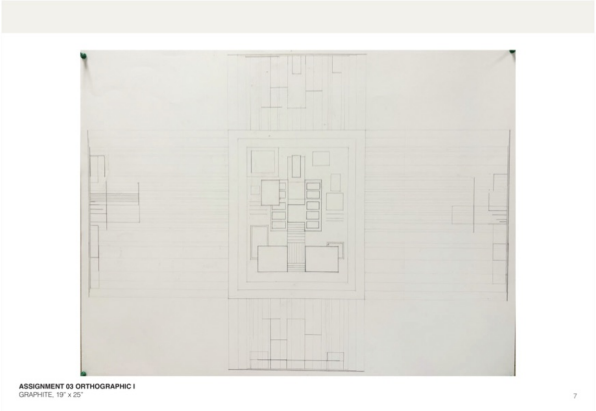
Constructed station-point perspective enriched with cut-paper collage to test human eye-level scale, materiality, and threshold depth.



ASSIGNMENT 09 GRAPHITE • 14″ × 14″

Paraline Projection II — Exploded Tectonic Assembly

Advanced graphite axonometric articulating structural frame, stair core, and envelope hierarchy.



ASSIGNMENT 02B • 3D TRANSLATION PAPER & CARDBOARD • 10″ × 8″ × 4″

Analytical Diagram — Spatial Extrusion Model

Translating 2D vector diagrams into a physical tectonic relief model exploring layered planes and structural rhythm.



ASSIGNMENT 08 ADOBE PHOTOSHOP • 11″ × 17″

Digital Collage — Atmospheric Narrative

Layering architectural geometry, texture, and lighting in Photoshop to evoke lived spatial atmosphere.

Course 02 (Spread 1/3) — Spatial Thinking Through Making: Line, Plane, Canopy, Landform & Mass

EQUIVALENT TO CAL POLY ARCH 1101 / 1102

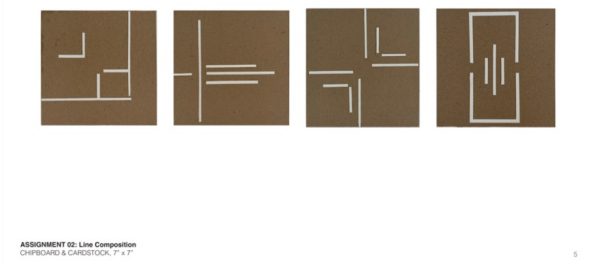
RUBRIC FOCUS: DESIGN CREATIVITY & RIGOR • PHYSICAL CRAFT • TECTONIC SYSTEMS

STUDIO PEDAGOGY & PROCESS

Tectonic Vocabulary: Five Elemental Operations

ARCH 283 (6-credit studio) investigates architecture through five foundational spatial operations: **Line** (frame), **Plane** (enclosure), **Canopy** (overhead filtration), **Landform** (topographic datum), and **Mass** (stereotomic subtraction).

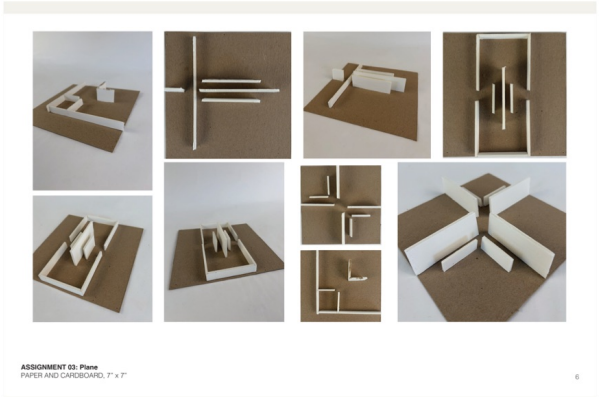
Each study required iterative physical prototyping inside a strict 7″×7″ or 4″×7″ bounding volume before synthesizing all five operations into an integrated architectural sequence.



ASSIGNMENT 02 • TECTONIC FRAME — CHIPBOARD & CARDSTOCK • 7″ × 7″

Line Composition — Linear Density & Implied Volume

Translating 2D linear vectors into a 3D structural lattice that modulates porosity and directional sightlines.



ASSIGNMENT 03 • PLANAR HIERARCHY — PAPER & CARDBOARD • 7″ × 7″

Plane — Threshold, Folding & Spatial Compression

Investigating how folded and intersecting planar walls establish primary, secondary, and interstitial rooms.



ASSIGNMENT 04A • OVERHEAD SHELTER — MIXED MEDIA TECTONIC ASSEMBLY

Canopy — Daylighting & Structural Rhythm

An overheadspanning armature mediating between sky and ground by filtering directional sunlight into patterned shadow.



ASSIGNMENT 04B • GROUND DATUM — CARDBOARD & FOAMBOARD • 7″ × 7″

Landform — Stepped Topography & Ascent

Carving and stepping contour strata to choreograph drainage, prospect/refuge, and the bodily experience of ascent.



