Few designers have yet ventured beyond the metaphors and mechanics supplied by ecological models to design effectively for adaptation to change, or to incorporate learned feedback into the designs, or to work in transdisciplinary modes of practice that open new apertures for the exploration of new systems, synergies and wholly collaborative work. This is the project ahead: leading the sciences, humanities and design culture toward a more rigorous, robust and relevant engagement across the domains of ecology and design. Chris Reed and Nina-Marie Lister, “Ecology and Design: Parallel Genealogies” (Guattari’s) radical approach, if applied to the urban domain, would result in a form of ecological design practice that does not simply take account of the fragility of the ecosystem and the limits on resources but considers such conditions the essential basis for a new form of creative imagining.

**course objectives & student learning outcomes** | In our time of climate change, this course brings together people and discourses from many disciplines in pursuit of more resilient social-ecological systems within our built environments through dialogue, interdisciplinary research, design, and action. The course is affiliated with Georgia Tech’s Serve-Learn Sustain initiative, and actively supports its commitment to helping Georgia Tech students develop the expertise needed “to help create sustainable communities where humans and nature flourish, now and in the future.” It does so first by providing introductions to design research methodologies, critical theories and practices of ecological science and thinking, and those of sustainability through readings and dialogue with distinguished researchers working in these areas. Secondly, each student develops, in dialogue with the seminar, a line of research investigating interrelationships between natural and cultural spheres and the design of the built environment—ones relevant to their individual interests and the world at large. In the process, students develop the following types of knowledge and skills during the course:

- **understanding** of key ideas and principles of ecological thinking, their historical construction and embedded values
- **understanding** of dynamic interactions between natural and built environments and their implications for design
- **understanding** of key global paradigms of ecological design—their key arguments, values, ethics, and impacts
- **understanding** of current ecologically-oriented design research problems, methodologies, and applications
- **ability** to develop and communicate new lines of ecologically-oriented research and creative problem-solving

**course procedure & organization** | The course is structured as seminar with 4 parts:

- **Part I** Seminar members unpack and present readings that explore ecology as historically-constructed ideas and principles that can be applied to the research and development of an interdisciplinary knowledge-base.
- **Part II** Seminar members facilitate dialogues with distinguished researchers in different areas of research involving diverse interrelationships between natural and cultural systems within the built environment.
- **Part III** Seminar members formulate their own ecological design research topic, questions, and methodologies, presenting them for feedback from the seminar.
- **Part IV** Seminar members conduct their ecological design research and construct proposals of new principles and/or design applications when appropriate, and present them for feedback from the seminar and invited guests.

**course requirements** | Students are expected to do the following: 1.) read assigned materials, 2.) prepare presentations, 3.) attend all classes [more than 2 unexcused absences resulting in a lowered grade for the course], and 4.) participate in all class discussions. There are no tests, just research submissions. Course grade are weighted as follows: **Part I = 20% of final grade; Part II = 20% of final grade; Part III = 20% of final grade; and Part IV as 40% of final grade.**