

Passive and Daylighting Design

Assignment #1 — Case Studies

Due: September 26th, 9:00 am

One of the fundamental building blocks of architectural technique is critical thinking, and the practice of studying projects by other architects, or case studies as they are known, is a long established technique for developing this skill.

The course will be spent designing a small exhibition building, and this first project is a vehicle to familiarize yourselves with the nature of passive design. This project will be done in groups as outlined below.

Each project is to be analyzed in the terms presented in class, specifically focusing on daylighting, temperature, people and poetry. Ask yourself questions such as: What is the concept of the building? How was it made? How does it work? How does the building respond to the context? To the climate? What technologies are utilized? Etc. etc.? Your task is to be extensive and comprehensive. You cannot have too much information. Your findings will be presented to the class, and should be documented using diagrams, drawings and photographs.

Working in groups of two you are to choose your favourite building and analyze its' success or failure in terms of passive design. Your deliverable is a five minute presentation to the class in slide or other format.

Good luck and go nuts.

Reading for next week (to be completed by September 26th)

From Sun, Wind and Light, Part 1 Analysis Techniques:

Exercise 2: Sun Path Diagram

Exercise 3: Solar Radiation

Exercise 4: Wind Rose

Exercise 7: Site Microclimates

Exercise 8: Sky Cover

Exercise 10: Daylight Obstructions