Instructor  
Mark Perepelitza, Adjunct Instructor  
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503.445.7305

GTF  
Peter Hamilton  
peterh@uoregon.edu

Time / Place  
M/W 5:30–7:30, location TBD

Credits  
4 Credit Hours, required for professional majors in Architecture.

Course Content:
The building enclosure plays a number of essential roles: it provides shelter and weather protection, it creates architectural form and image, and it offers visual and physical connections between interior and exterior. The enclosure is also crucial in supporting occupant comfort, productivity, and well-being with the lowest possible energy consumption. In the design and construction of high-performing buildings, architects must make intelligent choices to balance trade-offs between competing functions. Effective innovative solutions can be developed from a strong understanding of enclosure performance fundamentals.

In this course we will study critical control layers which are essential to the creation of an effective and durable building enclosure. We will explore common enclosure materials and systems including metal and wood framing, weather control layers, various types of insulation, a broad range of cladding materials (including masonry, metals, and wood), historic and modern mass wall assemblies (masonry and concrete), window systems, below grade assemblies, roof terraces, “green” roofs, and conventional roofing assemblies.

We will engage these topics in the context of the design and documentation process, including tools and techniques. The emphasis will be on developing assemblies and the interfaces between systems in drawings and details from initial sketches through construction drawings. We will also touch on rules of thumb and analysis methods that support decision-making in technical design.

Building performance and sustainable design are important factors in the design and making of buildings and will be themes that weave through the course topics. We will primarily consider current best practices, but will also discuss building enclosure trends and emerging technologies.
Course Objectives:
1. Build on the students’ understanding of the multiple roles of the building enclosure.
2. Study the building science concepts at play in building enclosures and the control layers required to manage them.
3. Explore a wide range of exterior wall, roof, and foundation materials and systems.
4. Engage the design, analysis, and documentation process in the creation of a complete and effective building enclosure.

Course Format:
The course will include lectures, guest presentations, and readings. Two technical design projects will provide an opportunity to explore and apply the principles covered in the lectures and readings through design, drawing, and detailing. For each project, one class period will be devoted to pin-up reviews with professional architects and consultants. In addition to the projects, a midterm and a final exam will cover the content of the course. One or two optional field trips will also be scheduled.

Blackboard:
Course information will be posted on Blackboard. Reference materials supporting projects 1 and 2 will be available. PDFs of lectures will be posted.

Course Grading:
Grading of projects and exams is performed by the instructor and by GTF under the direct supervision of the instructor. The instructor has ultimate responsibility for determining and entering grades. All grading will be done according to clear criteria that are used by the instructor and GTF. The instructor will regularly monitor the grading activities of the GTF with respect to accuracy and fairness. Graduate students have the option of having their work evaluated solely by the instructor teaching the course.

Point Distribution—PRELIMINARY

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
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<tbody>
<tr>
<td>Project 1</td>
<td>100</td>
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<tr>
<td>Project 2</td>
<td>100</td>
</tr>
<tr>
<td>Mid-term Exam</td>
<td>50</td>
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<tr>
<td>Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>Attendance and participation</td>
<td>30</td>
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<tr>
<td><strong>Total</strong></td>
<td>380</td>
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The point total translated to a percentage, and the following grade distribution will apply:
A 90 – 100%; B 80 – 89%; C 70 – 79%; D 60-69%; F Below 60%
A grade of B or better must be obtained to receive a P, if a P/N grading is selected. Please pay attention to the cutoff date for changing grading option. If missed, the grading option cannot be changed.

Exams
The mid-term exam will cover fundamental concepts presented in lectures and readings during the first three weeks. A final exam will be given at the time allocated for the final exam for this class. The final exam will cover the full content of the course including lectures, readings, and projects.

Late Policy
Projects 1 & 2 are due during the time identified in the class schedule. Projects submitted after these deadlines will receive an immediate 10% penalty, and 10% will be deducted for each additional day the project is late.

Incomplete/No basis for grade
If you do not turn in a project, or you miss the final exam, you will receive a “Y”—no basis for grade. This will require you to repeat the class at a later date. You are eligible to receive an “Incomplete” only if you have a documented medical excuse or family emergency.