COURSE DESCRIPTION:

‘... the organism which destroys its environment, destroys itself.’

Gregory Bateson [English Anthropologist / Social Science 1904-1980]

In the simplest of terms, Bateson acknowledges the act of environmental alteration as a potential act of self destruction. Consciously or unconsciously the decisions made at the scale of the building impacts both geological and ecological systems near and far; consequently, architectural provocations must address both the built and natural environments as a design project simultaneously.

The studio Wood and Everything After will explore the resurgence of wood as a building material through the simple question, what is the architectural morphology of wood? Student driven research will delve into architecture as a conscious act of design linking territory, industrial processing, logistics, tectonics, form and space. These elements will stand as the alibi to strip away the ambiguity of wood as a commodity and serve to understand the diversity of wood’s architectural building morphology: frame, hybrid, mass based, and-everything after.

The words of Deleuze and Guattari will be used to frame the studio inquiries: surrender to the material so we can uncover the specificity of wood architecture.

‘It is a question of surrendering to the wood, then following where it leads by connecting operations to a materiality, instead of imposing a form upon a matter: what one addresses is less a matter submitted to laws than a materiality possessing a nomos. One addresses less a form capable of imposing properties upon a matter than material traits of expression constituting affects.’


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THE PROGRAM:
The studio will engage three distinct, yet interconnected design prompts exploring the territorial and tectonic implications of wood architecture. Students will be expected to widen their gaze to be inclusive of territory and architecture simultaneously. Research and design will vacillate between architectural propositions and their associated ecological, social, and tectonic implications.

**PR01 Solid Wood Climate Refuge:** Standing timber is felled, skidded, transported, sawn, processed and in the case of Cross Laminated Panels arranged into a layered systems of 2 x 6 dimensional lumber forming parent panels that reach widths of approximately 12'-0" and lengths of 60'-0". Through the CNC process the large format parent panel is milled into smaller panels which are flat packed to the project site and assembled into a habitable shelter. **PR01** will conceive of a Climate Refugee Shelter by leveraging the parameters of the CLT parent panel and CNC milling to design the process of processes.

**PR02 If a Tree Falls...** An analysis and documentation of mass timber and solid wood architecture processes will be compiled and employed as a reference manual for the development of studio projects. The analysis and documentation will be used to generate a collaborative studio manual that defines a catalogue of the architectural elements inherent to wood processes and architecture: Standing Timber to Saw Log, Saw Log to Dimensional Lumber, and Assemblies and Tectonics of CLT and Mass Timber [thin and thick]. Through the identification, classification, drawing/re-drawing, and de-construction exercises, the studio will organize the elements of assemblies and tectonics into a catalogue of methods and techniques serving as a foundation for studio explorations.

**PR03 If Wood Could Speak... What Would it Say?** The final prompt will task the enrolled students to leverage information gleaned in **PR01** and **PR02** to develop an architectural proposal through the design of a building. The intent of **PR03** is to expose one’s architectural position regarding the language of contemporary solid wood, mass based wood building through the development of a formal and tectonic wood language. Essential to the architectural proposal, students will address the up and down stream system influences, inclusive of but not limited to territory, resource management, logistics, processing, and end of life proposal[s].

**The specifics of the project program and deliverables will be distributed in a separate program brief.**

OBJECTIVES AND COURSE STRUCTURE:
Fundamentally, the aim of the studio is to advance enrolled students’ knowledge of wood as a resource, processes, assemblies and architecture. The studio will require a ‘systems’ thinking approach inclusive of both the ‘upstream and downstream’ elements of architecture: resource management, logistics, material processing and industrial fabrication processes. The studio will consider these elements as design directives vital to a comprehensive architectural proposal.

Students will be responsible for:
- Recalling knowledge gained in the architectural core studio + seminars.
- Identifying an architectural position used to formulate a concept.
- Applying wood knowledge gained through foundational studio research to support an architectural position and subsequent design proposals.
- Analyze knowledge gained through conducted studio research to draw connections between the forest and building needs through architecture.
- Create and develop innovative design proposals that support an architectural position.

