

# ECOLOGICAL DESIGN | DESIGN ECOLOGY: INTEGRATING SYSTEMS THINKING INTO EARLY DESIGN EDUCATION

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### **1 ABSTRACT**

*As a professionally-oriented discipline, education in landscape architecture requires a curriculum with the fundamental capacity to both teach the skills necessary to operate within the contemporary expectations of practice while expanding the nebulous intellectual boundaries of the discipline. Emerging pedagogical frameworks in education are shifting to a more systems-based approach focusing on the recognition of relationships and functional processes of engagement over the need to identify specific and static solutions or responses. While Landscape Architecture programs may already incorporate systems-based pedagogy in their design curriculum, the scope of literature available for how this is done is relatively limited. In this paper, we present our approach to a systems-based design education through two related courses, a studio and lecture that introduce basic ecological principles and integrate them with the design process in the initial year of Landscape Architecture studies at the University of Washington. The application of this framework has had mixed results. We find students have difficulty with: 1) comprehending the complexity of core ecological concepts and their spatial relevance; 2) incorporating the temporal aspects of biophysical processes and focusing on the sometimes intangible qualities of relationship-building reduces students' capacity for form-making; and, (3) a linear approach to narrative representation of design proposals doesn't capture or express the multidimensional interactions inherent in ecological systems and in the design process.*

#### **1.1 Keywords**

design education, studio, systems thinking, pedagogy