ASSIGNMENT 05 • STEREOTOMIC CASTING — CAST PLASTER & FORMWORK • 4″ × 7″

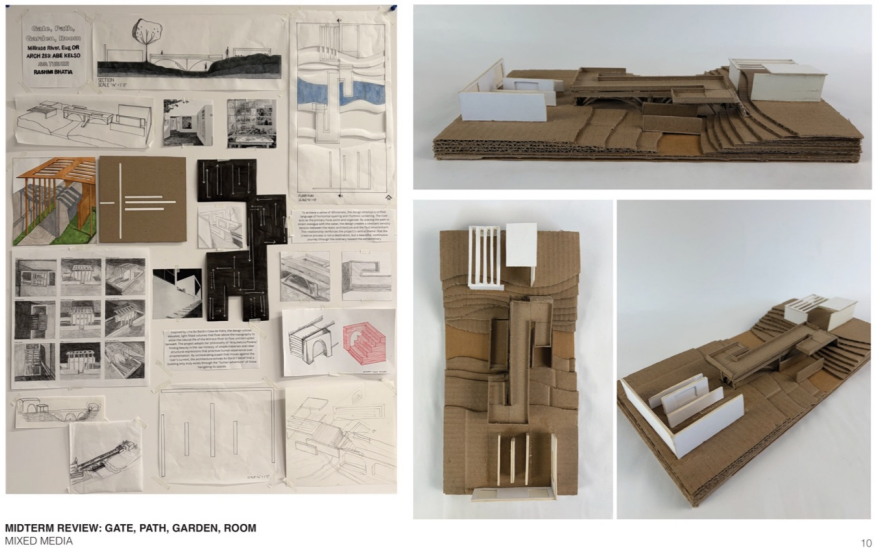
Mass: Inhabited Wall — Solid-Void Plaster Casting

Designing negative formwork to cast a monolithic plaster wall carved with habitable alcoves, light apertures, and deep thresholds.

Course 02 (Spread 2/3) — Design Iteration: “Gate, Path, Garden, Room” (Midterm vs. Final)

EQUIVALENT TO CAL POLY ARCH 1101 / 1102

RUBRIC FOCUS: DESIGN CREATIVITY & RIGOR • PROCESS-TO-FINAL EVOLUTION



MIDTERM REVIEW: GATE, PATH, GARDEN, ROOM
MIXED MEDIA

10

PHASE 01 • MIDTERM REVIEW PROPOSITION

MIXED MEDIA PHYSICAL MODEL & ORTHOGRAPHIC DRAWINGS

Midterm Synthesis — Choreographing Threshold, Circulation, Landscape & Shelter

Synthesizing landform, inhabited wall, plane, and canopy into a four-part architectural promenade: an entry threshold (Gate), an ascending circulation spine (Path), an open contemplative court (Garden), and an enclosed pavilion (Room). Midterm critique highlighted opportunities to tighten tectonic joints between the overhead canopy and stepped terrain.



FINAL REVIEW: GATE, PATH, GARDEN, ROOM
MIXED MEDIA

11

PHASE 02 • FINAL REVIEW RESOLUTION

REFINED MIXED MEDIA MODEL, SECTIONS & SPATIAL SEQUENCE DRAWINGS

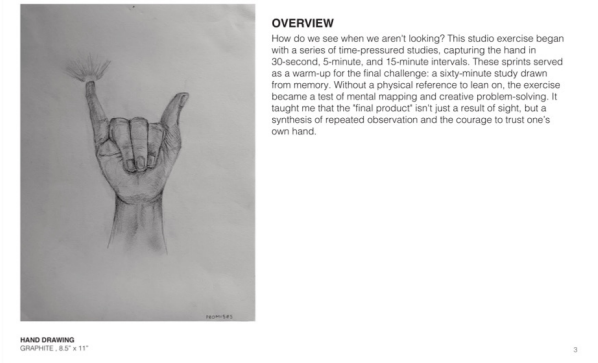
Final Proposition — Resolved Tectonic Continuity & Section Hierarchy

Responding directly to midterm jury feedback, the final iteration recalibrated the topographic section to embed the mass wall deeper into the slope, articulated a lighter rhythmic wood canopy over the final Room, and clarified the visual axis from the entry Gate across the sunken Garden.

Course 02 (Spread 3/3) — Observational Hand Drafting, Collaborative Logic & Paraline Synthesis

EQUIVALENT TO CAL POLY ARCH 1101 / 1102

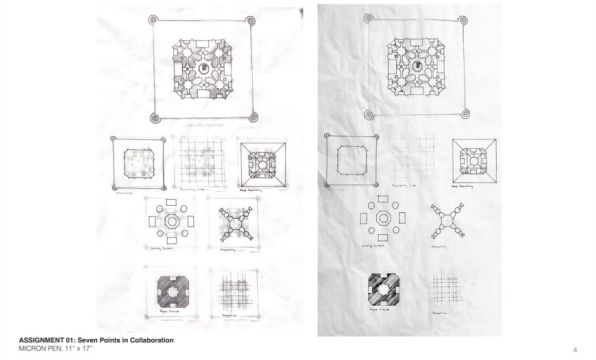
RUBRIC FOCUS: FREEHAND DRAWING COMMUNICATION • SPATIAL ANALYSIS



OBSERVATIONAL STUDY — GRAPHITE ON PAPER • 8.5″ × 11″

Timed Observational & Memory Hand Studies

Rapid 30-second, 5-minute, and 15-minute contour and volume studies culminating in a 60-minute study drawn entirely from spatial memory.



ASSIGNMENT 01 • COLLABORATIVE DRAWING — MICRON INK PEN • 11″ × 17″

Seven Points in Collaboration — Shared Geometric Rules

Multi-author generative drawing establishing datum nodes and vector trajectories where independent hands converge into a unified spatial field.

STUDIO SYNTHESIS DRAWING — GRAPHITE & MIXED MEDIA

Studio Spatial Projection & Tectonic Documentation

Using drawing not merely as post-hoc documentation, but as an active analytical instrument to test shadow, proportion, and structural enclosure.