The studio *Wood and Everything After* is a research driven design studio and should be understood as a collaborative effort. The studio does not carry a strict alignment to any specific format or process--digital or analogue--but instead requests that selected processes align with the agenda of the work as a means to support and progress design thinking. It is expected that the
studio as a whole will pursue a range of individual inquiries addressing a similar question through many different perspectives. **Success in the studio will require a consistent and iterative approach to foundational investigations and project development.** A select portion of each studio meeting will be allotted for ‘in studio’ work, however, the expectation will be that significant progress will be made between studio meetings.

**COURSE LEARNING OUTCOMES:**

Enrolled students will be encouraged to engage architectural thinking through a critical yet constructive framework. At the completion of the studio, students will be expected to have:

- Extended their capacity to think critically about architectural circumstances. The intent of the Upper-Level studio is to position the student within the context of the ‘wicked problem’—defined as a problem in which a proposed solution will create a certain contradiction, mandating the student stake a position regarding the positive or negative potentials of the proposed solution.
- Developed new methods and techniques progressing the language and agenda of wood architecture.
- Developed skills of communicating the process of architecture through the use of drawing, three dimensional modeling, and verbal discussion of architectural ideas. [defined by the studio as the process of processes]
- Effectively use multiple digital platforms to create architectural drawings, diagrams and presentation materials—representation as a means of explorations. [A range of representational media and citation of images and sources will be implemented.]
- Enhanced their capacity to generate questions about wood processes and wood architecture which bridge across multiple scales, inclusive of: territorial and/or regional conditions, resource management, logistics, processing, the city, the building, and the elements of architecture.
- Developed their comprehension of fundamental principles and strategies in architectural precedents and case studies while assessing their relevance to design prompts.

**COURSE PREREQUISITES / COREQUISITES:**

Graduate and Undergraduate Upper Level Standing: any and all questions regarding prerequisites should be directed to U|SoA administration.

**REQUIRED TEXTBOOK(S) + READING(S):**

There are no required textbooks, all required readings will be provided by the instructor.

**RECOMMENDED LEARNING MATERIALS:**

**Bibliography:**

[Course Resource Page]

General Wood References


Jodidio, Philip. **100 Contemporary Wood Buildings.** Taschen, 2015.


Mary M. Berlik, David B. Kittredge, and David R. Foster. “**The Illusion of Preservation: a Global Environmental Argument for the local Production of Natural Resources.**” Journal of Biogeography, 29, p. 1557-1568.


McLeod, Virginia. **Detail in Contemporary Residential Architecture:** Includes CD-ROM. First, Laurence King, 2007.


**Thermal Properties**


Hameury, Stéphane, & Lundström, Tor. (2004). “**Contribution of indoor exposed massive wood to a good indoor climate: In situ measurement campaign.**” Energy & Buildings, 36(3), 281-29


Anais Jeanjean, Regis Olives, Xavier Py, “**Selection criteria of thermal mass materials for low-energy building construction applied to conventional and alternative materials.**” Energy and Buildings 63 (2013) 36–48


Structural


Global Timber Industry, Carbon Cycle


**In addition to the recommended learning materials listed above the journals Detail, C, Architecture + Landscape + Urbanism, The Architectural Review, EL Croquis and Praxis should be considered resources for your research and investigations.

INSTRUCTIONAL METHODOLOGIES:

All work used in the seminar must be from a credible source, contain the correct citation and be organized in the seminar/studio project bibliography. Precedent images, projects or work which does not have a credible citation(s) or associated citation(s) information will be at risk of omission of the final studio submission. Work omitted due to missing or nonexistent citation will not contribute to course evaluation.

**Studio Modality**
The studio will be conducted in a hybrid modality, meaning in-person and remote simultaneously, two days a week at the School of Architecture on the Coral Gables campus facility. All in-person meetings will strive to meet social distancing guidelines for the protection of the students and faculty. All in-person meetings will require facial covering or a protective mask worn by the students and faculty at all times. Course modality is at the discretion of the University of Miami and the School of Architecture and will be evaluated as COVID-19 guidelines are updated to reflect the evolving conditions and is subject to change at any point within the semester.

**Synchronous | Asynchronous Learning**

Fundamentally, recording of classroom activities, lectures and/or gatherings by students or course guests is strictly prohibited.

