

RE-FINISHING

"THIS TIME FEATURING OVER 80% MORE PROJECTION MAPPING"

RE·FIN·ISH

/re'finiSH/

1. *apply a new finish to (a surface or object).*
2. *an act of refinishing a surface or object.*

To re-finish is to bring new life or reading to a material object or space. This course will re-image the finishing course from a year ago, and expand upon its techniques of fabrication and representation, with a special emphasis on projection mapping.

As the range of architectural finishes has become more comprehensive and complex than ever before, they have also become less permanent and more fluid. Competing logics of building technology, performance, economy, consumer capitalism, material extraction, net carbon, labor, and culture all intersect in a complex context that shapes how buildings are constructed. In the US, traditional natural materials of the past have largely been replaced with cheaper, less labor intensive, manufactured alternatives. Wood can be tile, brick is a sheet good, and marble comes on a roll; the likeness of any material can be molded to any form. This faux representation of material has created an image-mapped architecture of finishes.

This shift to a representational materiality, while offering infinite formal potential, creates a crisis of traditional tectonic expression in architecture. No longer is the aesthetic of material tied to its performance. Traditional tectonic expressions of structure and materiality are now clad with performative requirements of continuous exterior insulation, fire-rated wall assemblies, and sound transmission class, as we will see.

A primary task of architects, then, is to detail faux-material finish conditions so as to perpetuate the ruse of authentic material expression. A likely danger of finish is that as it is, at best, minimally required, it can become an easy target of value engineering. Among the questions we will address in this course are: Why don't we move beyond these historical associations of material? What does this say about our cultural relationship to technology that we are resistant to change? Why are architects accepting this role of finish designer? Why do we work so hard to disguise the structure and systems that actually support the building? What is an expressive architecture of tiles, sheets, and rolls?

In this course students will be encouraged to explore new formal potentials to propose an expressive architecture of finishes.

COURSE STRUCTURE:

As a re-imagining, there will be more opportunity for independent student explorations. Loosely, the course will be structured as a 2-part workshop with both a fabrication and representation component. The first half of the course will be dedicated to defining and creating a set of representational materials, before deploying these material readings into a hybrid constructed / projected space.

PT 1: REPRESENTATIONAL MATERIALITY

The course will begin through a sampling / conceptualization phase, allowing students to develop their own material readings. We are particularly interested in exchanges between analogue and digital modes of working. We will compare how surfaces are commonly physically constructed (layers of the rainscreen; finish/cladding, control layers, and structure) with how they are generated digitally (physically based rendering texture maps: color, surface relief, and reflectivity) in an effort to explore how the two might inform each other.

Students will use a combination of found or sampled materials, digital material assets, the school's material library, photogrammetry or scanned assets, and AI render texture generation as a means to generate digital material textures.

PT 2: HYBRID CONSTRUCTED / PROJECTED SPACE

The course will provide a demonstration of projection mapping techniques, introducing students to software options, how to map, size, and scale, and animation workflows. Students will begin by extracting and expanding upon materials derived from found or sampled objects, and projecting into simple still life scenarios, before expanding to fabricate their own materials.

The final project will have students utilize multiple projectors in a spatialized arrangement to create a convincing experience of material space. This arrangement will be a hybrid digital/physical construction and will offer opportunities for unique forms of material interaction and representation.

Other media workflows students might use may include: studio photography and lighting techniques, 3d scanning and photogrammetry, greenscreen backdrops, sewing machines and working with textiles, vacuforming, CNC routing, 3d printing, laser cutting, and AI image generation, among others.