

M: Course Objectives / Learning Outcomes:

At the end of the course, the successful student should be able to:

1. demonstrate safe working procedures and precautions when dealing with theatrical luminaires and related equipment
2. demonstrate a working knowledge of theatrical luminaires including:
 - basic lens and reflector characteristics
 - theatrical light sources
 - function and use of theatrical luminaires
3. demonstrate a working knowledge of the procedures and techniques for hanging and focusing of theatrical luminaires
4. understand basic electrical theory and practices for the stage

N: Course Content:

1. Basic Theory of Optics
 - 1.1 Composition of light
 - 1.2 Reflection: spherical, ellipsoidal, parabolic
 - 1.3 Refraction: fresnel, stepped, plano-convex
2. Light Sources
 - 2.1 Incandescent
 - 2.2 Tungsten halogen
 - 2.3 Arc and discharge
 - 2.4 Other sources including fluorescent, laser, fiber optics, low voltage
3. Equipment
 - 3.1 Lens and lensless luminaries
 - 3.2 Spots and floods: fresnel, projectors, floods and scoops, par and r, follow spots
4. Hang and Focus
 - 4.1 The light plot and schedules
 - 4.2 Selection and preparation
 - 4.3 Circuitry and patch
 - 4.4 Trouble shooting and repair
 - 4.5 Focus
5. Basic Electricity for the Stage
 - 5.1 Basic electrical theory
 - 5.2 Quantities and measurement
 - 5.3 Basic wiring and maintenance for luminaries and cable

O: Methods of Instruction:

Students will receive 1 to 1 ½ hours of lecture/demonstration followed by 2 ½ to 3 hours of lab that includes independent work and one-on-one instruction.

P: Textbooks and Materials to be Purchased by Students:

A list of recommended materials is available to students at the beginning of each semester.

Attendance at various live theatrical productions will involve costs for transportation and admission. Ticket prices will vary but an average of 3 x \$20 = \$60 is typical.