Course 03 (Spread 1/3) — Foothills Field Institute: Ecological Site Analysis & Program Matrix

EQUIVALENT TO CAL POLY ARCH 1102 / 2201

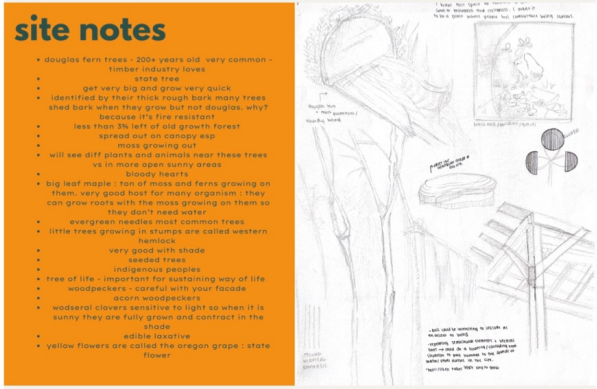
RUBRIC FOCUS: SITE ANALYSIS • PROGRAM DIAGRAMMING • DESIGN CONCEPT

INTEGRATED BUILDING PROPOSAL

Foothills Field Institute (Biology Research Center)

Sited in an old-growth Douglas fir and western hemlock forest ecosystem in the Oregon foothills, the **Foothills Field Institute** is a public biology research center and educational sanctuary for students, visiting scientists, and teachers.

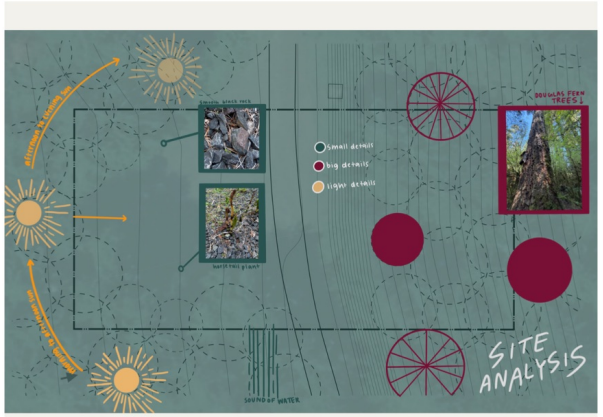
My design concept centers on **curiosity and ecological reciprocity**: a radial timber-louvered pavilion capped by a rainwater-harvesting butterfly roof and living rooftop garden that channels storm runoff into a central acoustic water feature.



PROCESS 01 • FIELD SKETCHING — GRAPHITE FIELD NOTES & BOTANICAL SURVEY

On-Site Ecological & Tectonic Field Notes

Documenting 200-year-old fire-resistant Douglas fir bark, light-sensitive wood sorrel clovers, obsidian gravel, and heavy-timber truss precedents on site.



SITE ANALYSIS — SOLAR TRAJECTORY, CANOPY & ACOUSTIC WATER MAPPING

Microclimate, Sun Path & Sensory Site Mapping

Mapping morning-to-evening solar angles across the sloped contour lines, acoustic zones from the creek, old-growth root zones, and micro-details (smooth black rock & horsetail plants).



SITE CONTEXT — FIELD PHOTOGRAPHY

Canopy Filtering, Wetland Edge & Timber Bridge Context

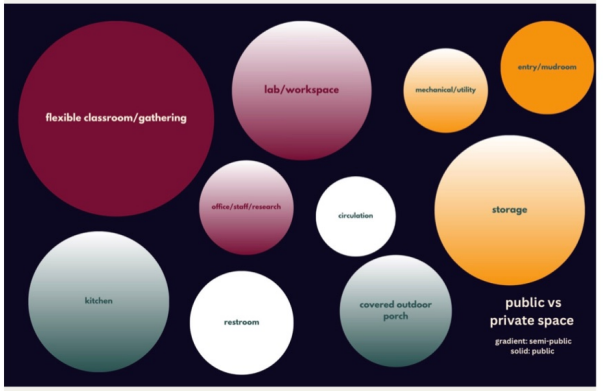
Photographic survey of vertical tree rhythms and filtered zenithal light informing the building's vertical louver facade.



PROGRAM DIAGRAM 01 — DIGITAL VECTOR MATRIX

Programmatic Zoning: Education, Flow, Basic Needs & Maintenance

Proportional area and adjacency clustering linking Flexible Classroom/Gathering, Lab/Workspace, and Research Offices with Covered Outdoor Porch and Mudroom/Storage.



PROGRAM DIAGRAM 02 — SPATIAL PRIVACY GRADIENT

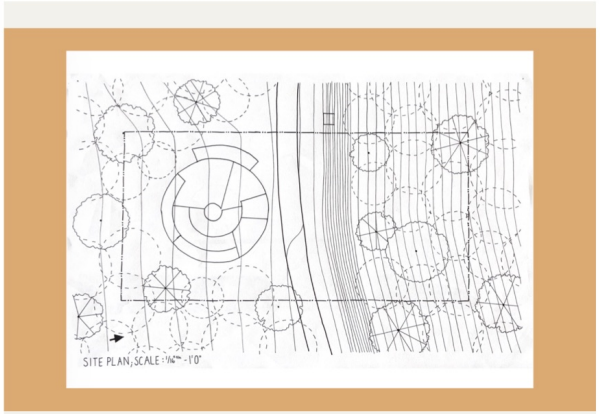
Public vs. Semi-Public Acoustic & Access Gradient

Differentiating solid public gathering nodes from gradient semi-public wet labs and staff research spaces.

