Columbia University
The Graduate School of Architecture Planning and Preservation

A4444-1, Spring 2020

Façade Detailing: *A Material Understanding*

Instructor: Kevin Schorn
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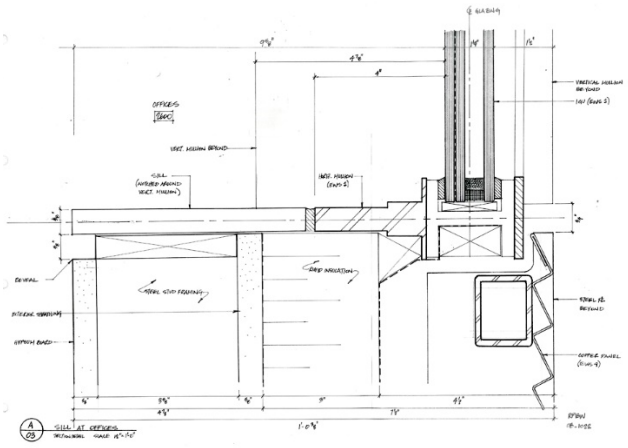
Building Science & Technology Elective

Full Semester, 3 Points
Thursday, 9am – 11am
409 Avery Hall

The subject of this course is the detailed design of building cladding through an understanding of materials and their physical properties. Students will learn what the consequences and opportunities are of their design choices for the exterior cladding of a building at a construction document level of resolution. There will be an emphasis on sketching details at large scales (often 1:1) by hand to facilitate a proper understanding of everything involved at the interface between the interior and exterior environments and the other necessary building systems. Upon completion of the course the students will have a deep understanding of many different cladding materials and what it takes to remain in command of the entire building process from design concept to constructed work.



The first half of the course will be focused on researching cladding materials and understanding all physical properties (basic, mechanical, thermal, environmental, etc.) as well as manufacturing and construction limitations and processes. Precedent projects and their façade system details will be dissected and understood.

The second half of the course will employ the new knowledge toward developing cladding details for a previous studio project or any other project which is at a level of design such that typical façade section and plan details can be developed. Details will be sketched by hand and once a solution is found, the details will be drawn accurately in two-dimensions with the option of augmenting the representation with a three-dimensional drawing. Emphasis will be placed on thinking through sketching as well as how to draw and annotate clear and legible drawings. The final deliverable will be detailed drawings as well as a model/prototype of the condition or a portion thereof to clearly communicate the design and how it works. Actual materials or close representations will be considered to be used in the models.

Schedule:

01/23 Week 1: Introduction and background, Assignment of **Project #1 - Research**

01/30 Week 2: Lecture: Material properties

02/06 Week 3: Lecture: Detailing the new Whitney Museum of American Art

02/13 Week 4: Working session: Project precedents and materials discussion

02/20 Week 5: **Presentations of Project #1**

02/27 Week 6: Lecture: Drawing Details, Assignment of **Project #2 - Design**

03/05 Week 7: Working session – Sketching details

03/12 Week 8: Lecture: Detailing the Krause Gateway Center

03/19 Week 9: SPRING BREAK

03/26 Week 10: Lecture: Making Models and Mock-ups.

04/02 Week 11: Working session – Technical drafting review

04/09 Week 12: Working session – Details and models review

04/16 Week 13: **Presentations of Project #2**

Note: Schedule is subject to change.