This studio will address an enduring challenge of architecture: the innovative design of residential spaces within dense urban contexts. Through design, we will strive to address two of this century’s most pressing societal needs: (1) confronting the growing need for affordable, engaging places to live in city centers, and (2) advancing the performance of these buildings beyond the status quo. The primary project will be the semester-long design of a new residential building to be located in a city of the students’ choice.

This course will approach the design of affordable housing with special emphasis placed on the energy performance of multi-unit residential buildings in urban settings. We will explore the potential relationship between high-performance building envelope systems and affordable housing. Through large-scale wall sections and modeling, we will study material assemblies and their dual roles—both technological and aesthetic—in defining the building envelope and its performance.

The semester will begin with research into housing typologies and case studies, incorporating analysis of the technologies, history, and theory related to housing design. In order to develop collaboration skills and to enable a high level of depth and detail in the projects, students will work in teams of two on the semester-long design project. Each team will have the freedom to select a suitable site in an urban location of their choice, anywhere on earth, and to develop a unique program and design proposal for multi-unit housing that addresses issues of advanced performance. The scale of the projects will vary depending upon the selected sites, but may be low-, mid- or high-rise and may also accommodate mixed-use programs, although the focus of the project will be on residential space, including the detailed design of apartment units.

The studio will emphasize mastery of technical principles as well as more intangible qualities such as spatial experience and architectural character, stressing quality over quantity of space. The studio process will be based on experimentation with form, structure, and enclosure, developed through iterative design proposals using detailed and large-scale physical and digital modeling.

Images:
Left: wall section from S. Murray, Contemporary Curtain Wall Architecture.
Above: floor plans from H. French, Key Urban Housing of the Twentieth Century.