Course 03 (Spread 2/3) — Foothills Field Institute: Plans, Site Section & Diurnal Light Studies

EQUIVALENT TO CAL POLY ARCH 1102 / 2201

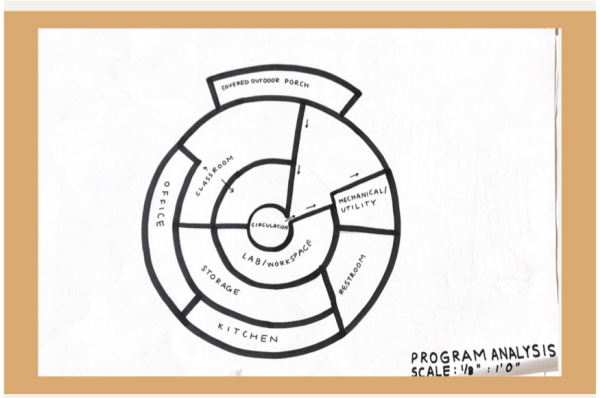
RUBRIC FOCUS: DRAWING COMMUNICATION • DAYLIGHTING & TECHNICAL COMPETENCE



SITE PLAN — SCALE: 1/16″ = 1′-0″ • HAND INKED

Topographic Site Plan & Canopy Integration

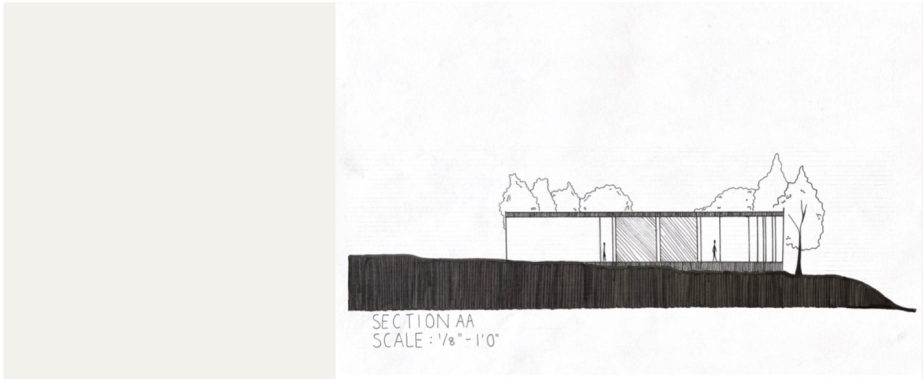
Nestling the circular research institute into the western hillside contours adjacent to the creek corridor while preserving existing mature Douglas fir root crowns.



RADIAL PROGRAM PLAN — SCALE: 1/8″ = 1′-0″

Concentric Circulation & Program Layout

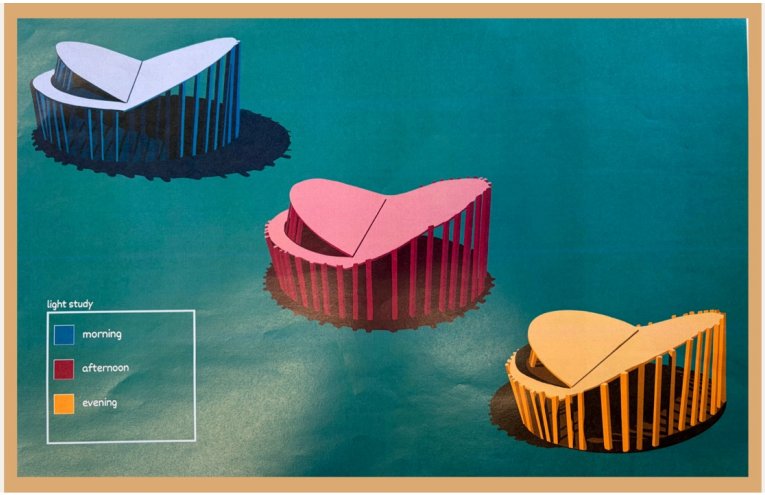
Organizing the wet lab at the illuminated core surrounded by flexible classroom, office, storage, and covered porch.



SECTION AA — SCALE: 1/8″ = 1′-0″ • GRAPHITE & INK

Longitudinal Site Section AA — Topographic Embedment & Forest Datum

Demonstrating how the floor slab steps gently with the hillside grade while full-height vertical timber louvers filter low-angle sunlight and frame views into the surrounding forest canopy.



PASSIVE DAYLIGHTING SIMULATION — THREE PHYSICAL SCALE MODELS • CONTROLLED HELIODON LIGHTING

Diurnal Light & Butterfly Roof Shadow Study (Morning, Afternoon, Evening)

Testing the V-shaped butterfly roof clerestory and vertical perimeter fins across morning (blue), afternoon (crimson), and evening (amber) solar altitudes to eliminate glare in the biology lab while animating interior walls with rhythmic shadow.

Course 03 (Spread 3/3) — Critique-Driven Iteration: Midterm Pinup to Final Architectural Resolution

EQUIVALENT TO CAL POLY ARCH 1102 / 2201

RUBRIC FOCUS: DESIGN CREATIVITY & RIGOR • ITERATIVE PROBLEM SOLVING



MIDTERM PHYSICAL MODELS — CORRUGATED CONTOUR SITE MODEL & BASSWOOD/CARDBOARD MASSING

Midterm Topographic Site Model & Jury Pinup

Stepped contour site model and removable roof study testing the butterfly roof geometry against the hillside slope.

JURY CRITIQUE → FINAL DESIGN ACTIONS

1. Water Integration: Engineered the butterfly roof crease to harvest rainwater directly into a cascading site water feature.

2. Uncramped Circulation: Opened the central radial core and separated kitchen and restroom zones for acoustic/olfactory comfort.

3. Occupied Roof: Added an accessible rooftop botanical garden extending the biology curriculum outdoors.



ITERATION PHASE 01 — MIDTERM REVIEW WALL & TECTONIC STUDY MODELS

Midterm Pinup & Structural Screen Prototypes

Integrating past studio weaving and tectonic screen explorations into the institute's double-height louvered envelope.



ITERATION PHASE 02 • FINAL REVIEW — FINAL STUDIO PINUP & RESOLVED DRAWING SET

Final Review Presentation — Foothills Field Institute

Final presentation boards uniting color-coded program diagrams, rendered sections showing the occupied green roof and rainwater cistern, refined floor plans with north datum, and structural timber framing details.

