**Building Enclosure Systems:**
*Bioclimatic and Ecological Approaches to Tall Building Enclosure Design*

ARCH 505  
Credit: 3 semester hours  
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**DESCRIPTION**

This course is to examine new environmentally sustainable methods of designing building enclosure systems. The revision of seven decade old practice of building enclosures as single-layer curtain walls is the ultimate goal of the course. Bioclimatic design and eco-diversity are the key course themes. New functions of building facades, windows and walls, will be introduced, and their performance criteria will be examined. Various methods of assembling multifunctional enclosure systems will be investigated to enhance the thermal and visual comfort in building perimeter zones and to improve the energy efficiency of opaque and transparent building skins. In the process, recent advancements in insulating glass technology, daylighting systems, and solar and wind energy production methods will be examined. As the final outcome of the course, students will develop a proposal for a new multi-functional bioclimatic facade for a tall building.