Meetings of this course might be recorded by the University. Any recordings will be available to students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Recordings may not be reproduced, shared with those not in the class, or uploaded to other online environments. If the instructor or a University of Miami office plans any other uses for the recordings, beyond this class, students identifiable in the recordings will be notified to request consent prior to such use.

When recording course material or lectures limited access to remote instruction will be reserved for enrolled students of the course and other officials as needed (teaching assistants, faculty supervisor, etc.). Access to recorded content will be password protected and remain accessible to enrolled students of this course and/or University of Miami Faculty with access to the course.
Using Remote Learning Platforms
Enrolled Students in a course implementing remote learning platforms should use their University of Miami Name to allow faculty to ensure participating members are allowed in the course. Students are discouraged from using 'nicknames' or obscure aliases of online identification related to University of Miami course work.

Enrolled students should be prepared to screen share in order to help identify course participation and to expose remote course intruders. The University of Miami is operating under the expectation students will enable their computer camera while attending remote course meetings to visually engage with faculty and fellow students.

Academic Continuity Contingency Plan
In the event that the University of Miami campus is closed and this course is no longer able to meet in person, students should activate the Academic Continuity Contingency Plan for the course which can be found on Blackboard in the course folder. Please note courses that include practicum components may require makeup.

In the event that the University of Miami campus is closed and/or the course modality is through a remote learning environment students are responsible for the following:

- Check UM email for any announcements. Professors will communicate any updates to due dates on assignments or exams via UM email.
- Students are highly encouraged to upload assignments using a cloud-based data storage site designated by the course professor.
- Immediately log into Blackboard for alternative assignments as instructed by course faculty.
- Be prepared to download and/or print possible alternate written assignments based on readings or other non-web-based (offline) sources.
- Students are encouraged to continue the readings and other assignments as outlined on this syllabus or subsequent syllabi.
- In the event of a suspension of all face-to-face classes, course instruction will resume and be facilitated using the Blackboard learning management system.

LPT contact information (Blackboard Helpdesk):
- Email learningplatforms@miami.edu
- Create an incident https://lpt.it.miami.edu/wiki/form/
- Phone_ 305.284.3949
- FAQ https://lpt.it.miami.edu/

UMIT Helpdesk
- Website uservice.miami.edu
- Phone_ 305.284.6565

U|SoA IT Technical Support
- Website arc.miami.edu/itsupport
- Phone_ 305.284.3390

Social Distancing + Personal Protective Equipment
Studies have shown that proper use of face coverings, distance/air dilution, and hand sanitization each incrementally reduce the risk of spread, with face coverings the most effective preventative measure by far.
Teaching faculty reserve the right to dismiss enrolled students and persons from course meetings who are not wearing and/or refuse to wear a face mask or facial covering for in-person meetings. Everyone—including faculty, staff, and students—is required to wear facial coverings on campus.

Social distancing of at least six feet should be practiced by administration, faculty and students whenever possible inclusive of interior and exterior meetings and gatherings. Faculty and students are highly encouraged to wash and/or sanitize one’s hands frequently. Students are encouraged to keep studio space clean and free of items no longer needed for coursework. Take home any items not needed for the execution of course work or project assignments from your workstation inclusive of personal items.

**Work Cited:**


All work used in the studio must be original work of the author, from a credible source, contain the correct citation and be organized in a studio project bibliography. Precedent images, projects or work which does not have a credible citation(s) or associated citation(s) information will be at risk of omission of the final studio submission. **Work omitted due to missing or nonexistent citation will not contribute to course evaluation.**

**Studio Guidelines:**

The design studio is the primary focus of your educational experience and will be the primary forum for the content of this course. For those engaging in an in-person modality the studio experience allows you to learn from your peers and faculty alike and thus completing work in the studio setting is encouraged. For both in-person and remote learning modalities it will be discouraged to work on studio projects ‘alone’, students should search means and methods to communicate with fellow colleagues to develop a studio culture. Studio class time is to be used exclusively for assigned studio work. Unless previously authorized by a studio faculty member, visitors are not allowed in the studio during studio class hours.

