

T ART173 : Lighting Design Fundamentals

General Information

Author:	<ul style="list-style-type: none">Jeanette FarrGunter, MelodySparfeld, Tobin
Course Code (CB01) :	T ART173
Course Title (CB02) :	Lighting Design Fundamentals
Department:	T ART
Proposal Start:	Spring 2025
TOP Code (CB03) :	(1006.00) Technical Theater
CIP Code:	(50.0502) Technical Theatre/Theatre Design and Technology.
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000551419
Curriculum Committee Approval Date:	05/22/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	05/22/2024
Course Description and Course Note:	T ART 173 is a study and execution of stage lighting theory, equipment, control, and their relationship to design for theatre, dance, and themed entertainment. Practical applications may include hanging lights for Glendale College theatrical productions, light lab cueing, and virtual lighting simulations. Note: Additional materials including an 8" crescent wrench and work gloves may be required.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none">Credit
Mode of Delivery:	
Author:	
Course Family:	

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none">Drama/Theater Arts
Alternate Discipline:	<ul style="list-style-type: none">Stagecraft
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Transferable to both UC and CSU

Transferability Status

Approved

C-ID	Area	Status	Approval Date	Comparable Course
T ART	Theatre	Approved	02/18/2014	THTR 173 - Introduction to Stage Lighting or Lighting Design Fundamentals

Units and Hours

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	90
Total Course Out-of-Class Hours	72
Total Student Learning Hours	162

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience

Education Status (CB10)

Weekly Student Hours

	In Class
Lecture Hours	2

Out of Class

4

Course Student Hours

Course Duration (Weeks) 18

Hours per unit divisor 0

Laboratory Hours	3	0
Studio Hours	0	0

Course In-Class (Contact) Hours	
Lecture	36
Laboratory	54
Studio	0
Total	90

Course Out-of-Class Hours	
Lecture	72
Laboratory	0
Studio	0
Total	72

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

No Value

Entry Standards

Entry Standards

Course Limitations

Cross Listed or Equivalent Course

Specifications

Methods of Instruction

Methods of Instruction Lecture

Methods of Instruction Laboratory

Methods of Instruction Discussion

Methods of Instruction Multimedia

Methods of Instruction Demonstrations

Methods of Instruction Field Activities (Trips)

Methods of Instruction Guest Speakers

Methods of Instruction Presentations

Methods of Instruction Collaborative Learning

Out of Class Assignments

- Group Projects (e.g. explore the collaborative nature of the design process through visual research, focusing, and programming)
- Individual projects (e.g. rendering lighting moments, written journals of lighting design as encountered in the natural world)
- Critique or written report (e.g. script or live performance analyzing the lighting design and execution)
- Lighting design portfolio (e.g. research, drawings, technical draftings, paperwork, and the creation of a lighting design programming project)

Methods of Evaluation**Rationale**

Activity (answering journal prompt, group activity)

Instructor-directed lighting design exercises

Report

Critiques of lighting design assignments

Evaluation

Practical examination (e.g. demonstrations of skills, execution of design)

Writing Assignment

Written examinations (e.g. terminology and techniques of lighting)

Textbook Rationale

Wolf text is a classic text. As stage lighting has not changed much over the years, publication date is irrelevant.

Textbooks**Author****Title****Publisher****Date****ISBN**

Anne E. McMills

The assistant lighting designer's toolkit

Routledge Taylor and Francis group

2018

9780415711210

Taylor, Clifton

Color & light : navigating color mixing in the midst of an LED revolution, a handbook for lighting designers

Quite Specific Media, a division of Silman-James Press

2019

9781935247197

Wolf, Craig

Scene design and stage lighting

Cengage Learning.

2014

9781111834784

J. Michael Gillette and Michael McNamara

Designing with light: An Introduction to Stage Lighting

Routledge

2020

9780367000691

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives

Course Objectives

Demonstrate an understanding of the function of the various theatrical lighting instruments through lighting designs.

Recall and practice safety information concerning theatrical lights and electrical hazards.

Demonstrate an understanding of the functions and elements of lighting design through theoretical projects, practical projects, and/or virtual lighting visualization software.

Assess the process of effective lighting design from the preliminary conceptualization of a play to its final, visual presentation.

Identify the basic lighting needs of a given script, score, or design brief.

Cue sequences for a live performance and score at least 75% on associated paperwork assignments.

SLOs

Define theatre terminology as it relates to areas of design.

