

*At the center of architecture, there seems to be an empty space.
You can't plan emptiness, but you can draw its boundaries, and so empty comes to life.
- Peter Zumthor*

OYSTER CULTIVATION :: CONTEXT : COLOR : COOLING

This studio will explore oysters, oyster aquaculture and its opportunities for coastal restoration, resilience, and economic development to inspire projects founded in passive design strategies for humid subtropical climates with a focus on Florida vernacular architectural traditions through time. The studio will kick off with an in-depth interrogation of these topics in parallel with the introduction of concepts and exercises in color relativity in the Josef Albers tradition, to be used as an analytical overlay in recording observations, describing design intent, and in the exploration and conceptual selection of finish materials

The studio will partner with Tallahassee State College's Wakulla Environmental Institute in Crawfordville, FL

The Wakulla Environmental Institute (WEI) is situated on 158 acres of untouched land which includes pine forest, a natural land bridge, sink holes, and swamp. WEI Building One was completed in 2016 and designed by Barnett, Fronczak, Barlowe, and Shuler Architects as a reflection upon southern vernacular architecture in the Florida Cracker style. It boasts 10,000 square feet of multi-use classrooms, meeting spaces, a state-of-the-art wet lab, administrative offices, and substantial covered porch area. A three-story dog trot indoor/outdoor cupolaed space bisects the building and facilitates ventilation for the entire building. The dog trot features a stone fireplace opposite the project's main entry. The elements comprising the net-zero design include insulated concrete walls, a solar-paneled parking lot, LED lighting, and cisterns to collect rain water for use in cooling, the mechanical systems, and flushing toilets. Since its inception WEI has worked closely with several state agencies and numerous businesses in conservation activities throughout Florida's Big Bend.

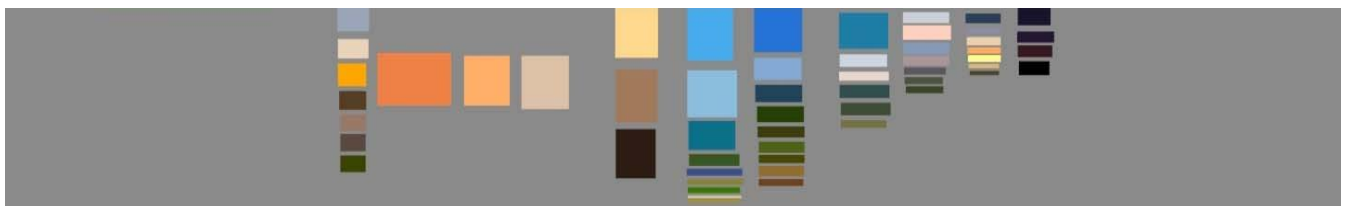
WEI offers credentialing programs in oyster aquaculture, GIS, and drone training and currently operates across two sites. WEI aspires to expand its Preservation Way campus to house all of its academic, community, conservation, education, outreach, and research activities. The expanded sustainable, teachable campus architecture shall consider contextually apropos passive design strategies and new building technologies alike. Elements of the expanded campus' masterplan are expected to include a land-based oyster hatchery and on-site residential quarters; additional programmatic elements to support existing or future programs may be added as studio coordination is finalized in the remaining weeks of summer.

What's so exciting about oysters? Find out with this introduction from **The Gastropod** (*these will be required listening*) (Season 06, 18 October, 2016): <https://gastropod.com/oysters-history-and-science-on-the-half-shell/>
(Season 19, 02 April 2024): <https://gastropod.com/the-world-is-your-oyster-how-our-favorite-shellfish-could-save-coastlines-worldwide/>

Texts, Materials, Travel

: Purchase of a (314) full set ColorAid paper for collage work; 4.5"x6" or 6"x9" preferred, 3"x4.5" acceptable

: Travel to WEI at least 2x, likely 3x (2-1/2 to 3 hours drive each way): 170 Preservation Way, Crawfordville, FL 32327



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DRAFT :: PHASES OF WORK (*subject to change – see syllabus for final*)

Anticipated typical all-class meetings on Monday + Wednesday weekly

1. Parallel Analyses and Explorations – BROAD: History to Present – ID critical terms and definitions
 - a. Oysters as keystone species (vs indicator, umbrella, foundational, flagship, other?); lifecycle
 - b. Oysters in the economy: Food source, building material (shells), pearls (cultured)
 - c. Intro to color relativity and its material and experiential opportunities
 - d. Florida aquifer, watershed, and coastline – where fresh and salt meet; planometric analysis
 - e. Florida horizons and geological layers; sectional analysis
 - f. Florida vernacular architecture / passive design strategies
 - g. Oysters - various analyses in plan and section

