Premise
In many ways, the economic and ecological rationales for mass timber have advanced beyond our discipline’s formal, functional and experiential design explorations. Constraints of program, pro-forma, zoning and budget, to name a few, have assumed solutions focused primarily on material efficiency and demanded the production of hybrid structures merging multiple structural systems together. We think this misses a fundamental design opportunity of mass timber to prioritize singular systems that ultimately lead to a more substantive and integrated built environment.

Waechter Architecture will bring its unique design process to students through our ongoing project of finding clarity: the potential for architecture to be legible, distinct, simple and direct, while remaining open to multiple uses and communities. This studio will prioritize the singular clarity of All-Wood structural systems and their potential to remain programmatically flexible, while simultaneously experientially unique.

This studio will ask students to challenge the architectural and construction profession’s assumptions of mass timber. Working together, we will expand its design vocabulary and experiential potential through new all-wood building prototypes attuned to our time and place, while preparing to adapt to the needs and challenges we all face in a rapidly changing world.
Process
The studio will be divided into two parts: first, collaborative research and analysis of the origins, essential properties and typologies for all-wood mass timber construction, and second, individual exploration and development of specific propositions and responses to site, context and condition.

Representation will be a significant focus of the studio, with digital and physical models produced throughout the term. Digital modeling and rendering skills will be provided through a Waechter led workshop. Physical modeling skills will be provided through a UO fabrication lab led workshop.

Phase 1 will be focused on formal and structural propositions informed by investigations of historical building traditions, contemporary market forces, and case studies of innovative approaches and advances in mass timber both regionally and internationally.

As a studio, we will produce a catalog of all-wood structural typologies, using an abstracted site area and volume as a basis for comparison and evaluation (e.g. a 100' by 100' by 100' volume). Representation will include structural diagrams, orthographic drawings, physical and digital models, and quantity surveys to accurately document each type. Perspectival renderings and/or collages will explore the spatial and experiential potential of each type.

Phase 2 will apply these findings to a specific “infill” site to be specified later. Students will work individually with a mass timber typology / system of their choosing to develop a building (or series of buildings) that responds contextually, programmatically and environmentally—to present conditions as well as potential outcomes, patterns of development, and climate conditions.

Building programs and prescribed uses will not be assigned in advance, and variations in site subdivisions, land use provisions and zoning limits will be considered so long as justification is provided for doing so—as a building’s function and guiding regulations are generally variable over time. Understanding of current code parameters and constraints will be critical, but not considered a limit to our investigation.

Outcomes
This studio aims to develop a deeper base of knowledge, and a range of individual and innovative proposals that marry mass timber construction systems with thoughtful responses to present conditions and pressing needs. It may be too much to assume that any building design or proposal is truly future-proof; our aspiration is to create a new body of work that is equally economical, adaptive, and future-forward. This work will be shared through a range of methods and media:

1. Collaborative research publication (digital and/or print) of mass timber structural typologies
2. Potential Presentation of structural concept models, drawings and renderings as part of a public exhibition alongside other student work.
3. Group presentation and final review at the Waechter All-Wood building on Mississippi Avenue. Students will be advised and evaluated by architects working with these technologies as well as engineers, developers and fabricators skilled in the application of mass timber systems in today’s market.
4. Inclusion in the research findings of a Waechter Architecture-led Wood Innovations Grant through the US Department of Agriculture / US Forest Service. All students / authors will be credited for their contributions and given full access to the final report.