

**San José State University**  
**Design Department | Interior Design Program**  
**dsIT 108: Architectural Lighting Design | Spring 2019**

**Course and Contact Information**

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<b>Office Hours:</b>	Available upon request (please email me)
<b>Class Days/Time:</b>	Monday and Wednesday 8:00-10:50 am
<b>Classroom:</b>	IS240
<b>Prerequisites:</b>	DSIT 33, DSIT 34

**Course Description**

Interior Design Specializations focus on professional activities in which Interior Designers engage. This course provides an overview of lighting design, introduces the effects of light on interior space, and investigates various lighting products and lighting systems. The course begins with fundamentals and precedents, then applies this knowledge with varied special topics, and then implements fundamentals directly as students envision and design their own custom light fixture. Through various field trips, industry tours, and guest lectures, students will have opportunities to learn from industry lighting design and sustainability professionals.

**Course Goals and Student Learning Objectives**

SLO1. Students will learn about lighting fundamentals and the lighting challenges for interior spaces.

SLO2. Research. Students will investigate and assess important lighting precedents in the past and present.

SLO3. Research. Students will employ basic methods of data collection and analysis to inform programming and design.

SLO4. Think critically. They will have the ability to make a comprehensive analysis and evaluation of the architectural lighting of an interior space.

SLO5. Students will explore lighting fixture design and then design and build a working decorative custom lighting fixture.

### **Required Reading List**

*Designing with Light: The Art, Science, and Practice of Architectural Lighting Design*  
c. 2014 by Jason Livingston

*Interior Lighting For Designers (5<sup>th</sup> Edition)*  
c. 2015 by Gary Gordon

There may be an additional list of course readings on Canvas. These reading will be made available for download from Canvas.

### **Course Format**

As a design research studio, this course is intensive in research, study, technology, time, and both digital and physical making.

### **Required Materials:**

#### Technical Requirements:

- Computer Specifications: A laptop powerful enough and meets the minimum requirements to run the required and appropriate software for this class.
- Required Software:
  - Microsoft Word,
  - Adobe Photoshop, Adobe Illustrator, and Adobe InDesign,
  - One required form of 3D modeling software: Such as AutoCAD, Revit, Modo, Sketch Up, and rendering such as Vray, or equivalent.
  - All software is required to be installed by 1/30/19, the second class meeting.
  - You may purchase the student or educational version of MODO online: <https://www.thefoundry.co.uk/products/modo/>
- Calculator with trigonometric functions
- Fabrication Access: We will schedule a group test during the first week.
- Making: Standard design studio supplies and expenses include: cutting mat, olfa and x-acto knives and blades, straight edge, architectural scale, drawing supplies, pens, pencils, paper, sketch book, drafting dots, push pins, T pins, tracing paper, glues, high quality paper for drawing or prints, and printing services, etc...
- Modeling supplies may include: Cement, adhesives, plastics, silicone, plaster, fastening hardware, aluminum, 3D prints, thread, fishing line, piano wire, foam core, museum board, chip board, plexi, plywood, pink or blue foam, colored paper, electrical components, etc...
- Specific model-making supplies can be purchased as needed over the course of the semester and as needed by the individual assignment and project.

## Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

The course is organized around lecture and lab work: lectures will introduce topics, content to learn, and assignments. Lectures will also provide an overview of issues and outline the design principles and communication concepts that are expected to be investigated. Quizzes will also be conducted during class time. Lab time will be a period of focused exploration of design issues and communication skills. Finished projects and work in-progress will be presented and discussed during each class session to make important points about design. Each pin-up will be graded. It is expected that your work will be printed out and pinned up within the first 10 minutes of class. If it is not you will receive a grade of 0 for that assignment. Later in the semester, we may have short pin-ups, followed by desk crits. The same rule for pin-ups applies on those days.

## Grading

Your final grade for this class will be based on class participation in reviews and labs and the successful completion of quizzes and assignments. The assignment grade will be based on the set of criteria listed in the grading section below. Students will be engaged in demos, discussions and critiques during class meeting times and they will be assessed on engagement in those activities in their Participation grade (LO6). Students will have homework assignments to do outside of class (12-18 hours per week) that include reading and writing assignments, research activities and, two- and three-dimensional sketching and drawing assignments as required by the course assignments (LO 1-6). Students will be required to be present to discuss their work in classroom critiques (LO 6). Grading will follow the standard SJSU A-F system.

A+, A, A- / 100+ - 90% / Excellent  
 B+, B, B- / 89 – 80% / Above Average  
 C+, C, C- / 79-70% / Average  
 D / 69-60% / Below Average  
 F / Below 60% / Failure

### Grading is weighted as follows:

Assignments (including Custom Design Fixture)	60%
Quizzes:	20%
Class Participation:	20%

### Design Project Grading:

A Excellent work and progress, focused process and design iterations, high standard of design and presentation, superior understanding of the issues discussed, active

participation in class, active involvement in bringing outside material and research into class, ability to move work forward, through initiative, excellent attendance.

