



*Protean Precedents*

## 48-763: Protean Systems: Sustainable Solutions for Uncertain Futures

Units: 9 or 12

Instructor: Joshua D. Lee, PhD, AIA

Uncertainty perpetually plagues the built environment. The inability of our buildings and cities to adapt to shifting circumstances has led to an enormous amount of waste. We will explore the various types and scales of change and review various concepts (Spatial Flexibility, Metabolism, Shearing Layers of Change, Open Building, Design for Deconstruction (DfD), Circular Economy, Dynamic Facades, Smart Materials, Transformable Structures, Universal Design, Resiliency, and Adaptive Reuse) through a wide array of built precedents and products that have attempted (with varying degrees of success) to respond to these forces over time. Students will produce sketches, animations, working physical models, short histories, and longitudinal effectiveness reviews of these exemplars. From this deep review students will design their own Protean Systems by utilizing a scenario planning tool and day/year/decades-in-the-life diagrams that will help address the often-overlooked social aspects of their technical solutions.