This studio challenges students to look at how nature can inform architecture from micro scale to the macro scale. We will look at how built form and nature can come together in architecture through the program, the site ecology and material studies.

- Study how to interweave ecosystems and urban architecture.
- Find architectural possibilities in material experiments & digital fabrication research.
- Accentuate the character of a place at the site, architecture and detail level.

Students are invited to choose their own program and site at a boundary where human activity faces natural networks. The site and program should accentuate a question that spurs a research direction. The choice should come from your own values, beliefs and identity so it engages you emotionally. The project will manifest how you take a stand.

The PROGRAM will be a generator for a three-term long rigorous architectural investigation. Each student’s program must comprise one large space complemented by a series of smaller spaces. (i.e. monastery with monk’s cells, performance space with practice rooms, or sports venue, library, school, market, etc.)

We will consider: what role does the SITE play in the city? (stitching, masking, filling...) How does the site character tell what project would be appropriate and relevant? How can the site design foster a healthy relationship between ecosystems and architecture? Where can we repair and restore damaged habitat and where should we complement it with urban human habitat? Studying how sun, water and wind impact the site is a pre-requisite to designing sustainable buildings.

What MATERIALS and spatial experiences found in the vicinity form an understanding of the place? How can the identity of the place be strengthened through evoking geologic or historic uses through materials? Working from the program, each student will find a compelling form in nature and study its underlying structure and logic; examine how the form relates to purpose. Using biomimicry and digital fabrication, we will explore how the connections, topology or mechanisms can be a source for design inspiration. Students will research material applications in building envelopes and model trial assemblies.

The Fall term preparation seminar will include
- developing the Project Thesis, conceptual framework and approach with readings and discussion
- investigating how the program can reveal design possibilities
- researching the site’s natural assets / problems
- sculpting material experiments to understand building fabrication processes

PRE-REQUISITES / CO-ENROLLMENT
All students not fluent in digital methods should enroll in Arch4/523 (Fall). Co-enrollment in Arch 4/549 Programming (Fall) and Josh Cerra’s ecological design seminar is recommended.