

COURSE OUTLINE

Theatre Arts 173 (C-ID Number: THTR 173)
Lighting Design Fundamentals (C-ID Title: Lighting Design Fundamentals)
(Formerly Theatre Arts 133)

I. Catalog Statement

Theatre Arts 173 is a study and execution of stage lighting with emphasis on equipment, control, color, and their relationship to design. Students learn how to use artificial light sources to create an appropriate environment for a variety of entertainment media including animation, theatre and dance productions. Applying basic techniques of lighting composition, students use highlights, shadows, textures, and colors to achieve the desired effects. Lighting designs are created using virtual lighting simulations on a computer.

Total Lecture/Demonstration Units: 2.0

Total Laboratory Units: 1.0

Total Course Units: 3.0

Total Lecture/Demonstration Hours: 32.0

Total Laboratory hours: 48.0

Total Faculty Contact Hours: 80.0

Prerequisite: None.

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening-Speaking 5; Math 2.

III. Course Exit Standards

Upon successful completion of the required course work, the student will be able to:

1. analyze scripts, music, and choreography for their lighting requirements;
2. apply basic techniques of color composition;
3. calculate the capacity of electrical wire gauge and safe current flow;
4. demonstrate an understanding of the function of the various theatrical lighting instruments;
5. recall and practice safety information concerning electrical hazards;
6. demonstrate the use of virtual light design software;
7. evaluate the effect of different colors of light on different colors of pigment;
8. create simple cueing sequences.

IV. Course Content

Total Faculty Contact Hours = 80

- A. Introduction to Designing With Light
1. Hanging

Lecture 8 hours
Lab 12 hours

2. Circuiting
 3. Focusing
 4. Operation
 5. Connecting strips and patch panels
 6. Lighting instruments and equipment
 - a. Step lens
 - b. Fresnel lens
 - c. Lamps
 - d. Strip light
 - e. Flood light
 - f. PAR Can
 - g. Follow spot
 - h. Dimmers
 - i. Gobos
- B. Analysis of Scripts, Music, and Choreography for Lighting Lecture 5 hours
1. Light and equipment needs
 2. Storytelling with light
 3. Practicals
- C. Electrical Theory and Practice Lecture 3 hours
Lab 4 hours
1. Source
 2. Load
 3. Circuits
 - a. Series circuit
 - b. Parallel circuit
 - c. Combination circuit
 4. Electrical current
 5. Electrical wiring
 6. Safety and electrical hazards
- D. Software Program Basics Lecture 3 hours
Lab 8 hours
1. Fades
 2. Cueing
 3. Channel Control
- E. Color Theory Lecture 3 hours
1. Pigment
 2. Mood
 3. Variety
- F. Lighting Ratios and Angles Lecture 2 hours
1. Plan angle
 2. Sectional angle
 3. Acting and lighting areas
 4. Beam angle

5. Field angle

G. Textures	Lecture 2 hours
1. Gobos	
2. Projections	
H. Design Theory	Lecture 3 hours
1. Dramas	
2. Comedies	
3. Musicals	
4. Dance concert	
5. Rock concert and other venue and event lighting	
6. Designing for thrust and arena stages	
I. Exploration of Compositions Using Colored Light	Lab 12 hours
1. Lighting key	
2. Drawing the light plot	
a. Lighting symbols	
b. Legend	
c. Instrument number	
d. Layering	
J. Creation of Different Lighting Looks and Cueing Sequences	Lecture 3 hours
1. Cue sheets	Lab 12 hours
2. Rehearsal and performance procedures	
3. Drawing the light plot and lighting section	

V. Methods of Instruction

The following methods of instruction may be used in the course:

1. classroom lecture and demonstration of basic lighting techniques;
2. instructor-directed lighting design exercises during class time;
3. demonstrations of virtual lighting software programs;
4. discussion and review of lighting concepts.

VI. Out of Class Assignments

The following out of class assignments may be used in this course:

1. individual project (e.g. light plot, cueing sequence, written outline);
2. critique or written report (e.g. written report on a script or live performance analyzing the lighting design and execution).

VII. Methods of Evaluation

The following methods of evaluation may be used in this course:

1. practical examination (e.g. demonstrations of skills, execution of design);

2. class participation in instructor-directed lighting design exercises;
3. critiques of lighting design assignments;
4. written examinations (e.g. terminology and techniques of lighting).

VIII. Textbooks

Gillette, John. M. *Designing with Light: An Introduction to Stage Lighting*, 6th edition.
Columbus, OH: McGraw Hill., 2013. Print.

12th Grade Textbook Reading Level. ISBN: 978-0-07-351423-9

Shelley, Steven Louis. *A Practical Guide to Stage Lighting* 3rd edition. Philadelphia:
Taylor & Francis Group, 2013. Print.

12th Grade Textbook Reading Level. ISBN 978-0-415-81267-2

Palmer, Richard H. *The Lighting Art: The Aesthetics of Stage Lighting Design*, 2nd edition.
Boston: Allyn & Bacon; Pearson, 1994. Print.

11th Grade Textbook Reading Level. ISBN: 0-13501-081-0

Additional playscripts or instructor handouts on design

IX. Student Learning Outcomes

Upon successful completion of the required coursework, the student will be able to:

1. evaluate the effect of different colors of light on different colors of pigment;
2. demonstrate proficiency in cueing sequences for a live performance;
3. define general lighting terminology.