You are in a professional education program, and at all times you are expected to act in a professional manner that demonstrates the dignity and decorum of the profession you have chosen. This means that at all times the studio must be kept in an acceptable state of order as there are frequent official visitors on little advance notice. Excessive waste is not only a visual eyesore, but can quickly become a fire hazard. Be mindful of your classmates with regard to materials and space.

During studio class, keep personal breaks to a minimum. It is not your professor’s responsibility to hunt you down to see your work for either in-person or remote learning settings. Such avoidance mechanisms will be treated as a studio absence. At no time during the studio are you to watch television shows, videos, etc. While listening to music, headphones must be worn at all times while in the studio. At any time, you must respect a request by the faculty or your peers to turn down/off music. Be considerate of those around you and avoid loud noises or other distractions at all times so that others may work. This applies for the designated studio time and ANY TIME you are working in the studio outside of class time.
Studio Travel + Resources:
The studio Wood and Everything After is projected to travel into northern Florida, Southern Alabama and Georgia to visit a working forest(s), meet with forestry/wood utilization groups and observe a cross-laminated timber [CLT] manufacturing plant. Student travel, if allowable, will be subsidized by the LU_Lab through a U.S. Forestry Wood Innovation Grant. As a note, all university sanctioned student travel is at the discretion of University of Miami policies and will need to be assessed in advance of the travel dates for evolving conditions of COVID-19 and associated protocols. A travel plan and agenda will be presented to the students in advance of the trip. Accommodations for students who have elected to engage in a remote learning modality will be at the discretion of the studio professor and no guarantees for financial support can be offered.

In addition, the studio has reserved funds available to support the development of physical models and mock-ups upon review and agreement of the project proposal.

COURSE EVALUATION:
Student work will be evaluated to the degree to which Course Learning Outcomes have been satisfied, along with effort, seriousness and attendance will all be factors into the determination of the studio evaluation. Student work will be evaluated based on what is produced and presented on assigned review dates or when work is turned in on assigned due dates – no exceptions.

The studio will address the Wood and Everything After prompt through the following aspects which will be a means to evaluate course contributions:
- The development of content for the comprehensive research manual and final formatting of the manual.
- Initial project research and site documentation
- Theoretical contribution to the studio prompt and the development of fundamental underpinnings of design proposals.
- Communication of design intent– inclusive of but not limited to– oral presentation, text, sketches, drawings, renderings, physical and/or digital models.
- Final project presentation and submission of the comprehensive project materials. Enrolled students will not receive a grade for the studio until the ‘final packaged’ project is submitted, inclusive of editable digital files and links.
- Attendance, meeting of set deadlines, submission dates, and studio participation.

PR01 Solid Wood Climate Refugee Shelter 25%
PR02 If a Tree Falls… 25%
PR03 If Wood Could Speak... What Would it Say?  40%
Final Submission of the Manual 10%

Class Participation
A portion of the grade will be assessed based on attendance, class participation, and material/deadline submissions [class participation responds to both in-person and remote learning modalities].

Each student is required to upload/submit all final work. Materials should include research, writing, and design work, including important study models and sketches. Faculty will further define how this work should be organized and presented before the end of the semester. Failure to submit the required documentation in a usable format will result in a grade reduction in the final grade for the semester. Documentation of the work is essential for accreditation purposes and assessment of the architecture program.
ATTENDANCE POLICY:
The University of Miami School of Architecture has no provision for unexcused absences and expects attendance at all classes. All excuses are to be submitted in writing for instructor approval. School policy establishes grounds for dismissal from the course and/or a failing grade after three unexcused absences.

Attendance is mandatory during scheduled studio hours and for the duration of all formal reviews. Plan your extra-curricular activities accordingly, with the understanding that occasional reviews may extend beyond studio hours. Each student must ensure that errands and social engagements are attended to outside of scheduled studio hours. Travel for the University of Miami coursework (studio/seminar travel), religious reasons, serious contagious, life-threatening illness and medical emergencies accompanied by a doctor’s note, or personal emergencies submitted to the office of the Dean of Students are the only acceptable excuses for missing seminar meetings – no exceptions. For impending official absence related to University-sponsored events, it is the student’s responsibility to provide concrete documentation to their instructor, if possible, prior to the date of such events. Athletes should present a schedule of anticipated absences for athletic events (not practices) at the beginning of the semester. Valid documentation of all other excused absences must be provided immediately to your professor upon your return to seminar. Additional specific documentation based on the circumstances of the absence may be requested.

