Lighting Design & Application

INTD - 2300 001

Course Description

Overview of light fundamentals and lighting systems. Students will learn to calculate lighting levels, solve interior design lighting problems and communicate specification to clients and other professionals.

Prereq: INTD 1450.
Semester: Fall & Spring

Course Student Learning Outcomes

- Demonstrate knowledge of designing lighting plans for multiple applications in residential and commercial settings.
- Demonstrate knowledge of identifying of lighting equipment and proper application.
- Demonstrate knowledge of reflected Lighting Plans" from the blue prints and specify lighting fixtures for appropriate usage.
- Demonstrate knowledge of proper use of industry terminology.

Engagement Plan

- I will try to respond to emails within 48 hours. The best way to contact me is via the Canvas Inbox or SLCC email, as I will prioritize this email over other modes of communication.

- Additionally, I will be participating in the discussion forums with you to share my perspective within the discipline and to offer some nuances of interpretation that may not be present in your textbook.
- I will be providing studio time for the final project which will offer hands-on opportunity to practice concepts discussed during lecture time. Studio time for the final project will be during the later part of the semester. Q & A for the final project will occur only during in-person studio time.

Keys for Success (how to succeed in the course)

1 understand fundamentals in electrical wiring

2 understand a brief history of lighting

3 familiarize with significant and historical light fixtures

4 know basic calculating methods for lighting intensities

5 become familiar with lighting terms, lighting sources and types

6 create design drawings and communication

7 understand lighting design methods

Required Text or Materials

Title: Architecture of Light
ISBN: ISBN-10 0980061717
Authors: Sage Russell
Publisher: Conceptnine
Publication Date: 2012
Edition: 2nd Edition

Title: Lighting Design Basics
ISBN: ISBN-10 1119312272
Authors: Karlen / Spangler

Publisher: Wiley
Publication Date: 2017
Edition: 3rd Edition

For more information on textbook accessibility, contact Accessibility & Disability Services at ads@slcc.edu.

Brief Description of Assignments/Exams

Assignments: *(explanations during class will be given the week before each assignment is due)*

Wiring Assignment -- Build a complete circuit (that can be plugged into a wall outlet) using a framed drywall board / panel, switch box, j-box, switch, light fixture, plug, and appropriate Romex wire. Assembly of the panel will be completed in class and as a team. ASSIGNMENT CAN ONLY BE COMPLETED ON THE DAY / TIME THAT THE ASSIGNMENT IS SCHEDULED. Partial alternative credit/assignment can be given to students unable to participate or attend.

Photo Assignment -- As you are out and about, take a look at the lighting around you. Find five examples of what you see as excellent application of lighting design or improper lighting. You will need to photograph. Relate 'aspects' & 'layers' of light as discussed in chapters 2-4 and write a brief summation of each photo. Assignment to be completed individually and submitted through Canvas.

Walking Tour -- A tour of the Salt Lake City Public Library – a handout will be given to help you look at the light fixtures in detail. Assignment handout to be filled out based on fixtures reviewed or seen and may be completed individually or as a team – each individual must submit assignment separately through Canvas

Light Fixture Specification Research Assignment -- This assignment is intended to build your experience in researching lighting. You will need to find tear / spec sheets for the following fixture types: 1 of incandescent wall sconce, 1 of fluorescent troffer with 3500K lamping/light source, 1 of LED linear suspension light with 90+ CRI and direct light source, 1 of spot (point source) light with max 15 degree beam spread, 1 of portable (table or floor light) with indirect lighting. Please provide specs for bulbs & lamping for all 5 luminaire spec sheets. Spec sheets and lamping info to be combined into a single PDF document and submitted through Canvas.

Calculations / Schedule Assignment -- Create a lighting plan (circuitry, symbols, etc) for a kitchen with a lighting schedule. The basis of the assignment will be efficiency (max 500 Watts for the entire plan). Your plan & schedule will be submitted through Canvas. Assignment may be completed individually or as a team– each individual must submit assignment separately.

***15 POINTS WILL BE DEDUCTED FOR ANYASSIGNMENT OR PROJECT TURNED IN LATE.

Final Project *(due by end of day on Friday Dec 12 -- submit through Canvas - one person per team)*

The Revit / PDF file for your final project will be loaded onto Canvas. You will work on Revit or Autocad to build your lighting plan. It is recommended that you work with a partner(s) on this, and the project may be submitted as a team. Please let me know who is in your team when submitting the final project. The final is worth 400 points, which is 40% of your grade.

The final will be graded and judged based on:

1--Technical accuracy (proper wattages, beam spreads, proper drawing/schedule, diagramming, etc.) which will account for 50% of the grade.

2--Design (placement of lighting, proper usage of lighting, proper types of fixtures, creativity, presentation, etc.) which will account for the other 50% of the grade.

There will be three portions of the project that will need to be submitted:

1--The electrical/lighting plan which will need to show all fixtures along with switching and circuit diagrams.