Expected Outcome Performance: 70.0

<i>T ART</i> Technical Theatre Certificate	Apply skills and knowledge of technical theatre in preparation for transferability or vocation
	Identify theatre terms and occupations
<i>T ART</i> Theatre Arts AA-T	Apply their knowledge of key concepts in theatre arts to discuss, analyze, and synthesize a variety of theoretical and practical foci within the discipline
	Gain a global, national, and local perspective on issues pertaining to the theatre arts preparing them for multiple pathways for future study and career opportunities
<i>ILOs</i> Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
<i>T ART</i> Theatre Arts - A.S. Degree Major (NIC)	apply skills and knowledge of theatre in preparation for transferability or vocation
	identify theatre as a collaborative art form
	identify theatre terms and occupations
<i>T ART</i> Theatre Arts - Certificate (NIC)	identify theatre terms and occupations

Identify the role and function of a lighting designer in relation to a production team.

Expected Outcome Performance: 70.0

<i>T ART</i> Technical Theatre Certificate	Apply skills and knowledge of technical theatre in preparation for transferability or vocation
	Identify theatre as a collaborative art form
	Identify theatre terms and occupations

<i>T ART</i> Theatre Arts AA-T	Apply their knowledge of key concepts in theatre arts to discuss, analyze, and synthesize a variety of theoretical and practical foci within the discipline
	Gain a global, national, and local perspective on issues pertaining to the theatre arts preparing them for multiple pathways for future study and career opportunities
<i>ILOs</i> Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
<i>T ART</i> Theatre Arts - Certificate (NIC)	identify theatre as a collaborative art form identify theatre terms and occupations
<i>T ART</i> Theatre Arts - A.S. Degree Major (NIC)	identify theatre as a collaborative art form identify theatre terms and occupations

Evaluate the effective use of lighting design techniques in a realized production.

Expected Outcome Performance: 70.0

<i>ILOs</i> Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas. Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.
<i>T ART</i> Technical Theatre Certificate	Apply skills and knowledge of technical theatre in preparation for transferability or vocation Apply skills and knowledge of technical theatre in preparation for transferability or vocation
<i>T ART</i> Theatre Arts AA-T	Apply their knowledge of key concepts in theatre arts to discuss, analyze, and synthesize a variety of theoretical and practical foci within the discipline Gain a global, national, and local perspective on issues pertaining to the theatre arts preparing them for multiple pathways for future study and career opportunities
<i>T ART</i> Theatre Arts - A.S. Degree Major (NIC)	analyze a play from script to performance apply skills and knowledge of theatre in preparation for transferability or vocation
<i>T ART</i> Theatre Arts - Certificate (NIC)	apply skills and knowledge of theatre in preparation for transferability or vocation

Additional SLO Information

Does this proposal include revisions that might improve student attainment of course learning outcomes?

No

Is this proposal submitted in response to learning outcomes assessment data?

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

SLO Evidence

No Value

Course Content

Lecture Content

Introduction (3 hours)

- Roles and responsibilities in the theatre
- Theatrical terminology
- Theatre spaces and layouts
- Introduction to on-deck: orientation and safety training

Lighting as a Design (6 hours)

- Functions of Lighting Design
 - Visibility
 - Selective Focus
 - Modeling
 - Establishing Mood
 - Revealing the Space
 - Supporting the Story
- Controllable Qualities of Light
 - Intensity
 - Color
 - Texture/Shape
 - Contrast
 - Direction
 - Movement
- Color Theory
 - Primary Colors of Light
 - Additive Color Mixing
 - Subtractive Color Mixing
 - Color Psychology
 - Color Temperature
 - Color Relativity
 - Color Media and LEDs

Lighting Design and the Theatre (6 hours)

- History of Lighting Design
 - Ancient to modern day
 - Major contributors
 - Major movements: realism, anti-realism, metatheatricality, abstraction, etc.
 - Role of lighting design in storytelling
- The Physical Stage
 - Sightlines
 - Staging in different theatrical spaces: proscenium, black box, thrust, arena, immersive spaces
 - Soft Goods
 - Fly systems
 - Positions
 - Beams
 - Front of House
 - Booms
 - Pit
 - Deck
 - Coves
 - Unconventional Locations

Lighting Equipment (6 hours)

- Introduction
- Anatomy of a Light
- Reflection
- Refraction
- Photometry
- Fixtures
- Ellipsoidal Reflector
- Spotlights
- PAR Cans
- Fresnels
- Strip Lights
- Sources
- Arc
- LED
- Incandescent
- Fluorescent
- Black Light
- Lasers