Course 04 (Spread 1/2) — Computational Design: Rhino, Grasshopper Parametric Systems & Laser Fabrication

COURSE GRADE: A • EQUIVALENT TO CAL POLY ARCH 2201 / 2241

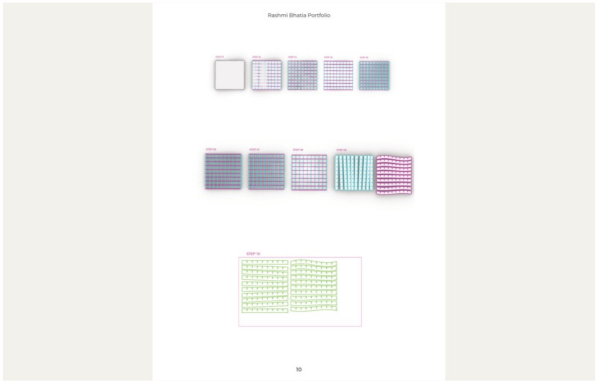
RUBRIC FOCUS: TECHNICAL COMPETENCE • DIGITAL-TO-PHYSICAL FABRICATION



MODULE 01A • DIGITAL NURBS SURFACE — RHINO 3D NOTCHED EGGCRATE WAFFLE

Double-Curved Surface & Eggcrate Waffle Contours

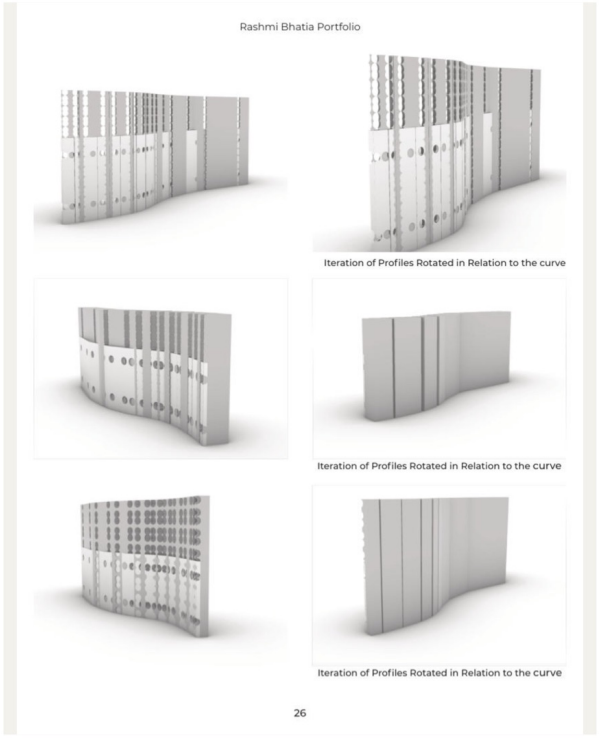
Contouring a NURBS surface in Rhino into orthogonal X and Y ribs notched at every intersection for friction-fit laser assembly.



MODULE 01B • STEPS 01–10 WORKFLOW — RHINO UNROLL, NOTCHING & LASER CUTTER BED

10-Step Contour Extraction & 2D Laser Cut Nesting

Systematic 10-step algorithmic progression from 3D surface intersection to indexed 2D laser-cut cutsheets.



MODULE 02 • PARAMETRIC SCRIPTING — RHINO 3D + GRASSHOPPER + RAVEN AI SCRIPTING

Grasshopper Parametric Screen & Profile Rotation Iterations

Authoring a parametric fence definition inspired by Tadao Ando where panel spacing, circular apertures, and profile rotations dynamically respond to a base Rhino curve.

COMPUTATIONAL WORKFLOW MASTERY

Earned an **A** in ARCH 222 (producing an 83-page digital methods compendium). Mastered NURBS boolean operations, kerf calibration for laser cutting, parametric Grasshopper definitions, and Rhino vector-to-Illustrator linework exports.



MODULE 03A • DIGITAL TOPOGRAPHY — RHINO 3D BOOLEAN & CONTOUR MODELING

Topographic Landform & Serial Spatial Frames

Modeling serial threshold frames embedded within stepped 3D terrain to study sequential perspective and light slots.



MODULE 03B • PHYSICAL PROTOTYPE — LASER-CUT BASSWOOD & SCALE FIGURES

Boolean Frames Physical Model & Scale Calibration

Translating Rhino Boolean operations into a multi-layered basswood pavilion with red-accented section edges.

Course 04 (Spread 2/2) — Cross-Studio Synthesis: Rhino 3D Modeling & AI-Assisted Material Visualization