Please refer to the 2018-2019 Academic catalog:
http://bulletin.miami.edu/graduate-student-handbook-online-students/attendance/

GRADING POLICY:
A Excellent attainment. Excellent work demonstrates that the student has excelled in satisfying all objectives and work methods. The work is exquisitely and iteratively developed, intellectually and formally. The work is completed on time and executed with impeccable craftsmanship that demonstrates a continuously evolving and rigorous process. The presentation strategies exhibit a superior quality of verbal, graphic and intellectual enthusiasm that carry the work beyond the goals of the assignment. The work also demonstrates a clear willingness to engage in the critical dialogue of architecture with both faculty and peers. Strong evidence of habitual study is present, and an abundance of new work is present on every studio date.

B Good attainment. Above Average work demonstrates that the student has satisfied all objectives and work methods, and has often exceeded those expectations for the course. The work is well developed intellectually and formally. The work is completed on time and executed with excellent craftsmanship that demonstrates a continuous engagement with the design process. The work also demonstrates a willingness to engage in the critical dialogue of architecture with both faculty and peers, and exhibits good evidence of habitual study. New work is present on every studio date.

C Fair attainment. Average work demonstrates that the student has adequately satisfied all course objectives and work methods. The work is developed intellectually and formally. The work is completed on time and executed with competent craftsmanship. The presentation strategies demonstrate an average effort on the part of the student who is engaged with the design process. The work demonstrates an ability to listen and respond to the critical dialogue of architecture with both faculty and peers, and gives evidence of habitual study.

D Poor attainment (earns credit hour but may not fulfill requirement for a major) Below Average work demonstrates that the student has not satisfied all course objectives and work methods. The work is under-developed intellectually and formally. The work is incomplete and/or executed with inconsistent or flawed craftsmanship demonstrating a lack of effort, lethargy, or inability to engage the design process. The work reflects an unwillingness to listen and respond to the critical dialogue of architecture with either faculty or peers. Little to no evidence of habitual study.

F Failure. Failing work demonstrates that the student has failed to satisfy many course objectives and work methods. The work lacks any merit, intellectually and formally. The work is incomplete and executed with crude and rudimentary craftsmanship. Overall, the work reflects a lack of engagement with the course content and/or objectives, an unwillingness to listen and respond to the critical dialogue of architecture with faculty, and an undeveloped command of the basic skills necessary at this studio level, and provides no evidence of habitual study.

W Course dropped prior to the last day for withdrawing from classes as published in the official calendar of the University. Credit hour can be earned only by successful repetition of the course.
WL  Late Withdrawal-Administrative: Only used for Complete Withdrawal (Effective Summer 2017)

I  Incomplete work in passing status with the instructor’s permission to complete the course. An ‘I’ will be assigned only if the instructor is satisfied that there are reasonable non-academic grounds for the student’s incomplete work. An ‘I’ is not intended to be assigned in order to permit a student to repeat a course without registration or to permit a student to do additional work in order to improve upon grades earned during the semester. The student who receives an ‘I’ must complete the course with a passing grade within the time frame specified by the professor of the course but not longer than the end of one calendar year, or prior to graduation, whichever occurs first. An Academic Dean may approve an extension initiated by the course instructor. An ‘I’ not completed prior to the student’s graduation shall be changed to an ‘IE’ or ‘IF’ by action of the student’s Academic Dean.

IP  Denotes in progress grade assigned upon satisfactory completion of the first semester of a two-semester sequence, with the final grade for both courses to be submitted at the end of the second semester of the sequence. Please note that all ‘IP’s must be converted to a letter grade or ‘IF’ at graduation. ‘IP’ will also be converted to ‘IF’ upon any departure for the University for a period in excess of one year.

IF  Symbol indicating that an ‘I’ grade was not appropriately completed. The symbol ‘IF’ is equivalent to an ‘F’ when computing a student’s average.

* Students should review the University of Miami Grading System specific to UNDERGRADUATE AND GRADUATE standing for further description of course evaluation.

