DEPARTMENT OF ARCHITECTURE  
School of Architecture & Allied Arts  
University of Oregon (Portland Program)  
ARCH 471/571  
Winter 2009  
Steffen/Levy

BUILDING ENCLOSURE: Theory and Practice

Instructor: Mike Steffen, AIA, CSI (msteffen@walshconstructionco.com)  
Ariel Levy, PE (aley@rdhbe.com)

Teaching Assistant: Nathan Gregory (nathangregory@lycos.com)

Meeting Time and Place: 6:00pm - 7:50pm Tuesday - Location TBD  
6:00pm - 7:50pm Thursday - Location TBD

Format: Lectures, in-class exercises, field trips, exams

Credit Hours and Grading: 4 credit hours, optional grading.

Prerequisites: ARCH 4/562, 4/563, 4/591.

Allen & Rand, Architectural Detailing, (2nd Ed.)  
Brock, Designing the Exterior Wall

Supplemental Readings: CMHC, Best Practice Guide: Wood Frame Envelopes in the  
Coastal Climate of British Columbia  
Brand, Architectural Details for Insulated Buildings

COURSE DESCRIPTION
This is the final course in the technical sequence that is required of all graduating students. The subject  
focus of this course is on the building enclosure systems that surround primary structure. The course will  
cover fundamentals and principles of building science and the building enclosure. Systems and assemblies  
will be explored, including critical barriers, windows and doors, flashings, coatings, sealants and  
waterproofing. Major material groups will be examined: wood, metals, glass, roofing, masonry veneers and  
concrete panels. Selection of appropriate materials and their application to design problems that require the  
integration of architectural concepts and good standards of technical practice will be discussed. The  
development of systems and materials will be presented along with case studies showing exemplary  
projects and current practice.

The class will be taught by two experienced professionals who represent different facets of a typical design  
and construction team: an architect/builder, and a building enclosure specialist. The class will meet twice a  
week for lectures, discussions and project case studies. There also will be case study presentations of  
enclosure designs by local architects, as well as field trips to construction sites and built projects.

COURSE OBJECTIVES
1. Build on the students developing understanding of the tectonic dimension of the art of building, through  
an appreciation of craft and expressive emphasis in building enclosure design and construction.  
2. Develop an understanding of building science principles as they apply to the design and construction of  
the building enclosure.  
3. Develop an understanding of the physical properties of materials and the appropriate use of materials in  
building enclosures.  
4. Provide experience with introductory concepts of construction detailing and documentation.
COURSE REQUIREMENTS
This course requires substantial reading from sources that describe the theory and practice of building design and construction related to building enclosures. The course includes lectures, class discussion, detailing exercises and sketch problems to supplement these readings.

COURSE GRADING
Activity: 
Exercise 1  20
Exercise 2  20
Exam 1  70
Exercise 3  20
Exam 2  70

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Total Possible  200  points

Late Work: Receives a 10% reduction each day it is late.

Grading for the term will be based on a percentage scale:
A = 90 – 100% (180-200 pts.)
B = 80 – 89% (160-179 pts.)
C = 70 – 79% (140-159 pts.)
D = 60 – 69% (120-139 pts.)

Graduate Students: To receive a P you must score at least a B or better.
Undergraduate Students: To receive a P you must score at least a C or better.

OTHER NOTES
Class attendance is mandatory. Emergencies occur - if you cannot attend please let the teaching assistant know asap. Generally speaking there is a direct relationship between class attendance and your ability to succeed in this course as well as in the architectural profession.

The instructors have limited time to provide consultations regarding coursework outside of normal class hours. By appointment only, the instructors may be available for consultation directly following class hours. Please contact the instructors or the teaching assistant by email or at the end of a class session to schedule an appointment.