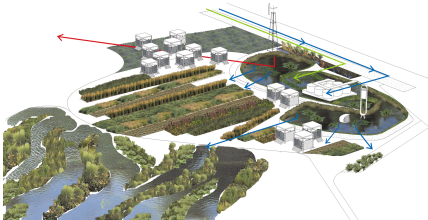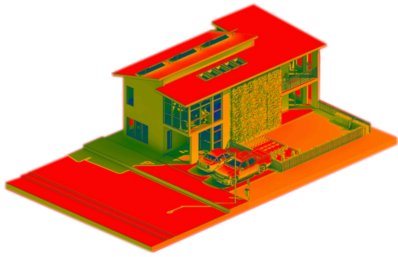# Architecture Energy and Ecology | course summary

School of Architecture | University of Florida

ARC 6793 • 03 Credits • Graduate Seminar
Spring 2025 | Meeting time TBD

It is not the strongest of the species that survives, nor the most intelligent. It is the one that is the most adaptable to change.

Charles Robert Darwin

…architecture is conceivable in its contradictory task only through understanding it as a poetic manifestation; poetic imagery is capable of overcoming contradictions of logic through its polyvalent and synthetic imagery. As Alvar Aalto once wrote: 'In every case [of creative work] one must achieve the simultaneous solution of opposites. Nearly every design task involves tens, often hundreds, sometimes thousands of different contradictory elements, which are forced into a functional harmony only by [wo]man´s will. This harmony cannot be achieved by any other means than those of art'.

Juhani Pallasmaa

The essence of technology is my no means technological…   Martin Heidegger
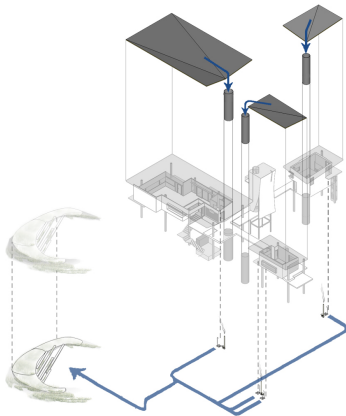
Students will explore the relations and interactions among humans and the environments in which they dwell – the metabolic, the natural, the built, and the sonic. Humans have uniquely harnessed and deployed energy reserves, materials, and natural resource flows to create what James Marston Fitch refers to as the 'Third Environment' – Architecture – interposed between humans and nature. Architecture allowed early humans free themselves from the intensities and stresses of the natural environment – hot, cold, wind, rain. This 'comfort' germinated and nurtured the evolution of a civilized humanity with a highly technical support infrastructure and sophisticated social order and expectations for performative architecture. In this evolution of aesthetically driven social culture, Architecture must go far beyond merely moderating environmental stresses. Architecture must also provide an inspiring and evolving typology of specialized cultural activity spaces – home, office, school, store, auditorium, laboratory, hospital bedroom, church, theater, plaza, street, etc. Often, these adjacencies are in conflict, especially within the urban soundscape of the city.

We shape our buildings; and afterwards our buildings shape us. Winston Churchill

At the onset of the 21st Century, scientists clearly understood, and have made the case that there are: (1) measurable limits to our environmental resources; (2) significant effects from human action on the environment that are changing it in dramatic ways; and (3) that the impending consequences – noise, warming of earth's atmosphere and/or subsequent sea level rise for example – are real environmental degradations that must be directly addressed. Rather than more 'sustainability' – as was the call for action in the later part of the 20th Century – 'resiliency' and 'ecology' will guide us in the 21st Century. Resiliency, rather than expecting a sustained equilibrium, accepts the inherent contradiction, conflict, and change in contemporary culture and embraces these challenges as opportunities for cultural advancement and enrichment. Ecology recognizes the interchanges of energy, material flows and sound within a given context and seeks to participate and nest within natural systems to limit external inputs and wastes. What is Architecture's role in the current phase of this evolution? And, how can individuals, as Architects, address and respond to these challenges in meaningful ways? This course will study these issues philosophically, conceptually, and practically, at the scale of urban dwelling.

Scope: Seminar format – we will read articles and engage in course discussions.
Research Element – research, visit, and evaluate a site with regard to the natural, social, and constructed ecologies that form a context.
Design Project – students will develop a design that responds to and advances ecological issues in the course at the scale of a large urban building or residential neighborhood - TBD.
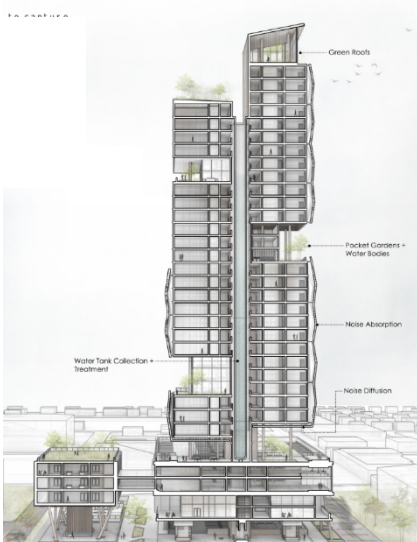
*students should be proficient in 2D AutoCAD and either Rhino, Revit or equivalent.