Architectural Lighting Design **EVDA 617 Q(3-0)**
Prof. Jim Love **Fall 2013**
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office: PFB 3181 **office hours: Friday 1300-1400**

Introduction
Architectural lighting design will be addressed as part of the broader process of designing the visual experience in architecture. Both daylighting and electric lighting will be covered.

Objectives
1. Ability to develop illumination schemes that enhance an architectural design.
2. Ability to model and analyze designs quantitatively.
3. Understanding of daylighting and electric illumination systems and design techniques.
4. Understanding of vision as a psychological phenomenon.
5. Understanding of light as a physical phenomenon.
6. Awareness of physical modeling procedures for electric and daylighting design.

Teaching Approach
The course will be presented in lecture and workshop mode. The workshops will cover development of lighting designs using computer-based design aids. The project is a lighting design exercise.

Content: Topic Areas & Detailed Class Schedule
The functions and characteristics of lighting systems will be revieFri, together with their place in the development of design concepts. Components and terminology will be discussed, as well as quantitative design methods. Factors in systems selection will be examined, including:
1. visual perception and the illumination of interiors,
2. terminology and measurement units in illumination,
3. electric light sources,
4. daylighting,
5. basic calculations for lighting, and
6. computer modeling of lighting designs.

Mon., Sept. 16	(1) Introduction to Lighting Design; Basic Concepts
Fri., Sept. 20	(2) Daylighting: Basic Concepts
Mon., Sept. 23	(3) Simulation Tutorial 1: Daylighting
Fri., Sept. 27	(4) Electric Lighting Systems 1
Mon., Sept. 30	(5) Simulation Tutorial 2: Electric Lighting
Fri., Oct. 4	(6) Electric Lighting Systems 2
Mon., Oct. 7	(7) lighting design documentation
Fri., Oct. 11	no class due to studio deadline
Mon., Oct. 14	Block Week
Fri., Oct. 18	Block Week

Mon., Oct. 21 (8) lighting project tutorial

Fri., Oct. 25 (9) lighting project tutorial

Mon., Oct. 28 (10) lighting project tutorial

Fri., Nov. 1 (11) lighting project tutorial

Mon., Nov. 4 (12) lighting project tutorial

Fri., Nov. 8 (13) lighting project tutorial

Mon., Nov. 11 Remembrance Day

Fri., Nov. 15 (14) review

Mon., Nov. 18 test

Means of Evaluation

Evaluation will be based on:

Lighting Design Project	75%
Test	25%
Total	100%

The test will be closed book. Writing and the grading thereof is a factor in the evaluation of the project.

Grading

Grading will be based on the following scale:

Grade	Grade Point Value	4-Point Range	Percent	Description
A+	4.00	4.00	92.5-100	Outstanding - evaluated by instructor
A	4.00	3.85-4.00	85-92.49	Excellent - superior performance showing comprehensive understanding of the subject matter
A-	3.70	3.50-3.84	80-84.99	Very good performance
B+	3.30	3.15-3.49	76-79.99	Good performance
B	3.00	2.85-3.14	73-75.99	Satisfactory performance
B-	2.70	2.50-2.84	70-72.99	Minimum pass for students in the Faculty of Graduate Studies
C+	2.30	2.15-2.49	66-69.99	All final grades below B- are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements.
C	2.00	1.85-2.14	63-65.99	
C-	1.70	1.50-1.84	60-62.99	
D+	1.30	1.15-1.49	56-59.99	
D	1.00	0.50-1.14	50-55.99	
F	0.00	0-0.49	0-49.99	

Note:
A student who receives a "C+" or lower in any one course will be required to withdraw regardless of their grade point average (GPA) unless the program recommends otherwise. If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript.

Readings

The course texts are

Russell, S., The Architecture of Light), 2008, Conceptnine, ISBN 978-0-9800617-0-3

Lawrence Berkeley Laboratory, Tips for Daylighitng with Windows, windows.lbl.gov/daylighting/designguide/dlg.pdf (free download)

Canadian Architectural Certification Board - Performance Criteria Met by Course

The following CACB Student Performance Criteria will be covered in this course at a primary level: B8 Environmental Systems, C2 Building Systems Integration

The following CACB Student Performance Criteria will be covered in this course at a secondary level: B4 Sustainable Design, B10 Building Service Systems, C1 Detailed Design Development, C3 Technical Documentation, C4 Comprehensive Design.

Notes

1. Classes will be held Mondays and Fridays during the term for purposes of coordination with the studio. As a quarter course, the class will run about 50% of the weeks of the term, plus time for the test and assistance with the project.

2. Written work, term assignments and other course related work must be submitted by the course Blackboard system.

3. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

4. Plagiarism - Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(b) parts of the work are taken from another source without reference to the original author,(c) the whole work (e.g., an essay) is copied from another source, and/or,(d) a student submits or presents work in one course which has also been submitted in another course(although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.

5. Information regarding the Freedom of Information and Protection of Privacy Act (http://www.ucalgary.ca/secretariat/privacy) and how this impacts the receipt and delivery of course material.

6. Emergency Evacuation/Assembly Points (http://www.ucalgary.ca/emergencyplan/assemblypoints).

7. Safewalk information (http://www.ucalgary.ca/security/safewalk.

8. Contact Info for: Student Union (http://www.su.ucalgary.ca/page/affordability-accessibility/su-structure/contact-info); Graduate Student representative((http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights).

9. The instructor may reduce grades for assignments and components thereof when submitted after deadlines).