

Spring 2016 Course Description: ARCH 576-CRW Graduate Seminar

CURTAIN WALL DESIGN & CONSTRUCTION

Professor Scott Murray

Credit: 3 hours

Day/Time/Location: Thursday / 9:30 AM to 12:20 PM / 102A Architecture Bldg.

Recent years have seen a rapidly growing interest among contemporary architects in the innovative use of curtain wall systems as building enclosure. This seminar takes a materials-based approach to explore in-depth the processes of design and construction of building envelopes, with an emphasis on the theories and technologies behind leading-edge curtain wall systems. Students who successfully complete the course will gain knowledge necessary to address a broad range of aesthetic and technical issues encompassed by curtain wall design in contemporary practice.

Topics of study include: the history of curtain walls • curtain wall typologies • technical and aesthetic performance • energy efficiency and sustainable strategies • glass, metals and other materials • prefabrication methodology • the architect's role in bidding, fabrication and installation procedures • current and future developments in curtain wall design.

The course is organized into three phases:

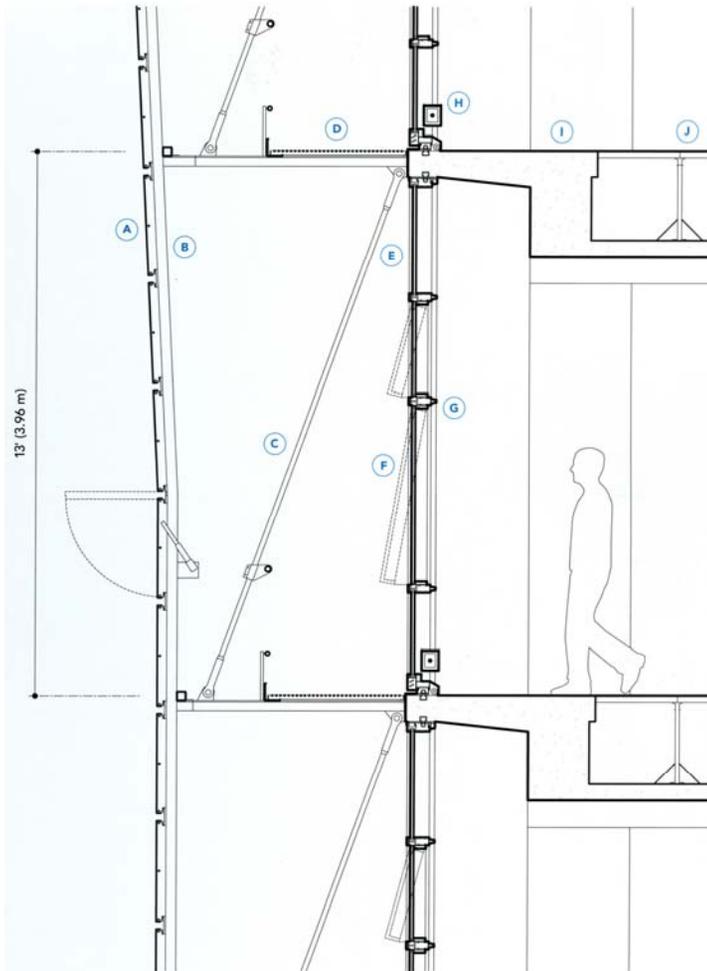
- (1) Readings, lectures and discussion on fundamental concepts in curtain wall design
- (2) Case Study Research Project
- (3) Final Design Project

In the Case Study Project, student teams will independently research, analyze, and document the curtain wall system of a recent significant building. The course culminates with the Final Design Project in which each student will develop and detail a curtain wall system of his or her own design, documented in drawings and models. Evaluation will be based upon class participation, assigned readings/homework, the Case Study Project, and the Final Project.

Required readings will come from the following book, in addition to other references: Scott Murray, *Contemporary Curtain Wall Architecture* (New York: Princeton Architectural Press, 2009). Copies of this book are available on reserve in Ricker Library. Additional readings will be distributed via the course website.

Please note: Class size is strictly limited to ensure adequate attention to student projects. When online enrollment is full, students who wish to add their names to the wait list must email the Graduate Programs Office at Arch-Grad@illinois.edu.

Image at left: wall section, US Federal Building by Morphosis (from *Contemporary Curtain Wall Architecture*).



6
Section

- | | |
|--|---------------------------------|
| A Perforated stainless-steel sunshade panels | F Operable out-swinging windows |
| B Galvanized-steel tube frame | G Extruded-aluminum unit frame |
| C Steel suspension rod | H Radiator |
| D Galvanized-steel-grate catwalk | I Reinforced-concrete slab |
| E Insulating glass | J Raised floor |