2. Parallel Analyses and Explorations – LOCAL: History to Present
 - a. SITE VISIT #1 WEI – TIMING TBD – Students tour and Q&A with WEI, learn about operations, research, and aspirations; optional lectures/talks per WEI availability/recommendation; UF SoA students/faculty respond to WEI questions on design process, etc.
 - b. Coastline and cultivation at WEI
 - c. Aspirations and operations at WEI; complementary programmatic proposals
 - d. Surrounding context and site conditions WEI
 - e. People at WEI; use groups and users – present and projected
 - f. Oyster cultivation spatial requirements

3. Preliminary/Concept Design (for explanation of goals of this phase of architectural work, see Schematic Design link below, scroll down to section discussing 'concept design' and its differentiation from schematic design)
 - a. Master Planning and Sitework explorations
 - b. Programmatic adjacencies and relationships
 - c. Experiential itineraries for various use groups
 - d. Preliminary material research
 - e. MIDTERM REVIEW (mid/late October) Sample Deliverables: Analytical diagrams to include chromatic site analyses and analyses of oysters as design inspiration, articulate experiential and performance goals and WEI campus vision, site plan, individual program orientation strategies – diagrammatic plans and sections, aspirational atmospheric illustrations; students to receive formal feedback from UF Architecture Faculty
 - f. Incorporate UF SoA faculty Feedback

4. Schematic Design
 - a. SITE VISIT #2 WEI – Timing TBD – student presentations to WEI with proposed next steps, receive WEI feedback
 - b. Incorporate WEI feedback
 - c. Tectonic Development – material systems integration, 3d modelling
 - d. Spatial and Performance Development – accessibility, clearances, passive design strategies
 - e. Testing and revisions – scale/materials TBD

5. 04 December, FINAL REVIEW - Sample Deliverables: Analytical diagrams, articulate how experiential and performance goals are met, have been honed and/or have shifted, site plan with landscape, individual programmatic elements' plans and sections, revised aspirational atmospheric illustrations; students to receive formal feedback from UF Architecture Faculty, WEI, others
 - a. SITE VISIT #3 WEI – Timing TBD - student presentations of final projects to WEI and/or put student work on display at WEI or other location per WEI request

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DRAFT :: COLLECTED INTRODUCTORY RESOURCES

Podcasts - Oysters

-Gastropod (Season 06, 18 October, 2016): <https://gastropod.com/oysters-history-and-science-on-the-half-shell/>

-Gastropod (Season 19, 02 April 2024): <https://gastropod.com/the-world-is-your-oyster-how-our-favorite-shellfish-could-save-coastlines-worldwide/>

EPA – EcoRegions of North America: <https://www.epa.gov/eco-research/ecoregions-north-america>

Climate Toolkit for Museums, Gardens, and Zoos – BioRegions: <https://climatetoolkit.org/bioregions/>

One Earth

-Oyster Facts: <https://www.oneearth.org/five-astonishing-facts-you-didnt-know-about-oysters/>

-Bioregion Navigator and Project ID: <https://www.oneearth.org/navigator/>

FLUSH - Sanitation and Shellfish Connection: <https://www.itsflush.com/post/sanitation-shellfish>

WHO Water Sanitation + Hygiene (WASH): https://www.who.int/health-topics/water-sanitation-and-hygiene-wash#tab=tab_1

Chesapeake Bay Foundation – How Does and Oyster Hatchery Work (2022): <https://www.cbf.org/blogs/save-the-bay/2022/02/how-does-an-oyster-hatchery-work.html>

NIH Design Requirements Manual (2016 with rev. 2024):

<https://orf.od.nih.gov/TechnicalResources/Pages/DesignRequirementsManual2016.aspx>

Case Study Project: Ferry Cove Oyster Hatchery (2022): https://www.beckermorgan.com/wp-content/uploads/2022/08/CaseStudy_FerryCoveOysterHatchery_ReducedSize.pdf

Passive Design

<https://www.wusf.org/environment/2023-08-05/florida-heats-up-architects-go-back-past-passive-cooling-home-designs>

Color Relativity

Intro: Teaching Albers - <https://www.youtube.com/watch?v=hYn3Ou8L3o0>

ColorAid can also be purchased here: <https://www.dickblick.com/products/color-aid-papers/?clickTracking=true&wmcp=pla&wmcid=items&wmckw=10528-1020>