WORKPLACES: DAYLIGHT AND DEEP ENERGY RETROFIT

Admitting daylight and distributing it throughout a building is a primary form generator in architecture. In contemporary workplaces, daylight is of first importance in reducing energy use and increasing productivity. A high performance building envelope can capture and filter daylight, while at the same time integrating natural ventilation, managing heat transfers, promoting a comfortable and pleasant interior environment, and making meaningful connections from inside to out. In designing for a sustainable future, our greatest resource is the existing building stock. The most productive investment we can make in meeting our future energy demands is in the rehabilitation of buildings to reach higher levels of performance. This studio will study workplaces as an opportunity to explore both daylight and deep energy retrofit.

Sponsored by Glumac, environmental engineers, the studio will have a strong technical emphasis. Specialized inputs will be offered by practicing architects and engineers, manufacturers and the construction industry. Completion of the Building Enclosure lecture class will be a distinct advantage, however, the studio will be open to everyone who qualifies at the 4/584 level.

In order to provide programmatic interest and a range of daylight requirements, the workplaces chosen for study will come from an academic campus. The selected buildings will be large enough to combine upgrades of existing facades, a deep reorganization of existing space and substantial new construction. In addition to the technical performance objectives, architectural integration of the new with the old, of the project and a campus context will be important themes in the work.

This studio will be offered by Professor Donald Corner, during regular studio meeting hours in Eugene. Mark Perepelitza, Associate Partner at ZGF in Portland, will be available as a co-instructor one day per week. There will be a number of field trips to Portland.

Mark Perepelitza has practiced architecture professionally since 1992. For the past 18 months he has split his time between his position at ZGF in Portland and research and graduate studies at UC Berkeley. In 2008, he was awarded the Van Evera Bailey Fellowship from the Architecture Foundation of Oregon for his proposal to investigate effective applications of integrated facades in the Pacific Northwest. The research included five weeks of travel in Northern Europe to tour buildings and interview key design team members. He has collaborated with Lawrence Berkeley National Lab, the Center for the Built Environment at UC Berkeley, BetterBricks, and the UO Energy Studies in Buildings Laboratory. The work was presented in a gallery exhibit in the summer of 2009, and is also included in a set of web pages hosted by BetterBricks: http://www.betterbricks.com/design/integratedfacades