**B** Good work and progress, focused process, fulfillment of all the requirements with some incompleteness in the presentation and/or some deficiencies in design, strong understanding of the issues discussed during lectures and pin-ups, inconsistent performance and progress, strong attendance.

**C** Work that is satisfactory with some obvious deficiencies and incompleteness of requirements, any or all of lessened engagement with the course material, less than strong attendance and/or participation.

**D** Work that is unsatisfactory with obvious and significant deficiencies in design and incomplete requirements, any or all of lack of engagement with the course material, poor attendance and participation.

**F** Seriously deficient or incomplete work, poor participation, engagement, understanding and attendance.

The measure of qualitative words such as ‘excellent’, ‘satisfactory’, etc. are based on the following criteria:

Initiative: The degree of exploration and additional references in the work, the ability to push the work forward.

Effort: As indicated by the intensity and depth of your study, and the commitment to the ideas being explored.

Engagement: As shown by the participation in work sessions, and the discussion of issues and ideas in studio.

Collaboration: With peers on comments, learning and shared responsibilities.

Flexibility: The willingness to maintain an open intellectual stance that allows for accelerated learning to occur.

Design Quality: As demonstrated by the sophistication and competence of addressing the issues of a problem.

Communication: As shown by the coherence and completeness of your work in elucidating its intentions.

Technique: The control and sophistication of design methods, tools and representation; a commitment to craft.

All assignments are due on time. No late work is accepted. Project work for critiques must be complete in order to receive in class feedback. The Participation grade in this course will be assessed through your engagement in Work/Practice sessions, assignment pin-ups, class discussions, field trips and critiques. Actively engaging and exhibiting life-long learning skills during class are the mode by which participation is assessed.

## **Classroom Protocol**

### Expectations:

- Arrive on time and prepared for class. Remain in class for the entire time.
- Students must be present for in-class critiques, students who arrive late will not be allowed to present.
- Be attentive, actively participate, and demonstrate engagement in class discussion and reviews.
- Prepare yourself to listen, consider, contribute, discuss different points of view during design review.
- Turn off and surrender cellphones for the duration of class. Cellphone use during class is not permitted and failure to comply will affect your grade.
- Unless we are working in studio, stow all laptops and ipads.
- Show respect for yourself, your peers, and your faculty.

If you miss a class, it is your responsibility to find out what you missed BEFORE the next class. Technical demos and lectures will not be repeated for students who miss a class; Projected critique dates will be given to you in advance; however, in some instances these may change do to extenuating circumstances, and it is your responsibility to find out about any announcements made in class, by communicating with your classmates.

Deadlines will be made available to you in class. Any work not turned in on the date it is due is considered late and will receive grade reductions. All assignments must be completed and turned in to receive a passing grade for the class.

The instructor reserves the right to alter assignments and change project due dates with sufficient notice to the students.

### Attendance and Participation:

- Non-participation for more than 2 classes, including consistent tardiness, is grounds for grade demotion.
- If you need to miss a class for an excusable absence, email me in advance.
- Unexcused non-participation at the mid review or final review is grounds for failure.

When a design critique is planned, work is to be either elegantly pinned-up on the wall or displayed on the table at the center of the room at the start of class. Be ready to start the design critique by 10 minutes after the class officially starts. Lateness will count as non-participation. Students are expected to leave the classroom in a clean condition at the end of each class so the next class has an organized, clean room waiting for them.

### **If you miss a class:**

It is your responsibility to find out what you have missed prior to the next class. Technical demonstrations, lectures, field trips, etc... will not be repeated for students

who miss a class. Anticipated critique dates will be given to you in advance; however, in some cases they may change due to extenuating circumstances and it is your responsibility to stay up-to-date by communicating with your classmates.

### **Cell Phones:**

Cell phones, organizers, laptops are also disruptive and inconsiderate to your classmates and instructors. ***Phones are NOT permitted in this class*** and you will be asked to both turn off and surrender your phone at the start of each class. If you disrupt or withdraw from class activity and are unable to silence your devices, it will count against the participation portion of your final grade. If personal issues (family, medical, etc) require you to leave your phone on, you may do so by making arrangements with the instructor in advance.

### **Computer Use:**

In the classroom, computers may only be used for class-related activities. Otherwise they must be shut or stowed. Students who use their computers for other activities or who abuse equipment in any way will be asked, at a minimum, to leave the class and will lose participation points for the day and at a maximum, will be referred to the Judicial Affairs Officer of the University for disrupting the course.

## **University Policies**

### **Dropping and Adding**

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at [http://www.sjsu.edu/provost/services/academic\\_calendars/](http://www.sjsu.edu/provost/services/academic_calendars/). The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

### **Consent for Recording of Class and Public Sharing of Instructor Material**

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”
  - It is suggested that the syllabus include the instructor’s process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.

- In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.
- “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

### **Academic Integrity**

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy S07-2 requires approval of instructors.