Lighting Design and the Play (6 hours)

- Analysis of the script
- Theatrical styles
- Plot styles
- Functions of Lighting Design as they relate to the story
- Realistic, non-realistic, abstraction, and theatricality
- Theatre spaces
- Movement and time
- Central message, image, metaphor
- Beginning Lighting Design Process
 - Lighting Concept
 - Historical research
 - Mood imagery research
 - Moment Breakdowns
 - Rough sketches
- Design Process through Production
 - Collaboration and communication with the design team
 - Design meetings
 - Production meetings
 - Designer run-through
 - The lighting designer and the deck crew
 - Tech rehearsals
 - Dress rehearsals
 - Performances

Communicating the Idea (3 hours)

- Evolving the Design
- Channel Hookup
- Color
- Key
- Magic Sheets
- Lighting Design Draftings
 - Ground plans
 - Section
 - Elevations
 - Lighting Symbols
 - Lighting Areas and Systems
 - Throw Distance
- Lighting Renderings
 - Exploration of rendering materials: marker, watercolor, gouache, acrylic, pastel, etc.
 - Photoshop
 - Introduction to 3D renderings

Creating the Design (3 hours)

- Hang
- Instrument Schedule
- Hang Cards
- Anatomy of a Light
- Safety
- Counterweighting
- Prefocus
- ColorGobos
- Circuiting
- DMX & Addressing
- Focus
 - SafetyFocus
 - Tape
 - Focusing different types of lights
- Programming
 - Patching
 - Moving Lights
 - Recording
 - Cues
 - Time, Hang, Delay, Wait, Block, etc.
 - Playback
- Production
 - Roles and Responsibilities
 - Schedules and Hookups
 - Plot Maintenance
 - Tracking
 - Reports
 - Headset
 - Etiquette

- Channel Check
- Moving Light Check
- Changing a lamp
- Problem solving

Lighting Design in Related Fields (3 hours)

- Theme Parks
- Museums
- Architecture
- Art
- Dance
- Concerts
- Live Events
- Film & TV

Total hours: 36

Laboratory/Studio Content

Introduction (3 hours)

- Roles and responsibilities in the theatre
- Theatrical terminology
- Theatre spaces and layouts
- Introduction to on-deck: orientation and safety training

Lighting as a Design (3 hours)

- Functions of Lighting Design
 - Visibility
 - Selective Focus
 - Modeling
 - Establishing Mood
 - Revealing the Space
 - Supporting the Story
- Controllable Qualities of Light
 - Intensity
 - Color
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Lighting Design and the Theatre (3 hours)

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 - Soft Goods
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 - Beams
 - Front of House
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 - Coves
 - Unconventional Locations

Lighting Equipment (12 hours)

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- Reflection
- Refraction
- Photometry
- Fixtures
 - Ellipsoidal Reflector
 - Spotlights
 - PAR Cans
 - Fresnels
 - Strip Lights
- Sources
 - Arc
 - LED
 - Incandescent
 - Fluorescent
 - Black Light
 - Lasers

Lighting Design and the Play (6 hours)

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- Theatrical styles
- Plot styles
- Functions of Lighting Design as they relate to the story
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 - Lighting Areas and Systems
 - Throw Distance
- Lighting Renderings
 - Exploration of rendering materials: marker, watercolor, gouache, acrylic, pastel, etc.
 - Photoshop
 - Introduction to 3D renderings

Creating the Design (15 hours)

- Hang
- Instrument Schedule
- Hang Cards
- Anatomy of a Light
- Safety
- Counterweighting
- Prefocus
- ColorGobos
- Circuiting
- DMX & Addressing

- Focus
 - SafetyFocus
 - Tape
 - Focusing different types of lights
- Programming
 - Patching
 - Moving Lights
 - Recording
 - Cues
 - Time, Hang, Delay, Wait, Block, etc.
 - Playback
- Production
 - Roles and Responsibilities
 - Schedules and Hookups
 - Plot Maintenance
 - Tracking
 - Reports
 - Headset
 - Etiquette
 - Channel Check
 - Moving Light Check
 - Changing a lamp
 - Problem solving

Total hours: 54

Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

GCC Major Requirements

No Value

GCC General Education Graduation Requirements

No Value

Repeatability

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Resources

Did you contact your departmental library liaison?

Yes

If yes, who is your departmental library liason?

Adina Lerner (Technology & Aviation, Visual & Performing Arts)

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value