ARCH 4/592: HDR Photography for Daylighting Design Analysis and Research

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Term: Winter 2016

Credits: 3-4

Prerequisites: Arch 4/592 ECS II; or instructor permission

Description: Daylight should be the primary source of illumination for most architectural applications you will design throughout your career. This course teaches High Dynamic Range (HDR) photography, an analysis technique that can be used to study built spaces with daylight, in order to help designers better understand visual comfort and aesthetic implications of their daylighting design decisions. HDR photography can also be applied to electric lighting design, and the course will facilitate exploration of the design and operation of hybrid daylight and electric lighting applications. These analysis and application techniques will translate well for designers interested in using digital daylighting simulation since HDR images can be generated through both simulation and photographic techniques, effectively closing the loop between design intent and reality. Through a seminar format with an experimental bent, the course will employ a combination of lectures, lab sessions, and field studies as media to investigate and understand the benefits and limitations of HDR techniques to support high quality daylighting design. Digital daylight simulation will not be taught directly in this course.

Grading: Optional P/NP or graded