KINETIC ARCHITECTURE DESIGN SEMINAR

COURSE DESCRIPTION
Apart from windows, doors and vertical conveyances, most buildings have few moving parts and are conceived and built as static artifacts. Driven by issues of sustainability and the desire for adaptive control of building environments, kinetic architecture has emerged as an exciting sub-discipline in design and construction communities. In this design-based seminar, we will explore the world of architecture-in-motion. Course work will primarily be studio-based. The core assignment will be the integrated design of an operable mechanism for a building. This will be a term-long design project that will constitute the bulk of the work for the course. Project types can range widely, from operable enclosure devices to movable building elements (façades, roofs, walls, floors) or conveyance devices. Final projects for this class will be presented in a separate end-of-term review and exhibit. Design tools will include both virtual and physical 3D modeling as well as traditional 2D design media. Design teams must pay careful attention to the complete range of technical concerns: construction, engineering, enclosure, environment and climate. While so doing, the principle focus will remain on aesthetic issues: the sculptural qualities of the mechanism, light, materials, and the poetic qualities of motion.

COURSE OBJECTIVES
• Exploration of the world of kinetic architecture: precedents, possibilities, practical problems
• Complete the comprehensive design of a kinetic device for a building, including problem definition, exploration of initial ideas, generation of a viable concept, schematic design, design development and resolution of technical problems, prototyping, production drawings and presentation drawings. On a fundamental level, we are interested in purpose, design, and physical execution.

COURSE INFORMATION
• Prerequisites: ARCH 462 & CONSENT OF THE INSTRUCTOR.
• Credits: 4-6 (Advanced Technical Elective); CRN’s: 30439/30541
• Group Work: Completing a kinetic architecture project involves more work than can be done by a single student. All projects will be undertaken by groups of 3-4 students.
• Time and Location: Monday and Wednesday 10:00 – 11:50; LA 230

INTERESTED STUDENTS SHOULD ATTEND AN INFORMATIONAL MEETING WITH THE INSTRUCTOR AT 12:30 ON EITHER THURSDAY FEBRUARY 27 OR MONDAY MARCH 2 IN LA 278

Animations of past student work can be found on YouTube by searching for ’Vancouver Kinetic Architecture.’