ARCH 5590--Architectural lighting design
Prof. Kay Bea Jones
Mondays—9:10-11:55
Knowlton Hall RM175

3 credit hours
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COURSE DESCRIPTION
Light is architecture’s most ephemeral medium. Intrinsic to all works of design, natural and artificial lighting define the quality of space and form. This seminar will provide students with the opportunity to examine through case studies and formal exercises those factors that impact environments as revealed by light. Interest in balancing quantities and qualities of composed light has been renewed in our era of energy conservation, yet phenomena of light have vitalized great architecture for millennia. Designing for public places today, the dialog between natural light with integrated LEDs and other current technologies requires knowledge of current standards and practices, and lighting designers who work in tandem with architects are often in part responsible for the renown of some of the greatest works of modern architecture.

OBJECTIVES
This seminar will focus on compositional aspects of architecture lighting design in buildings and landscapes. Students will observe and analyze selected structures and develop tools to assess lighting outcomes and effects. Presentations by lighting designers will contribute to students’ technical knowledge. The seminar will act as a workshop to explore lighting design through site analysis, while modeling tools will provide students the chance to explore light media and methods for critical evaluation. One formal artifact that evolves through iterative stages will allow students to explore various principles, physical attributes, and composition of light. The artifact will be documented to reveal light’s dynamic potential. Students are encouraged to explore photographic processes from the arts, including pinholes, cyanotype, photograms, rayographs, and other light recording processes.

CLASS STRUCTURE:
Monday morning sessions will include site visits and studio project critiques. Bring recording materials to all classes. Open discussion and dialog are encouraged. Due to special presentations and access to technical content, some classes will be rescheduled for alternate times.
Site Visits (by individual room or space):
Exercises will be developed in and after class and presented informally in subsequent seminars.
On final analysis (student’s choice) will follow 5 in-class exercise. Analysis method:
Observation
Perception + recording (measurement is optional)
Documentation
Assessment following synthesis of discoveries

Final Project will be developed in stages:
An artifact or space will be crafted to study conditions of light through form. Conditions of form will include quantity and degree of penetration, intensity of light, surface color and reflectivity, and transparencies. The element of student might be a “Room” or a “Light Fixture.” Methods of documentation through photograph and video will be explored. The Final Project submission will document the evolving stages of light study provided by the artifact or space.

Grading
Each site analysis = 10 points  50%
Final architecture lighting analysis  20%
Lighting model and final project  30%

Evaluation will include not only individual work, but also a student’s contributions to the seminar through participation. Grading is based on a comparison with other students in the course and with the instructors’ expectations relative to the objectives of the course. Evaluation of projects may include visiting experts. For an “A”, the student must satisfy the course objectives excellently; for a “B”, in an above average manner; for a “C” in an average manner; for a “D” in the lowest acceptable manner; and an “F” denotes that the student has not satisfied the course objectives.

Calendar:
Sept 8  Introduction
Sept 15  review Ex 1 —group A
Sept 22  KB in Chicago with ARCH 4410 student choice—Final Ex.
Sept 29  review Ex 2—group B
Oct 6  review Ex 3—group A
Oct 9  4-6 pm Wexner Transfigurations with lighting designer + curator
Oct 13  review Ex 4—group B
Oct 16  all day NELA PARK (optional)
Oct 20  Off-campus site visit
Oct 27  Models: light and movement
Nov 3  Models: surface and color
Nov 10  schedule independent project reviews advance sign ups
Nov 17  Models: reflection and refraction
Nov 24  Models: transparency (INSIDE/OUT)
Dec 1  schedule independent project reviews advance sign ups
Dec 9  Final Project discussion

Options for Wexner lighting tour of Transfigurations
Thursday, October 9, 4-6 PM
Thursday, October 16, 11AM- 1PM
Thursday, October 16, 4-6 PM
Recommended readings:
Tanizaki’s *In Praise of Shadows*
Turrell, *Phenomenology of light*
Louis I. Kahn: “Silence and Light” from 1968 and 1969 lectures


Antonakaki, Theodora. “Lighting within the social dimension of space: A case study at the Royal Festival Hall”, University College London.


Websites:
- [www.tevereterno.it](http://www.tevereterno.it)
- [www.concerninglight.com](http://www.concerninglight.com) (Howard Brandston, architectural and theatre lighting designer)
- [http://www.lrc.rpi.edu/](http://www.lrc.rpi.edu/) (Rensselaer Polytechnic Institute Lighting Research Center)
- [www.illinoislighting.org](http://www.illinoislighting.org) (Illinois Coalition for Responsible Outdoor Lighting)