Knowing: Nature

“Nature is your book of reference, and in it you study and learn.”
- Frank Lloyd Wright

Premise: Primordial geology, flora, and fauna co-evolve with their surroundings... Their forms and systems arise and emerge, directly and efficiently, in sustainable, even regenerative, dynamic harmony with the specific ecology in which they exist. There are many valuable lessons in how their forms and systems initiate or develop from the specifics of their greater ecology - their so-called ecological morphogenesis. This studio will consider conventional biomimicry, but seek beyond, into design approaches that might emulate how nature’s solutions emerge to be holistic, rather than singular or additive, solutions. We’ll then explore how those principles can be employed iteratively in the design of a contemporary built environment, to not only resolve impulses of greater ecology in which a project exists, in a recursively emergent way, but also resolve the design itself to be regenerative with its place.

Project: The project for the studio will be an ecological education and research center focused on a significant, perhaps endangered, plant, animal or habitat in your local area, and the effects of climate change on the ecology that surrounds it. The facility will serve primarily as an educational platform for visits by various teaching organizations, as well as the general public, while providing a localized support center for research staff. Depending on the environment chosen by each student, there will likely be extensive outdoor program elements supporting a prescribed indoor program.

Process: The early part of the studio will involve studying, through a series of individual field explorations, research and readings, the forms and systems response of local geology, flora, and fauna to surrounding ecological factors, while also documenting the local contemporary ecological factors of the project site in a full range of environmental, economical, experiential and ethnological aspects. Students will also develop an initial, intuitive design concept that will be adapted and tested through the term. The latter part of the studio will explore contemporary sustainable and regenerative precedents and their response(s) to ecological factors, while students evolve or re-envision their own initial design based on their further awareness of ecological response, and the AIA-COTE Framework for Design Excellence. The work will conclude with fully documenting the design, including its ecological responses and synergies among those responses, in hopes of entry to the 2021 COTE Top Ten Awards student competition.

Procedures: The studio will be taught primarily through an online remote-learning environment, that uses virtual studio spaces for group and individual student work, built around a robust integration of digital, real-time interactive whiteboards, and parallel web-conferencing for audio and video interaction. Though students are asked to be available during scheduled studio class hours, some portions of the class will be directly interactive and synchronous, while much will be based around exercises and assignments that can be done off-line and asynchronously. The studio will include a combination of readings, presentations, virtual group "field trips", and dialogues with outside project-related parties, in addition to large- and small-group and individual discussions about project conception, design, development and documentation, in the virtual design studio structure. Some studio work and individual meetings, and site visits may optionally be done in-person at UO campus facilities, all per UO & SAE Covid-19 protocols.