COURSE GRADE: A • EQUIVALENT TO CAL POLY ARCH 2201 / 2241

RUBRIC FOCUS: ADVANCED DIGITAL REPRESENTATION • STUDIO INTEGRATION



MODULE 04A • ITERATIVE PROMPT ENGINEERING — RHINO VIEWPORT → GEMINI / RAVEN AI / FIREFLY

Controlled Material & Atmospheric Prototyping

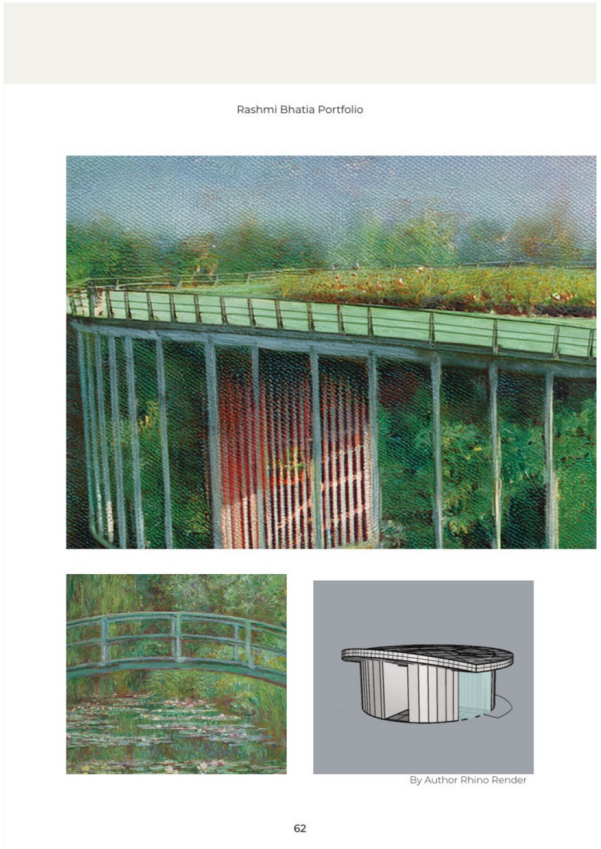
Using custom Rhino perspective exports as strict geometric control nets while testing board-formed concrete vs. warm mass-timber tectonics and hand-drawn graphite sketch translations.



MODULE 04B — COMPARATIVE RENDER MATRIX

Multi-Platform Architectural Visualization Study

Benchmarking fidelity, lighting accuracy, and tectonic preservation across Rhino Render, Raven AI, and Firefly.



STUDIO SYNTHESIS 01 — RHINO 3D MODEL + IMPRESSIONIST LANDSCAPE STUDY

Foothills Field Institute — Rhino Base Geometry & Rooftop Garden

Digitizing the ARCH 284 Foothills Field Institute in Rhino 3D (lower right) with radial louver mullions, glazing, and overhanging green roof, then testing botanical color integration inspired by Monet's water garden bridge.



STUDIO SYNTHESIS 02 — RHINO 3D + PACIFIC NORTHWEST TIMBER VISUALIZATION

Foothills Field Institute — Redwood & Douglas Fir Tectonic Expression

Translating the Rhino massing into a site-anchored Pacific Northwest timber pavilion cantilevered over mossy basalt outcrop, validating material warmth and cantilevered deck proportions.

Courses 05 & 06 — Second-Year Design Studios (ARCH 383/450) & Building Technology (ARCH 470/491)

EQUIVALENT TO CAL POLY ARCH 2201/2202 & ARCH 2241/2242

RUBRIC FOCUS: BUILDING TECHNOLOGY • CONSTRUCTION SYSTEMS • SPATIAL COMPOSITION

SECOND-YEAR STUDIO & TECH PROGRESSION

Bridging Design Studio III & Building Systems

During 2026–2027, my University of Oregon coursework directly parallels Cal Poly's second-year Design Studio (`ARCH 2201 & 2202` / legacy `ARCH 251–253`) and Architectural Technology Fundamentals (`ARCH 2241 & 2242` / legacy `ARCH 241, 242, 207`) sequences:

ARCH 383 Architectural Design III (6 cr, Fall '26): Multi-story architectural synthesis, urban/site context, program organization, and tectonic enclosure.

ARCH 450 Spatial Composition (4 cr, Fall '26): Compositional ordering systems, proportional geometry, and spatial layering.

ARCH 470 + Lab Building Construction (4 cr, Fall '26): Foundation-to-roof construction assemblies, heavy timber/steel/concrete detailing, and wall sections (→ *CP ARCH 2241*).

ARCH 491 + Lab Environmental Control Systems I (4 cr, Win '27): Passive solar, thermal envelope, psychrometrics, acoustics, and daylighting (→ *CP ARCH 2242 / 207*).

ARCH 384 Design IV (6 cr) & ARCH 461 Structural Behavior (4 cr, Spr '27): Completes 2nd-year design & structures (→ *CP ARCH 2202 & ARCE 1121*).





ARCH 470 / TECTONIC INTEGRATION — TIMBER ENVELOPE, GLAZING MULLIONS & CANTILEVER DECK

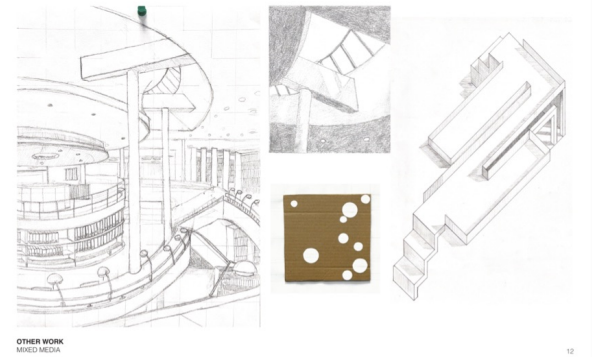
Building Construction & Envelope Materiality Study

Analyzing heavy-timber and steel-frame envelope transitions, glazing mullion thermal breaks, and cantilevered deck connections in UO ARCH 470 Building Construction.

ARCH 383 & ARCH 450 (FALL 2026) — 6-CREDIT DESIGN STUDIO III + 4-CREDIT SPATIAL COMPOSITION

Second-Year Architectural Design III & Spatial Composition

Exploring rhythmic colonnades, threshold compression, topographic siting, and structural grids.



