UNLV School of ARCHITECTURE

Course Syllabus

Course Name	Interior Lighting Design
Course Number	ABS 443/643
Course Prerequisites	MATH 127 or 128 and PHYS 151
Meeting Times	Thursday 6:00-8:45
Meeting Room	ARC152
Instructor Name	Jon Champelli, LC, LEED AP
Instructor Email	jon.champelli@unlv.edu or jon.champelli@shop12design.com
Instructor Office	3330 W Desert Inn Road
Instructor Phone	702-873-0221
Instructor Cell Phone	702-523-2810
Office hours	Appointment Only

Course Overview

Course Description

Principles of interior lighting, daylighting, electrical loading, and evaluation of light sources for distribution, cost, and color.

Course Objectives

- Discuss the use of energy-efficient lighting systems that are effectively integrated with other building systems.
- Calculate the illuminance levels in an interior space.
- Recall current building, electrical and energy codes.

- Applying the basic terminology and vocabulary of illumination.
- Conduct an objective and aesthetic analyses of lighting needs for architectural spaces.

Compliance with CIDA Standards

Standard 12. Light and Color Interior designers apply the principles and theories of light and color effectively in relation to environmental impact and human wellbeing.

Standard 12 Description This standard ensures graduates understand the art and science of light and color. Graduates should be able to integrate light and color in the design process to enhance the human experience.

Standard 4 Objectives

- Students are aware of the environmental impact of illumination strategies and decisions. This will be covered in lecture discussions on daylighting and lighting code requirements, and assessed via the Mid-term Exam, Final Exam and Final Project.
- Students understand the principles of natural and artificial lighting design. This will be covered throughout the course and assessed via several different assignments plus the Mid-term Exam, Final Exam and Final Project.
- Students understand strategies for using and modulating natural light. This will be covered in lecture discussions on daylighting and assessed via several different assignments plus the Mid-term Exam, Final Exam and Final Project.
- Students competently select and apply luminaires and light sources. This will be covered in lecture discussions on daylighting and assessed via several different assignments plus the Mid-term Exam, Final Exam and Final Project.
- Students have awareness of a range of sources for information and research about color. This will be covered in lecture discussions on Color and Psychology and assessed via the reading quizzes.
- Students understand how light and color in the interior environment impact health, safety, and, wellbeing. This will be covered in lecture discussions on The Aging Eye and assessed via the Mid-term Exam and Final Exam.
- Student work demonstrates understanding of color terminology. This will be covered in lecture discussions on Color and Psychology and assessed via the Mid-term Exam and Final Exam.

- Student work demonstrates understanding of color principles, theories, and systems. This will be covered in lecture discussions on Color and Psychology and assessed via the Mid-term Exam and Final Exam.

- Student work demonstrates understanding of color in relation to materials, textures, light, and form. This will be covered in lecture discussions on The Controllable Qualities of Light, Color and Psychology as well as and assessed via the Mid-term Exam and Final Exam.

- Student work demonstrates the ability to appropriately select and apply color to support design concepts. This will be covered in lecture discussions on The Controllable Qualities of Light, Color and Psychology as well as and assessed via the Mid-term Exam, Final Exam and Final Project.

- Student work demonstrates the ability to appropriately select and apply color to multiple design functions. This will be covered in lecture discussions on The Controllable Qualities of Light, Color and Psychology as well as and assessed via the Mid-term Exam, Final Exam and Final Project.

- Student work demonstrates the ability to appropriately use color solutions across different modes of design communication. This will be covered in lecture discussions on The Controllable Qualities of Light, Color and Psychology as well as and assessed via the Mid-term Exam, Final Exam and Final Project.

Required Books and Materials

Architectural Lighting Design: A Practical Guide by Admir Jukanovic, available in the UNLV bookstore as well as online.

ISBN-13: 978-1785004575

Architectural Lighting Design: A Practical Guide is available from Amazon

Cost: $27.22 As of August 17, 2021

Lighting Design Basics: Third Edition by Karlen, Snagler, Benya, available in the UNLV bookstore as well as online.

ISBN-13: 978-1119312277

Lighting Design Basics: Third Edition is available from Amazon

Cost: $23.19 As of August 17, 2021

Please see supplemental attachment titled IAD Syllabus Supplement for addition program required books and materials that may be used for this course.

