PROGRAM DESCRIPTION: A semester in New York City at Rensselaer’s Center for Architecture Science and Ecology (CASE) allows both undergraduates and graduates to work in a collaborative interdisciplinary research environment focused on the development of advances in sustainable technologies.

The design studios at the Center for Architecture Science and Ecology (CASE) work to generate meaningful dialogue between the interdisciplinary research of the Graduate Programs in Built Ecologies (BE) at CASE and the design studies of the School’s professional programs. By teaming these two groups, research students who are innovating technologies to advance the built environment, with professional studies students who are learning to design the next generation of buildings, ideas are cross-pollinated, informing new modes of thought on how the built environment can be technically and spatially sculpted.

The CASE research agenda follows the belief that the next generation of buildings will transition from the mitigation of energy flows through barrier technology to the capture, transformation, storage, and redirection of energetic resources through advanced building design and technology. Meanwhile, the design studios embrace the study of the dynamic phenomena surrounding a project as primary concerns in the formation of the built condition—a radically different characterization of the problem. The core of this exploration involves the introduction of new digital simulation techniques through a variety of platforms and techniques that are capable of simulating dynamic and energetic flows at multiple scales. Emphasis is placed on designing architectural systems that work and respond with dynamic energetic flows rather than resisting or blockading them.

The CASE / NY Program is optional for the undergraduates and offered as a required course for the M.Arch Students. The belief is that this studio will better prepare the next generation of architects to radically advance a new era of next generation building systems for the built environment.