ARCH 450 / ARCH 470 — TECTONIC DETAIL & COMPOSITIONAL ORDERING

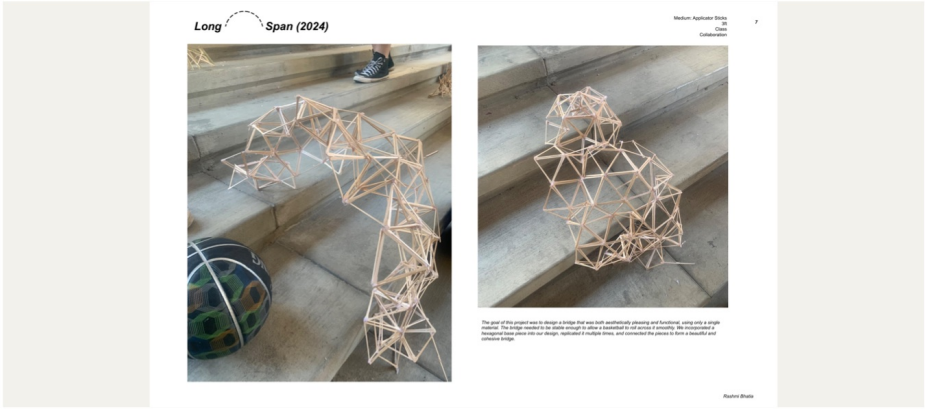
Spatial Ordering, Tectonic Framing & Material Assemblies

Investigating structural grid geometry, load-bearing vs. non-load-bearing skin, and daylight modulation across multi-bay architectural volumes.

Course 07 (Spread 1/2) — “Learn by Doing” at Cal Poly SLO: Long-Span Structural Bridge & Light Tectonics

COMPLETED ON CAMPUS AT CAL POLY SLO

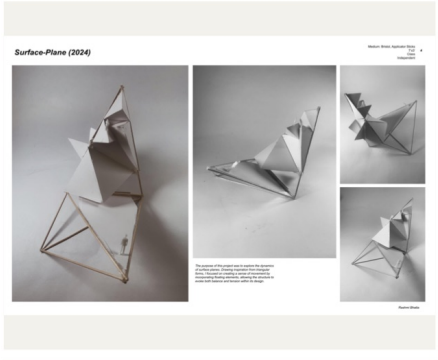
RUBRIC FOCUS: STRUCTURAL PRINCIPLES (ARCE 1121) • PHYSICAL MODEL CRAFT



STRUCTURAL ENGINEERING CHALLENGE — WOOD APPLICATOR STICKS & TENSION/COMPRESSION TRUSS • 3-FOOT CLEAR SPAN

Long Span — 3-Foot Modular Hexagonal Truss Bridge (Load-Tested with Rolling Basketball)

Designed and fabricated during the 4-week Cal Poly SLO Architecture Summer Workshop. By inventing a repeatable hexagonal base module that distributes compressive and tensile forces across triangulated chords, our team engineered a 3-foot clear-span bridge capable of supporting a live rolling basketball across its deck.



TECTONIC STUDY 01 — BRISTOL & WOOD STICKS • 7″ × 3″

Surface-Plane Cantilever

Triangular folded planes suspended in dynamic equilibrium to test balance and structural tension.



PHENOMENOLOGY STUDY 02 — CARDBOARD & BRISTOL • 8″ × 9″ × 4″

Atmospheric Light Box

Carving solar and lunar apertures with chromatic filters to study how colored light transforms interior volume.



ANALYTICAL DRAWING — STIPPLING & CROSS-HATCHING ON VELLUM • 14″ × 17″

Tectonic Force & Geometric Abstraction Diagramming

Deconstructing organic and structural geometry on transparent vellum using ink stippling and directional cross-hatching.



TOPOGRAPHIC SITING — CHIPBOARD, CARDBOARD & APPLICATOR STICKS • 12″ × 24″

Site Integration — Hillside Path, Canopy & Light Pavilion

Integrating the light box structure atop a stepped chipboard hillside with achoreographed solar pathway and vertical stick forest elements.

Course 07 (Spread 2/2) — Sustainable Urbanism (“Cataracta”) & Live-Work-Share Dwelling

FINAL CAED GALLERY EXHIBITION • SUMMER 2024

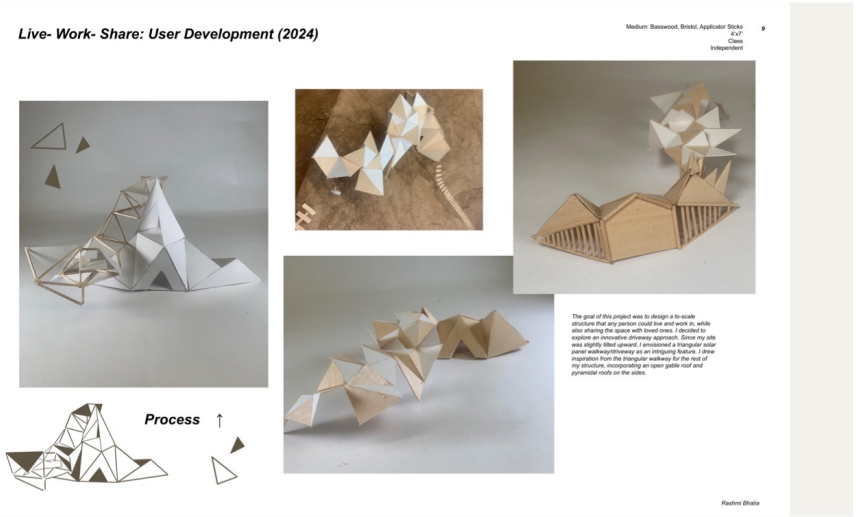
RUBRIC FOCUS: DESIGN CREATIVITY • URBAN SYSTEMS • DWELLING SCALE



COLLABORATIVE URBAN DESIGN BRISTOL, WOOD, CARDBOARD & PAINTED CARTOGRAPHY • MAP + DIORAMA + MODEL

[RE]Defining City: Cataracta — Symbiotic Rainforest Urbanism

A comprehensive masterplan, cartographic map, and three-dimensional sectional diorama for a zero-carbon rainforest city where human habitation and wildlife corridors coexist through elevated treehouse districts, aerial gondola transit, hydroponic vertical farms, and micro-hydro/wind turbines.



