# T ART135 : Intelligent Lighting

## General Information

| | |
|---|---|
| **Author:** | • Melody Gunter |
| **Course Code (CB01) :** | T ART135 |
| **Course Title (CB02) :** | Intelligent Lighting |
| **Department:** | T ART |
| **Proposal Start:** | Fall 2024 |
| **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) :** | CCC000644458 |
| **Curriculum Committee Approval Date:** | 02/28/2024 |
| **Board of Trustees Approval Date:** | 04/16/2024 |
| **Last Cyclical Review Date:** | 02/28/2024 |
| **Course Description and Course Note:** | T ART 135 is the study of intelligent lighting instruments and their use in the live entertainment industry. Students learn a detailed breakdown of the various instruments, such as Moving and Color-Changing lighting instruments. The course includes the common practices associated with intelligent lighting equipment in the field and the use of these instruments in live events, concerts, and theatrical performances. |
| **Justification:** | New Course |
| **Academic Career:** | • Credit |
| **Author:** | • Melody Gunter |

## Academic Senate Discipline

**Primary Discipline:**
• Theater Arts

## 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

## Transferability & Gen. Ed. Options

**General Education Status (CB25)**

Not Applicable

**Transferability**

Transferable to both UC and CSU

**Transferability Status**

Pending

## Units and Hours

### Summary

| | |
|---|---|
| **Minimum Credit Units (CB07)** | 3 |
| **Maximum Credit Units (CB06)** | 3 |
| **Total Course In-Class (Contact) Hours** | 126 |
| **Total Course Out-of-Class Hours** | 36 |
| **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.

**Funding Agency Category (CB23)**

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

### Weekly Student Hours

| | In Class | Out of Class |
|---|---|---|
| Lecture Hours | 1 | 2 |
| Laboratory Hours | 6 | 0 |
| Studio Hours | 0 | 0 |

### Course Student Hours

| | |
|---|---|
| **Course Duration (Weeks)** | 18 |
| **Hours per unit divisor** | 54 |
| **Course In-Class (Contact) Hours** | |
| Lecture | 18 |
| Laboratory | 108 |
| Studio | 0 |
| **Total** | 126 |
| **Course Out-of-Class Hours** | |
| Lecture | 36 |
| Laboratory | 0 |
| Studio | 0 |
| **Total** | 36 |

## 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 | Collaborative Learning |
| Methods of Instruction | Demonstrations |
| Methods of Instruction | Discussion |

**Out of Class Assignments**

- Observation of intelligent lighting used live
- Written assignments, such as critiques of live performances
- Participation in or observation of live events on campus using intelligent lighting

| Methods of Evaluation | Rationale |
|---|---|
| Exam/Quiz/Test | Midterm Exam |
| Project/Portfolio | Individual projects based on the implementation of intelligent lighting |
| Writing Assignment | Written critiques based off of the observation of live theatre events that implement intelligent lighting |
| Other | Practical class work surrounding the hands-on use of intelligent lighting |
| Exam/Quiz/Test | Final Exam |
| Exam/Quiz/Test | Quizzes based on lecture, readings, and course material |

**Textbook Rationale**

This is a classic text. It is the standard text for Automated Lighting. There is no equivalent.

**Textbooks**

| Author | Title | Publisher | Date | ISBN |
|---|---|---|---|---|
| Cadena, Richard | Automated Lighting: The Art and Science of Moving and Color-Changing Lights | Routledge | 2017 | 9781138850903 |

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

No Value

**Materials Fee**

No value

# Learning Outcomes and Objectives

**Course Objectives**

Analyze the inner workings of an intelligent light in order to better understand the relationship of each component in a single fixture.

Experiment with a variety of intelligent lighting instruments in order to understand their differences and similarities.

Inspect the maintenance and repair of various intelligent lighting instruments in order to understand how each unit operates.

Assess the capabilities of an intelligent light by programming a variety of units in order to offer lighting designers a range of options.

Examine a high end computerized lighting console in order to assess the numerous capabilities of controllers.

## SLOs

Investigate and setup a variety of intelligent lighting instruments.

Expected Outcome Performance: 0.0

Assess the maintenance and repair of various intelligent lighting instruments.

Expected Outcome Performance: 0.0

Outline the capabilities of an intelligent light for a production.

Expected Outcome Performance: 0.0

Facilitate operation of intelligent light system during a live production and show flexibility when dealing with real show situations and contingencies.

Expected Outcome Performance: 0.0

# 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

**Hanging, circuiting and focusing of intelligent lighting instruments (4 hours)**
**Basic operation of an intelligent lighting control console (2 hours)**
**Control protocol signal path (2 hours)**
**Dissection of intelligent lighting fixtures (2 hours)**
**Basic electronic signal path (1 hours)**
**Instrument electrical requirements (1 hours)**
**Electronic component identification and dissection (1 hours)**
**Electric and Electronic tools (1 hours)**
**Troubleshooting procedures (1 hours)**
**Repair procedures (1 hours)**
**Maintenance procedures (1 hours)**
**Reading electronic schematics (1 hours)**

**Total: 18 hours**

## Laboratory/Studio Content

**Hanging, circuiting and focusing of intelligent lighting instruments (18 hours)**
**Manual override operation (3 hours)**
**Basic operation of an intelligent lighting control console (9 hours)**
**Intelligent lighting crew work (12 hours)**
**Control protocol signal path (9 hours)**
**Dissection of intelligent lighting fixtures (9 hours)**

**Basic electronic signal path (6 hours)**
**Instrument electrical requirements (6 hours)**
**Electronic component identification and dissection (6 hours)**
**Electric and Electronic tools (6 hours)**
**Troubleshooting procedures (6 hours)**
**Repair procedures (6 hours)**
**Maintenance procedures (6 hours)**
**Reading electronic schematics (6 hours)**

**Total: 108 hours**