2--A completed schedule / legend that will be on the same page as the lighting plan.

3--A completed catalog containing tagged tear sheets of all fixtures used on the lighting plan. Specified portions/options of the fixture must be highlighted on the tear sheet.

You can use catalogs provided in materials lab or the following sources/reps for your lighting. Each of these local reps has multiple companies to work from. There are many useful sources from each of these reps:

The Light Source http://www.tlsource.com

JRC Lighting http://www.jrclight.com

Light Spot Modern Design http://lightspotmoderndesign.com

Quantum Lighting http://www.quantumltg.com

Lighting Group Utah http://www.lightinggrouputah.com

Stevens Sales Company http://www.ssco.net

There are also online retailers that may be useful as well:

Build / Ferguson http://www.build.com

Lumens http://www.lumens.com

There will be time allotted in class to work on the projects in the weeks to come. If you do have questions regarding your project, I am happy to help during class – no emails please during the final project (regarding your projects).

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Introduce Yourself	Discussion	0
	Test 1	Assignment	100
	Test 2	Assignment	100
9/4/25	Electrical Wiring Assignment (completed in class)	Assignment	80

Due Date	Assignment Name	Assignment Type	Points
9/25/25	Photo Assignment	Assignment	80
10/23/25	Walking Tour	Assignment	80
10/30/25	Luminaire Specification Assignment	Assignment	80
11/6/25	Calculations & Lighting Plan Assignment	Assignment	80
12/12/25	Final Project	Assignment	400

Grading Scale

Quizes: 200 pts (2 @100pts ea)

Assignments: 400 pts (5 assignments @ 80 pts ea)

Final Project: 400 pts

Total: 1000 pts available

Tests and assignments will be held at the beginning of class, so please do not be late. Grades will be given in accordance with the policies outlined in the college catalog and will be computed as follows: A (93%+), A- (90-92%), B+ (87-89%), B (84-86%), B- (80-83%), C+ (77-79%), C (74-76%), C- (70-73%), D+ (67-69%), D (63-66%), E (62% or below)

How to Navigate to Canvas

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, and grading policies, Title IX and other important acknowledgements. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

For more information, navigate to the Institutional Policies tab on the Institutional Syllabus page.

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, visit the Institutional Syllabus page under the Tutoring and Learning Support tab. We encourage you to take advantage of these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to reach out to us. We are here to support you in any way we can.

Advising and Counseling Support Services

At our institution, we are committed to supporting your academic and personal growth. That's why we offer a range of advising and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, visit the Institutional Syllabus page under the Advising and Counseling Support Services tab. Our advising team and the support centers across campus are here to support you in achieving your goals and overcoming any obstacles you may face.

Student Academic Calendar

As students you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar below:

SLCC Student Academic Calendar

Additional Policies

Schedule

All lectures will occur in the classroom. The dates highlighted in red will require in-person attendance.

Week 1 – Aug 28

-Intro to Class & Syllabus Review

-Introduction to Electricity

Week 2 – Sep 4

-Electrical Wiring Basics

-Wiring Assignment (to be completed in class)

Week 3 – Sep 11

-Discussion on Historical Lighting

Week 4 – Sep 18

-Discussion on Chapters 1-4

-Explanation of Photo Assignment

Week 5 – Sep 25

-Submit Photo Assignment (before 11:59pm through Canvas)

-Discussion on Chapters 5-7

-Review for Test

Week 6 – Oct 2

-Test #1

-Makeup for Wiring Assignment (if missed)

-Discussion on Chapters 8-15 - part 1 (Fixture Types & Bulb Type Handouts)

Week 7 – Oct 9

-Discussion on Chapters 8-15 - part 2 (Fixture Types & Bulb Type Handouts)

-Explanation of Walking Tour Assignment

Week 8 – Oct 16

-No Class Due to Spring Break

Week 9 – Oct 23

-Submit Walking Tour Assignment (before 11:59pm through Canvas)

-Discussion on Chapters 16 & 21

-Explanation of Luminaire Specification Research Assignment

Week 10 – Oct 30

-Submit Luminaire Specification Research Assignment (before 11:59pm through Canvas)

-Discussion on Chapters 23-24

-Explanation on Calculations/Schedule Assignment

Week 11 – Nov 6

-Submit Calculations/Schedule Assignment (before 11:59pm through Canvas)

-Discussion on Lighting Design Scenarios

-Explanation of Final Project

-Review for Test #2

Week 12 – Nov 13

-Test #2

-Studio Time

Week 13 – Nov 20

-Studio Time

Week 14 – Nov 27

-No Class Due to Thanksgiving Holiday

Week 15 – Dec 4

-Studio Time

Week 16 – Dec 11

-Studio Time

-Last day of class

DUE DATE FOR FINAL PROJECT: Dec 12 (by 11:59pm)