University of Miami Undergraduate Grading System:
http://bulletin.miami.edu/general-university-information/undergraduate-policies-and-procedures/grades/#text

University of Miami Graduate Grading System:
http://bulletin.miami.edu/graduate-student-handbook-online-students/graduate-grading/

ACADEMIC HONESTY STATEMENT:
The University of Miami expects all undergraduate and graduate students to adhere to the highest standards of ethics and academic integrity. All forms of academic fraud are strictly prohibited. These include, but are not limited to, plagiarism, cheating, collusion, falsification, violation of professional ethics, or misrepresentation of research data. Students certify that all work (whether an examination, dissertation, thesis, research paper, research project, form of creative expression, experimental data, or any other academic undertaking) submitted for evaluation, presentation, or publication meets these standards.

http://biomed.miami.edu/current-students/academic-policies/academic-integrity
COURSE SCHEDULE:
SYLLABUS OUTLINE / SCHEDULE

08.17 M_ Studio Introduction: Lecture | From Forestry to Mass Timber – Solid Wood
   Introduce PR01_Solid Wood Climate Refugee Shelter
   Forestry Lecture_Laura Bosworth, Introduction to Forestry + [Florida Forest Association] FFA

08.19 W_ Studio In Progress Review of PR01 Development

08.24 M_ Studio In Progress Review of PR01 Development
   Processing Lecture_Daniel Wirth, SmartLam NA about CLT fundamentals

08.26 W_ Studio In Progress Review of PR01 Development
   Forestry Lecture_Dan Roach, Rayonier Director of Public Relations, Working Forest and Mills

08.31 M_ Studio In Progress Review of PR01 Development
09.02 W_ Final Review of PR01 and Submission of Documentation
   Introduce PR02_If a Tree Falls...

09.07 M_ No Classes Holiday
   09.08 T_ Forestry Lecture_Don Pattee, West Fraser U.S. South Residuals Sales Manager,
   Logistics and Processing

09.09 W_ Submission of Documentation for PR01 Final Drawings
   Review + Provide Feedback of PR02 Development

09.14 M_ Studio In Progress Review of PR02 Development
09.16 W_ Studio In Progress Review of PR02 Development
   Forestry Lecture_Ann Duff, West Rock Manager of Fiber Sustainability, Policy, Stewardship and
   Management

09.21 M_ Penultimate Review of PR02
   (Combination of in person jurors + virtual jurors)

09.23 W_ Studio In Progress Review of PR02 Development
   Introduction of PR03_If Would Could Speak... What Would it Say?

09.28 M_ Final Review of PR02 and Submission of Final Draft Studio Manual Documentation
09.30 W_ Studio In Progress Review of PR03 Development
   Wood Utilization Lecture_Patricia Layton Director of Clemson University Wood Utilization + Design
   Institute
   Submission PR01 Final Drawings to Tiny House Comp
10.05 M_ Studio In Progress Review of PR03 Development
10.07 W_ Studio In Progress Review of PR03 Development
   Fabrication and Engineering Lecture_Jan Knippers Professor and Institute Director ITKE - ICD
10.09 F_ Submission of Final Studio Manual PR01 + PR02 chapters
10.12 M_ Studio In Progress Review of PR03 Development
10.14 W_ Studio In Progress Review of PR03 Development

10.19 M_ Studio In Progress Review of PR03 Development
10.21 W_ Studio In Progress Review of PR03 Development

10.26 M_ Mid-Review of PR03
10.28 W_ Studio In Progress Review of the Mid-Review

11.02 M_ Studio In Progress Review of PR03 Development
11.04 W_ Studio In Progress Review of PR03 Development

11.09 M_ Penultimate Review of PR03
11.11 W_ Studio Discussion of Penultimate Review
11.15 S_ Submission PR01 Final Drawings to Tiny House Comp 5:00 p.m. EST

11.16 M_ Studio In Progress Review of PR03 Development
11.18 W_ Studio In Progress Review of PR03 Development
11.20 F_ Final Review: Time, Location and modality TBD

11.23 M_ LAST DAY OF CLASSES (Virtually Modality)
11.25 W_ No Classes Holiday

12.07 M_ Packaging + Submission of final Project Deliverables + Studio Manual [PR01, PR02 and PR03]
12.09 W_ Submission of Grades