



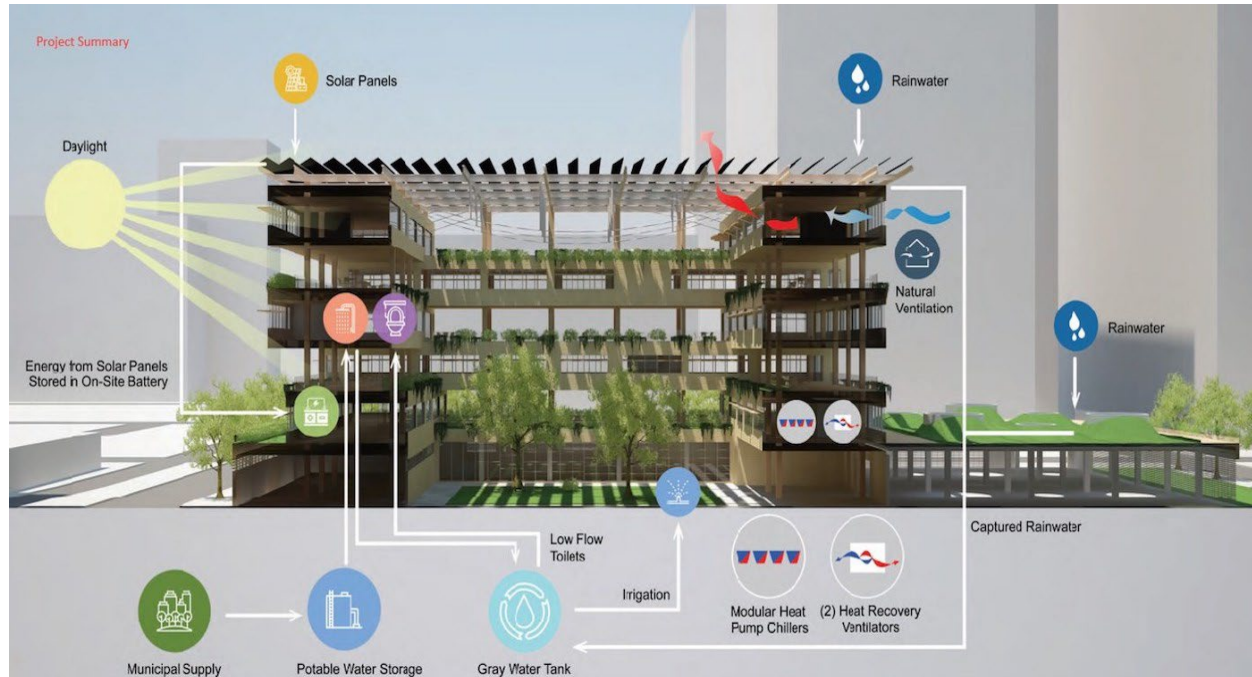
Carnegie Mellon University

School of Architecture

College of Fine Arts, CFA 201

Carnegie Mellon University

Pittsburgh, PA 15213



First place and fan favorite in the 2019 ASHRAE LowDown Showdown modeling competition were awarded to C.R.E.A.M. (Carbon Rules Everything Around Me). (Image: ASHRAE)

48-116: Building Performance Fundamentals

Units: 3

Instructor: Nathan Sawyer

This course will introduce fundamental concepts of building physics. The knowledge and skills obtained from this course can be applied to studio projects and beyond, improving building design and performance through standard methods of evaluation and simulation tools. Course curriculum running concurrent with studio projects will aid students in further developing and guiding design decisions to incorporate fundamental concepts related to climate, energy, light, relationship to site, and occupant visual and thermal comfort.

Students will develop a general understanding of, site analysis, building placement & form as it relates to building performance, photometric principles to evaluate lighting conditions, thermodynamic principles, and heat transfer, building energy, renewable and embodied energy. Skills, tools, and knowledge base learned in this course will enable designers and architects to employ sustainable practices at all phases of design, leading to better performing buildings.