Modularity and the Kit of Parts
How Systems Thinking impacts Design and Designers

IARC 407/507
Instructor: Linda Zimmer
3 credits  Seminar/Advanced Elective
T-Th 12:00-1:20
Room 206 Lawrence

Open to Interior Architecture and Architecture students who are eligible for 4/584 and will be open to Product Design students if space is available.

This course examines how the dual concepts of modularity and kit of parts construction have been applied in contemporary design theory and practice. We will begin by studying how scatia modularity has historically informed composition as well as construction and compare and how different modern designers invented and/or applied various modular systems. Next we will examine how of standardized modules and parts have changed the way designers approach construction/fabrication and whether kit of parts assemblies have fostered new thinking about composition.

Systems thinking, as examined in this course is inclusive of two critical attributes of good design. First, the ability to use modularity as a tool to make useful and beautiful spaces and products, the second is the ability to work with a module to facilitate economy, ease of construction, reconfiguration and/or portability.

Topics covered in the course include but are not limited to:
- Scale, shape and size in modular planning
- How modules “fit” together in use
- Kit of Parts construction; “open source” kits made of readily available elements and “closed” kits made of custom elements
- Mass customization and the opportunity to create variation and change in buildings and products through modular or kit of parts design
- Transportation, disassembly and reuse or reconfiguration as design influences
- Trade-offs in Function and flexibility

The course structure includes readings, lectures, student projects and presentations. On-line readings and lectures will set the stage for case study research of projects and systems. Students may guide their own research within a fixed framework of assignments and will be encouraged to analyze modular systems and kits of parts that are of individual interest.