Course Calendar – See Appendix for more detail

Week One	Introductions & Overview
Week Two	The Controllable Qualities of Light
Week Three	Light Sources, Vision, Color & Psychology
Week Four	Luminaire Types and Selections
Week Five	Lighting Calculations and Documentation
Week Six	Overview of Energy Codes
Week Seven	The Design Process
Week Eight	Comprehensive Review and Mid-Term Exam
Week Nine	Lighting Product Data: Cut sheets, Fixture Schedules and Lighting Plans
Week Ten	Switching, Controls, and Daylighting
Week Eleven	Venue Specific Design Considerations
Week Twelve	The Aging Eye
Week Thirteen	Final Exam Review & Final Project One-on-One Consultation
Week Fourteen	Thanksgiving – No Class
Week Fifteen –	Final Exam
Week Sixteen –	Final Project Presentations

Course Assignments – See Individual Assignment Pages for Details

Assignment One

Journal of Lighting Impressions
The purpose of this assignment is to make you more consciously aware of the effect that lighting has on your physical and psychological well-being throughout your daily life. We have all experienced the feelings of discomfort associated with being in direct sunlight on a bright day without sunglasses, of annoyance at not being able to read a program in a theater or a menu in a restaurant, or of comfort and calm while sitting in front of a fire. We need to be able to understand and acknowledge these feelings in order to either re-create or avoid them when designing lighting for specific spaces and venue types.

Assignment Two

Local Survey of Lighting
The purpose of this assignment is to begin recognizing lighting techniques and sources in the world around you

Assignment Three

Lighting Calculation Exercises
The purpose of this assignment is to gain fundamental understanding of the inverse square law and the lumen method, as well as how to perform basic lighting calculations by hand and using computer software. The assignment will also reinforce the understanding of basic lighting units of measurement and terminology.

Assignment Four

On-Line Lighting Review and Quiz
The purpose of this assignment is to get an outside perspective on lighting design priorities and demonstrate the knowledge gained so far.

Assignment Five

Light Map and Switching/Dimming Control Plan Exercise
The purpose of this assignment is to demonstrate knowledge of the purpose and practice of light map creation and a basic understanding of the principles and practices of dimming and switching lighting within a commercial space.

Assignment Six

Lighting Cut Sheets

The purpose of this assignment is to demonstrate knowledge of lighting fixture selection and cut sheet comprehension. This assignment will tie directly into the Final Project.

Assignment Seven

Concept/Schematic Design Deliverables

The purpose of this assignment is to function as a preliminary deadline for the Final Project, by providing an interim d date for specific aspects of the Final Project deliverables.

Be aware that all work generated in this course belongs to the UNLV School of Architecture and will be retained for accreditation or for use in promotional materials. Make sure to have copies made for your personal portfolios or for personal uses.

Point Allocation and Distribution

Assignment	Points
Reading Pop Quizzes	50
Attendance	50
Open Discussion Presentation	50
Assignment 1 – Personal Lighting Journal	50
Assignment 2 – Local Lighting Survey	50
Assignment 3 – Lighting Calculations	50
Assignment 4 – On-line Ltg Review & Quiz	50
Assignment 5 – Light Map and Switching	50
Assignment 6 – Lighting Cut Sheets	50
Assignment 7 – Concept/Schematic Design	50
Mid-Term Exam	150
Final Exam	150
Final Project	200

1,000 total points available for this course.

Grading Scale The university grading scale with pluses and minuses will be used in this course. The following standard cutoffs will be used to determine your final grade:

93.3 & above A

90.0 to 93.2 A-

86.7 to 89.9 B+

83.3 to 86.6 B

80.0 to 83.2 B-

76.7 to 79.9 C+

73.3 to 76.6 C

70.0 to 73.2 C-

66.7 to 69.9 D+

63.3 to 66.6 D

60.0 to 63.2 D-

Less than 60 F

Classroom Rules and Policies

The following guidelines constitute policies and the student's receipt and acceptance of a course syllabus containing a course instructor's rules on these shall constitute acceptance of these policies.

