COURSE: High Performance Envelopes – Part 1
ARCH 407/507 – Fall 2014

2 credit hours. Taking this course with the 2 credit Winter 2014 companion course will satisfy the Architecture program’s Advanced Technology requirement.

INSTRUCTOR: Sean K. Scott, Adjunct Instructor, AIA, LEED AP + BD + C, BEC
OFFICE: Ankrom Moisan Architects
o: 503.952.1342 c: 503.539.8878
seans@amaa.com
OFFICE HOURS: By appointment.

LECTURES + WORKSHOPS: Mondays: 5:30 – 7:30PM, UO PDX White Stag Building Room 451.


PREREQUISITES: Building Enclosure: Design / Construction / Performance with a passing grade

GRADING: Graded, or P/NP

BACKGROUND
Building on the prerequisite course of “Building Enclosure: Theory and Practice”, this course plans to apply concepts of building technology to studio projects via problem-based learning. The durability and performance of our buildings is one of the most important topics related to the built environment today. The largest factor in this topic is the building envelope. Numerous professionals will be brought in from various roles within our industry to interact with students as we explore betterment of envelopes together, integrating as much as possible with studio classes that are current or past projects students may have.

INSTRUCTIONAL OBJECTIVES

- Become more familiar with the difference between “high performing details” and “standard details”.
- Develop an immediately marketable service to help you gain employment straight out of your educational career – detailing.
- Be able to select appropriate building materials and assemblies for various building types, climates, budgets, and priorities.
- Analyze and support various pros and cons of differing sustainability efforts on the project with the enclosure.

FINAL EXAM: Monday, December 08, 2014, 5:30pm – 7:30pm
Explore the relationship further between the enclosure and the interior building systems (Mechanical, Lighting, Electrical, Plumbing).

LEARNING VEHICLES
Class size will be limited to the first registered 12 students meeting the prerequisite. Class sessions will alternate between lecture and workshops every other week. The lecture will introduce and discuss concepts, while the workshop the following week is designed to allow a lower student to teacher ratio in groups of 3 or 4 to focus on one student’s work in a hands on, in-process effort. Students are expected to come with the assignment complete to the workshop, and expected to make revisions for the following week. Participation in the workshop is important and helps to prepare all for success in the workplace. Homework will be turned in before each workshop (digitally) and graded as “in process”, final versions are turned in the following week prior to lecture.

COURSE ACTIVITIES
Lectures will include:
- Discourse related to connections between building performance / durability and the process, influences, and tools available.
Workshops will include:
- Exercises (within the workshop and take home) that elaborate on the tools from the lecture.
- Drawing, researching, narrative papers, and other exercises will be employed and submitted for grading.

EVALUATION
Grading is based on the following breakdown.

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>8 week homework</td>
<td>10 x 8 weeks = 80</td>
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<tr>
<td>Final Exam</td>
<td>20</td>
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<td><strong>TOTAL POSSIBLE</strong></td>
<td><strong>100</strong></td>
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FORMAT
ARCH 410 / 510 is a lecture and workshop course. Much information will be exchanged in lecture. Workshops will be used to develop and discuss issues and concepts beyond what is possible in lecture. Hands-on application of selected concepts will be explored through homework and workshop activities.

MONEY
In addition to typical University tuition, fee, and book expenses, additional expenses will likely be incurred for materials and supplies required for the completion of course homework and minor travel within Portland once or twice during the term.

FINAL EXAM: Monday, December 08, 2014, 5:30pm – 7:30pm