Passive Cooling

“BUILDING DESIGN, COOLING”
ARCH 410/510    FALL 2008

Prof. John Reynolds, x 6-3642
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8:30-9:50 AM, TU/ TH, RM 206
Seminar is limited to 20 students

4 Credit Hours, P / N or Graded

Prerequisite: ECS, Arch. 491 / 591 (or equivalent elsewhere): familiarity with heat gain calculation and passive cooling terminology and procedure is assumed.

The primary focus of this seminar is on the design impacts of various passive cooling strategies. Also:

• heat gain-avoidance strategies
• major natural heat sinks -- earth (and ground water), air, and sky;
• various cooling techniques;
• interactions of passive cooling, daylighting and passive solar heating;
• JR's book, Courtyards: Aesthetic, Social, and Thermal Delight, Wiley © 2002 (purchase is not required)

First seven weeks: discussions. Last 3 sessions: presentations of the individual term projects (topics of your choice)

Final Project Due at Final Exam:
8 a.m. WEDNESDAY Dec. 10

TEXTBOOK: 10th edition of Mechanical and Electrical Equipment for Buildings REQUIRED.
Natural Ventilation in Northwest Buildings. RECOMMENDED
Additional readings, including the Arup Journal, will be on reserve.