

THEA 145: ANATOMY OF INTELLIGENT LIGHTING INSTRUMENTS

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Spring 2024
Credits:	3
Total Contact Hours:	72
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	18
Outside of Class Hours:	108
Total Student Learning Hours:	180
Prerequisite:	THEA 120 and THEA 140.
Transferable to CSU:	Yes
Transferable to UC:	No
Grading Method:	Standard Letter

Catalog Course Description

The study, dissection and manipulation of intelligent lighting instruments and their use in various aspects of the entertainment field. 54 lecture hours, 18 lab hours arranged.

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 and assess 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 for a production in order to, in the future, offer lighting designers a range of options
- examine a high end computerized lighting console in order to assess the numerous capabilities of controllers.

Major Course Content

1. Comprehend and analyze the characteristics and uses of Scanners and Moving Heads in the entertainment field.
2. Analyze and dissect the characteristics and uses of LED fixtures in the entertainment field.
3. Comprehend and analyze the characteristics and uses of control systems for intelligent lights.
4. Analyze and understand the intricacies of Digital Multiplexing and other control protocols.
5. Dissect and analyze the various rigging methods for intelligent lights.
6. Comprehend and analyze the various techniques used in programming intelligent lights.
7. Analyze and dissect the methods of troubleshooting intelligent lights.
8. Comprehend and analyze the characteristics and uses of each intelligent lighting instrument.

9. Dissect various intelligent lighting instruments in order to understand how to maintain and repair them.

Hours Arranged Content

Guided instruction in...

- hanging, circuiting and focusing of intelligent lighting instruments.
- manual override operation.
- basic operation of an intelligent lighting control console.
- intelligent lighting crew work.
- control protocol signal path.
- dissection of intelligent lighting fixtures
- basic electronic signal path,
- instrument electrical requirements
- electronic component identification and dissection
- electric and electronic tools.
- troubleshooting procedures
- repair procedures
- maintenance procedures
- reading electronic schematics

Suggested Reading Other Than Required Textbook

Intelligent Lighting: A Curriculum in Entertainment Technology Matthew Haber CreateSpace Independent Publishing Platform (June 14, 2010) ISBN-13: 978-1452877785

Examples of Required Writing Assignments

Research paper on new, high end intelligent lights and their capabilities.

Examples of Outside Assignments

Interview of an intelligent lighting manufacturer. Set up a class tour of a manufacturer.

Instruction Type(s)

Lab, Lecture, Online Education Lab, Online Education Lecture