

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer course A.A. degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: ID 130 Light and Color

UNIT VALUE: 3.0

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS:

Appropriate language and computational skills.

ENTRANCE REQUIREMENTS

PREREQUISITE: None.

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

Principles and application of light and its effect on color and the design process in interiors, architecture, and visual merchandising. Emphasizes lighting needs, light sources, light calculations, and energy conservation.

SPECIFIC COURSE OBJECTIVES:

Successful students will:

1. contrast and compare subtractive and additive color primaries and comprehend their applications on textured surfaces and color visualization;
2. identify and utilize scientific theories as they apply to lighting in interior environments;
3. select and utilize correct lighting equipment and its application in creating environments for residential and commercial use;
4. identify types of light sources and their impact on color;
5. evaluate human perception, gender differences, and cultural factors in programming interior color and lighting;
6. analyze the impact of overall energy and equipment costs when utilizing various types of lighting;

7. apply terminology and architectural symbols used in lighting design;
8. correctly draw and present a lighting plan for given spaces such as an open office environment, residence, store, and restaurant;
9. distinguish the essentials of task illumination in office systems, especially related to computer use.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

I. CREATING THE DESIGN

A. Analyzing the project

1. Client motivation
2. Client vision
3. Client cultural preference
4. Color and the electromagnetic spectrum
5. Activities
6. Mood

B. Using compositional lighting techniques

1. Lighting for unity and harmony
2. Compositional working methods
3. Specific lighting techniques
4. Decorative fixtures
5. Comparing compositional lighting techniques

C. Working with constraints

1. Design and construction schedules
2. Complexity of construction
3. Code compliance
4. Budget

D. Selecting a light source

1. Incandescent and gaseous-discharge lamps
2. Optical characteristics
3. Electrical efficiency
4. Lamp life/dimming
5. Color rendering

E. Selecting fixtures

1. Beam shapes
2. Mountings
3. Fixture costs
4. Appearance
5. Safety
6. Reading catalogs
7. Relamping
8. Ballasts

F. Project execution

1. Drawings
2. Project documentation
3. Contract documentation

II. LIGHTING SPECIFIC INTERIORS

A. Residence with a garden

B. Art gallery

- C. Bank
 - D. Restaurant
- III. SPECIAL LIGHTING NEEDS
- A. Lighting for the aged and infirm
 - 1. Barrier-free design codes
 - 2. The aging eye
 - B. Lighting plants
 - 1. Indoors
 - 2. Outdoors
 - C. Light as art
 - 1. Hardware
 - 2. Kinetic effects
 - 3. Illusions
 - D. Lighting for merchandising
 - E. Lighting the electronic office

REQUIRED READING:

None.

SUGGESTED READING:

Grosslight, Jane. Light Light Light. 2nd Edition. Tallahassee: Durwood Publishers, 1990.

Schiler, Marc. Simplified Design of Building Lighting. 7th Edition. New York: John Wiley & Sons, Inc., 1992.

Steffy, Gary. Lighting The Electronic Office. 1st Edition. New York: Van Nostrand Reinhold, 1995.

REQUIRED WRITING:

Students submit two written analyses (5 pages each) of assigned case studies in lighting. Essay questions are included on mid-term and final examinations.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Design criteria established in class is applied to several outside research projects: Visual task survey, color assignment, surface illuminance ratio, power/fixture budget breakdown, subjective mood impression study, address blueprint changes, and assess prescriptive lighting criteria based on class driven scenarios.

In addition to the above, two written qualitative and quantitative case study assignments outside of class are required.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply.

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

Exams	25%
Design Project	40%
Case Study	25%
Participation	10%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON: Lori Graham, Ext: 2210

SIGNATURES:

SIGNATURES ON FILE