ARCHITECTURAL SCALE MODEL BASSWOOD, BRISTOL & APPLICATOR STICKS • 4″ × 7″

Live — Work — Share: Solar-Integrated Courtyard Dwelling

A scaled residential and studio structure uniting living, creative work, and communal gathering around a central courtyard bridged by a triangulated solar-panel canopy walkway, open gable truss roof, and pyramidal skylights.



ARCHITECTURAL PHOTOGRAPHY CAL POLY CAMPUS STUDY

Framed Composition

De-objectifying built geometry through tight architectural framing and shadow contrast.

WHY CAL POLY SAN LUIS OBISPO

Returning to CAED

Completing the 4-week Architecture Summer Career Workshop at Cal Poly SLO and exhibiting our studio work in the CAED gallery confirmed that Cal Poly’s hands-on fabrication and rigorous engineering-integrated studios are where I thrive most.

Architectural History Research, Cultural Publication Design (Bottu Mag) & Fine Art Craft

EQUIVALENT TO CAL POLY ARCH 2221 (LEGACY ARCH 217)

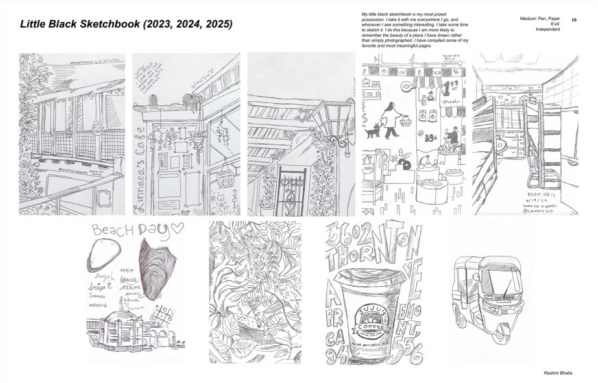
RUBRIC FOCUS: WRITTEN COMMUNICATION • GRAPHIC LAYOUT • FREEHAND MASTERY

UO ARH 314 → CAL POLY ARCH 2221 (GRADE: A-)

Rani Ki Vav — The Queen's Stepwell (1063 CE)

In my 11-page architectural history research paper (15+ scholarly sources, Fall 2025), I analyzed **Rani Ki Vav** in Patan, Gujarat—a seven-story subterranean "inverted temple" commissioned by widowed Queen Udayamati in the Māru-Gurjara tectonic tradition.

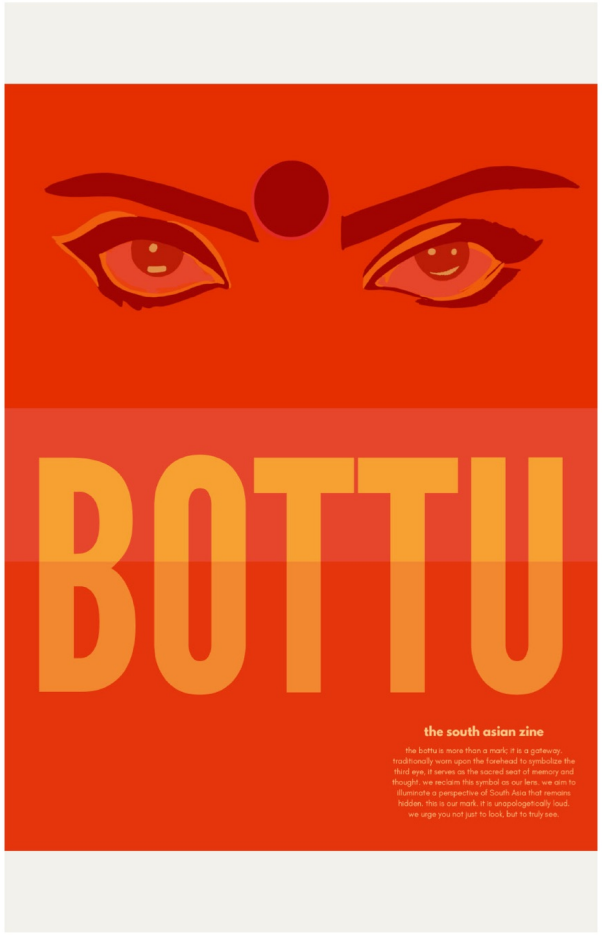
Comparing Rani Ki Vav's stepped hydrological section and carved *apsarā* colonnades against the monolithic excavation of the Kailasa Temple (8th c.) and the axial planning of Jagannath Temple (12th c.), the study examines how subterranean infrastructure, sacred geometry, and female patronage shaped civic gathering spaces in medieval India.



DAILY TRAVEL & FIELD PRACTICE — PEN & INK ON PAPER • 6″ × 4″

The Little Black Sketchbook — Spatial Memory

Ongoing pocket sketchbook capturing architectural details, street sections, and botanical studies from daily life.



PUBLICATION DESIGN & ART DIRECTION — 28-PAGE PRINT & DIGITAL ZINE • UO SACA UTSAV

Bottu Mag: The South Asian Zine — Co-Creator & Art Director

Created for the University of Oregon South Asian Cultural Alliance (SACA), where I serve as Executive Chair of Public Relations. Directed the 28-page typographic grid, editorial illustrations, and architectural heritage spreads.



FINE ART 01 — CHARCOAL • 12″ × 14″

Nani (Grandmother)

Chiaroscuro tonal study capturing warmth, texture, and light.



FINE ART 02 — CHARCOAL • 12″ × 14″

Bliss

High-contrast value modeling trained at Ichen Art Academy.



FINE ART 03 • ICHEN ART ACADEMY (35+ WORKS) — CHARCOAL ON PAPER • 12″ × 14″

Ms. Khan — Memorial Portrait & Human-Centered Empathy

Alongside my Boy Scouts Distinguished Eagle Scout community mural and founding Brushmi's Designs, fine art portraiture grounds my architecture in human empathy.