### **Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at [http://www.sjsu.edu/president/docs/directives/PD\\_1997-03.pdf](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](http://www.sjsu.edu/aec) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

### **Accommodation to Students' Religious Holidays**

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See [University Policy S14-7](http://www.sjsu.edu/senate/docs/S14-7.pdf) at <http://www.sjsu.edu/senate/docs/S14-7.pdf>.

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*Schedule is subject to change with fair notice.*

**Overall Semester Arc and 3 Phases:**

- Weeks 1-8: Lighting Fundamentals, Calculations, and Precedents
- Weeks 9-11: Application of Lighting Fundamentals / + Special Topics
- Weeks 12-16: Implementation > Design of Custom Light Fixture

**Table 1 Course Schedule**

<b>Week</b>	<b>Date</b>	<b>Topics, Readings, Demos, Assignments, Deadlines</b>
1	Mon 1/28 + Wed 1/30	In-class discussion: Introduction and Lighting Basics: Syllabus review, lighting basics, Forms of Lightplay, precedents. Review arc of assignments and Quiz protocol. Read CH. 1,3,4
2	Mon 2/4 + Wed 2/6	In-class discussion: Light and Shadow; Distribution and Direction of Light, Lighting Concepts. Quiz #1: CH 1,3,4 Assignment #1 Due: Richard Kelly Lightplay Presentations Read CH. 2,5,6
3	Mon 2/11 + Wed 2/13	In-class discussion: Lamps (incandescent, gas discharge, LED ballasts and transformers), Precedents: pick a space / designer Quiz #2: CH 2,5,6 Read: CH 7,8 Assignment #2 Due: Light and Materials Photo Study Assignment #3 Due: Grey Scale RCP Light Composition
4	Mon 2/18 + Wed 2/20	Monday 2/18 is a HOLIDAY Lamp Factory Tour (Vode TBD) In-class discussion: Fixture Day. Luminaires. (Distribution, optical control, common luminaire types). Color (Color rendition index, Kelvin scale) Quiz #3: CH. 7,8 Assignment #4 Due: Fixtures Read: CH 9,13
5	Mon 2/25 + Wed 2/27	In-class discussion: Photometrics and Calculations Quiz #4: CH. 9 Assignment #5 Due: Precedent Study

		Re-Read CH 13
6	Mon 3/4 + Wed 3/6	In class discussion: Photometrics and Calculations Quiz #5: CH. 13 Assignment #5v2 Due: Precedent Study Re-read: CH. 13
7	Mon 3/11 + Wed 3/13	In-class discussion: Photometrics and Calculations Quiz #6: CH. 13 (second version) Read: CH. 14-16
8	Mon 3/18 + Wed 3/20	In-class discussion: Light and Health; Architecture and Applications. Introducing Phase 2 — Applications of Fundamentals
9	Mon 3/25 + Wed 3/27	Mid-Term Grades Handed Out Guest Lecturer — Loisos Ubbelode TBD In class discussion: Daylighting, Design Process and Documentation Assignment #6A: Concept, Precedent, Concept Model
10	Mon 4/1 + Wed 4/3	SPRING BREAK — NO CLASS ☺
11	Mon 4/8 + Wed 4/10	In-class discussion: Sustainability, Industry terms, electrical codes, IES, recommendations, Title 24 Field Trip SFPUC Assignment #6A: Concept, Precedent, Mock-up v. 1
12	Mon 4/15 + Wed 4/17	In-class discussion: Fixture design concepts, Inspiration and Precedents, Introducing Pecha Kucha, Mock-up iteration. Field Trip: Borden TBD Assignment #6B: Fixture Mock-Up v.2
13	Mon 4/22 + Wed 4/24	In-class discussion: Fixture Design Iteration and Design Critique, Pecha Kucha preparation Assignment #6B: Fixture Mock-Up v.3
14	Mon 4/29+ Wed 5/1	In-class discussion: Fixture Design Iteration and Design Critique Pecha Kucha preparation Assignment #6C: Fixture Draft Final Fixture
15	Mon 5/6 + Wed 5/8	In-class discussion: Fixture Design Iteration and Design Critique Pecha Kucha dry runs Assignment #6C: Fixture Draft Final Fixture
16	Mon 5/13	Last Day of Class Final Presentation in exam period TBD Presentation Dates could include 5/16, 5/20, or 5/21 @ 8AM

**Important Administrative Dates:**

- Sunday, 1/20 — Advance Registration Ends

- Monday, 1/21 — MLK Holiday
- Thursday, 1/24 — First Day of Instruction
- Monday, 1/28 — First Day of our DSIT 108 Class
- Tuesday 2/5 — Last day to Drop a Class without a “W” and a Late Drop petition
- Monday, 4/1 – 4/5 — Spring Break
- Thursday, 4/25 — Last Day to Withdraw and Last Day for Submittals
- Monday, 5/13 — Last Day of Instruction
- Wednesday, 5/15 — Final Exams Begin
- Tuesday, 5/21 — Final Exams End
- Friday, 5/24 — Grades Due