

**THETR 365**  
**Automated Lighting and Control**

E.D. Intemann (edi1)

**Course Content**

This course covers the understanding and application of lighting control technologies, including electrical systems, color, optics, dimming protocols, and console programming. Students will complete a series of projects culminating in the programming and use of automated fixtures and lighting visualization software.

**Objectives**

1. To gain a thorough understanding of lighting control theory and technologies.
2. To become facile at programming lighting consoles to manipulate conventional fixtures
3. To become familiar with the use of visualization software to emulate lighting in larger venues
4. To develop competency at programming automated lighting fixtures under various circumstances in differing genres of lighting
5. To articulate a discriminating aesthetic in the manipulation of light as an artistic medium.

**Requirements and Attendance**

Each absence beyond two will lower the final grade one letter. Attendance at each of Cornell's plays is also mandatory. Late work will be lowered at least one letter grade. Chronic tardiness will be considered as absence. The course grade consists of four projects, each totaling 10% of the grade, a final project worth 25%, short homework assignments totaling 25%, with the remaining 10% being awarded for participation. This class will uphold all University policies regarding academic integrity, discrimination, plagiarism, observance of religious holidays, and assistance with student impairment.

**Project 1:** Programming Conventional Fixtures and Console

**Project 2:** Basic Programming of Automated Fixtures

**Project 3:** Advanced Programming with Automated and Conventional Fixtures

**Project 4:** Programming with Offline and Visualization Software

**Final Project:** Genre Programming

**Texts and Materials:**

Information and materials will be posted on Blackboard at: <http://blackboard.cornell.edu/>.

J. Michael Gillette, *Designing with Light*

Richard Cadena, *Focus on Lighting Technology*

Brad Schiller, *The Automated Lighting Programmer's Handbook*

Expression Offline Software

Maxxyz PC

USB Drive at least 1gb

3 ½" Diskettes

**AUTOMATED LIGHTING & CONTROL**

**Daily Schedule**

<b>TUESDAY</b>	<b>THURSDAY</b>
Optics—Reflectors, Lenses Gillette: 1,2,4	Illumination and Lux, Color Theory Gillette: 9 Cadena: 4,5,9,10,14,15
Electricity, Distro, Phase Control, Dimming Gillette: 3,5,6 Cadena: 6,7,11-13	DMX Protocol: Addresses, Channels, Dimmers Cadena: 2,3,8
Lighting Consoles—Setup and Layout	Console Functions. Control—Cues, Groups, Waits, Links
Advanced Control—Effects, Macros	Mechanics of Automated Fixtures
<b>Present Project 1</b>	Mechanics of Automation w/ ETC Gillette: 7,8,10
Conventional vs. Automated Consoles <i>2 Looks on ETC</i>	Communication, Drawing Standards Gillette 15, 17, App. A Cadena 1, 8, 16
<b>FALL BREAK</b>	Automated Console Concepts/Palettes Schiller: Intro-3
Maxxyz PC Syntax <i>Palettes in Light Lab</i>	Dynamics /Spatial Movement Schiller: 4-5
<b>Present Project 2-Cycle 3 Looks</b>	Visualization Software and Fixture Selection Schiller: 6-7
Visualization Software--Programming <i>Fixtures in Visualizer</i>	Dynamics in Time/Context, Punctuation Cue Types and Tracking
<b>Present Project 3</b> <i>Final Countdown w/ Palettes</i>	Advanced Programming: Cue Lists, Macros Schiller: 8-9
Cuing vs. Live Programming Schiller: Appendix <i>Palettes in Visualizer</i>	Advanced Programming: FX, Masking Schiller: 10-11
<b>Present Project 4 Minute of Final Song</b>	<b>THANKSGIVING</b>
Develop Final Project—Virtual Portion	Develop Palettes for Project—Live Portion

**Final Project Presentation:** TBA