Studio and Classroom Standards, Policies, and Etiquette

- The School of Architecture maintains standards of design quality in student work and personal conduct in the classroom, design studios, and within extracurricular activities.
- The classroom and design studio are considered learning environments predicated on the presence and appropriate behaviors pertaining to participation, dialogue, initiative, and learning which includes sharing thoughts, discussing ideas, and exploring concepts

Bullying, Group Think, and Gang Warfare

- Bullying is defined as loud, aggressive, and inappropriate language used at a fellow classmate or instructor during class or studio or while engaged in classroom or studio

exercise. This includes, email, text messages, and voice mail, and face to face interaction.

- Group think is when one person engages other classmates in negative dialogue pertaining to some aspect of the course or studio assignment which turns into collective shared thought.

- Gang warfare is when a student lobby's his or her peers to join him or her in some sort of revolt against an instructor or fellow classmate.

- Any student found to be engaged in any of the above will be first given a written warning and then reported to the school's Director. A third offence will entail removal from the course and a written report submitted to the university academic and student affairs.

Lodging a Complaint

- Any student who has a complaint about an instructor or classmate must first speak with the course instructor.

- If satisfaction has not been achieved the student can then take their complaint to the program coordinator.

- If satisfaction has still not been achieved the student can then take the complaint to the Associate Director.

- If satisfaction continues to be unachieved then the student can take their complaint to the School Director.

- If satisfaction continues to be unachieved then the student can take their complaint to the Associate Dean.

- If satisfaction continues to be unachieved then the student can take their complaint to the Dean.

- Any violation in this chain will result in a decrease of one letter grade of the student's final grade.

Use of Electronic Devices

- Use of electronic devices during lectures, presentations, project reviews and structured group activities are prohibited.

- Lap top computers are permitted during class when their use is part of the course.

- Under no circumstance is a student permitted to audio or visually record an instructor or fellow classmate without written permission.

- Permitted audio or visual recording cannot be uploaded to any electronic platform or disseminated to any other person without written consent of every person appearing in the video and every voice contained within the recording medium.

- Violation of this policy WILL result in the removal of the violator from class, an automatic failing grade, and report, with recommendation, to student affairs for expulsion from the University for violation.

Ethics

- Under no circumstance is a student allowed to:

    - Plagiarize- Defined as using work from a previous course to satisfy requirements for another class (self-plagiarism) to use any portion of copy and pasted section from a website, or video.

    - Violate Copyright Infringement- The unauthorized use of images, video, or music. It is expected that students will only use images, sounds, and video they have specifically created, have purchased from a stock site, or have written permission from the original creator.

    - Unethical Behaviors- Bullying, group think, and gang warfare (see definitions above) are not allowed.

    - Lying and forgery- Any engagement in the act of deception by lying to an instructor or forging a doctor, lawyer, etc. note constitutes dishonesty and will be reported to student and academic affairs with the recommendation for expulsion.

Grievances

- If a student has an issue with any aspect of the course including interpersonal conflicts the student has the right file a grievance. This grievance must first be presented to the instructor for resolution.

- If the issue continues, the grievance must be presented to the program coordinator.

- If the situation is still not resolved, then the grievance will go the director of the school.

- If resolution is still not achieved, then the students should take their grievance to the Dean of the college.

- Only after all these avenues have been exhausted should the student go outside of the college to resolve their grievance.

Provost's Statements

Fall 2021 Syllabus Policies

Public Health Directives

Face coverings are mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found on our public health website. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the UNLV Student Conduct Code, including being administratively withdrawn from the course.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the Student Conduct Code.

Auditing Classes

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as pagers and cellular phones, or potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically prohibited to record classes without instructor authorization, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may

initiate an administrative withdrawal of the student from the course. Since the COVID-19 pandemic forced most instruction to be delivered remotely starting on March 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available.

Disability Resource Center (DRC)

The UNLV Disability Resource Center (SSC-A, Room 143, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, which states that "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment" is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of "I" (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student's control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of "F" will be recorded, and the student's GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the "I" grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries' Research Consultation website. You can also ask the library staff questions via chat and text message.

Missed Classwork

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the Academic Policies webpage.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a "Drop one" option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate's policy, and an infringement on the student's right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC) provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the ASC website, or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in the Central Desert Complex, Building 3, Room 301 (CDC 3–

301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Statement for Inclusion

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see University Statements and Compliance.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.