Our deeper understanding of sustainability and ecology has led to a performance driven architecture that focus more on energy efficiency than design. However, one of the biggest misconceptions of high-performance building is the belief that saving energy is the premier focus, when it should be to cater for the comfort and well-fare of our focus: the occupants. The core concept of sustainable, or high-performance, building is that it is being designed and oriented for the comfort of the occupants.

Responsive architecture aims to optimally respond to a range of needs within multiple contexts that it is capable of self-modification, regulation, and adaptation. By reacting intelligently to changes of various kinds, architecture can be high-performance building.

The studio emphasizes that buildings are never inert, static but buildings should be dynamic and respond to the environment in where they are located. Buildings can be more symbiotically designed with the information from surround environment.

This studio will be accomplishing this by focusing on three environmental factors: Thermal, Light, and Airflow. These three factors will be the basis to shape building design into becoming high-performance design buildings. An example of this would be a type of kinetic skin which can respond to dynamic of temperature, daylight and wind flow that ultimately generate better indoor environment.

Students will be introduced to design metrics via the latest building simulation tools used in the profession to evaluate the environmental impact of design choice. eQuest, EnergyPlus, Diva4Rhino, Ladybug, Fluent are some of the tools that will be used during the studio to evaluate the performance of the design.

The project is to design a new elementary school located at the Champaign School which is located at 1117 W Park Ave, Champaign, IL 61821. The existing building will be demolished this summer and the new construction will start soon. Students will be interacting with stakeholders (architect firm, school district, school faculty, and student) to get feedback on their needs for the new building. Final outcomes are proposed to present to the stakeholders after final review.