## THEA 223-01: Lighting and Sound Technology

**Instructor**: **Cell Phone:**

**Office Hours**: see schedule **Office Phone**:

**E-mail**: **Office**

**Schedule:** **Office Hr. Appointment**

**Class Meeting Times**:

1. **Course Description and Rationale:**

**Course Description:**

This course is an introduction to the mechanics of stage lighting and sound. It includes basic electricity, tools, equipment, distribution and control for theatrical lighting and sound. The course will deal with the many aspects of implementing lighting and sound for a production.

**Rationale:**

In order for a BFA or BA student to be marketable as a theatrical technician they need to be able to be as diverse as possible. This course will give hands on training in lighting and sound technology to give the student what is needed to be a diverse technician.

1. **Textbook** **Required:**

Designing with Light by Michael Gillette

Videos and additional required readings can be found http://bit.ly/TADALStech

**Recommended:**

*Backstage Handbook An Illustrated Almanac* by Paul Carter *Exploring Sound Reinforcement DVD* by Yamaha

### III. Intended Learning Outcomes

This course fulfills the following elements of Baccalaureate Goals set forth by SUNY-Fredonia: SKILLED: (develop Intellectual and Applied Skills, Literacies and Knowledges)

* The ability to think critically and analytically;
* to listen effectively to others;
* to write persuasively and creatively;
* to speak confidently and professionally;
* to work with and evaluate information effectively;
* to utilize technology capably and thoughtfully;

CREATIVE: (demonstrate Scholarship, Artistry, and Innovation)

* engage with their peers, faculty and professionals in diverse experiential learning situations, to actualize research, performance and craftsmanship, within their majors and in general education;
* engage with their peers, faculty and professionals in co-curricular learning experiences to demonstrate their ability to translate knowledge into everyday situations and contexts.

This course fulfills the following goals in the Bachelor of Fine Arts in Theatrical Production and Design:

* A) Students should comprehend the process involved in the creation of theatre, beginning with the script through the interpretive creative processes of performance and production.

* B) Students should have achieved significant technical mastery in at least one of the traditional or innovative techniques appropriate to their work.

This course fulfills the following goals in the Bachelor of Arts program:

* C) Demonstrated ability in the fundamental skills basic to technical production and design, such as stagecraft, design principles, and/or stage management.

**Course Objectives**

* 1. *Learn the Functions and Controllable Qualities of Stage Lighting*
  2. *Be able to create a resume for positions in Theatrical Production and Design*
  3. *Gain basic knowledge in electricity for lighting and sound*
  4. *Be able to identify basic lighting and sound equipment*
  5. *Learn basic theatrical lighting skills such as hanging instruments, focusing instruments, coiling a cable, basic wiring and using a lighting console*
  6. *Gain knowledge in lighting color theory in lighting*

*Have the ability to set up a basic sound system*

### IV. Instructional Methods and Activities

**Exams:** There will be Three Exams throughout this course. The first two on lighting technology and the final will be a take home exam and skills test.

**Quizzes:** Will be given on selected reading, all will be sent in over email. The subject line must be quiz and the days date. None will be accepted after you are instructed to turn them in.

**Class Participation:** This class is a discussion and participation class and will be a factor in your grade.

Please Keep up on the reading!

**Critiques:** Each student will write a 700 word lighting critique for two of the departmental shows during the semester. The file should be in **Microsoft Office** format only. They will be due at the beginning of the first class period after the strike of the show.(if class is canceled that day you will still place it in the drop box) The critiques must be put in the On Course drop box. The file name should have your initials in it.

Discuss the Designers use of color, distribution, intensity, and movement.

Did they achieve selected visibility, mood, modeling, composition, and information? Were the choices appropriate the script and production?

**Projects:** All projects are due at the beginning of the class period. Most projects will be presented in class. Discussing the projects is a part of your grade and an absence on a presentation day will result in a lowering of your project grade. All projects should be presented in a neat and ordered fashion in a folder. All paperwork should be bound and the entire projects should be together in a logical fashion. Files for the Projects can be found at http://bit.ly/TADALStech

**V. Course Requirements** **Projects:**

1. Create a resume and cover letter or a position you found on-line. Turn in the final copy on Angel.

1. Fill out the form at http://bit.ly/tadalightform on different instrument properties.

1. Build a practical of your choice. (You can find parts for this at Radio Shack.)
   * 1. It must have a DC power source,
     2. Must have either a lamp or motor
     3. Must have a switch
     4. It must work on the presentation day
     5. You will be graded on craftsmanship

1. Create from the provided plot on the Google Drive Projects folder http://bit.ly/TADALStech:
   1. Instrument breakdown and Twofer count turn in on Angel and bring a copy to class.
   2. Figure out the weight for each position if it were a single purchase counterweigh system. Assume the counterweight bricks are 15 lbs each.
   3. Draw on the plot a plan for the circuit runs. Turn in and bring a hard copy to class.

1. Fill out the sheet on the following playback devices. Use manufactures websites,

www.fullcompass.com and other sound sites to get the information needed for this project. Fill out http://bit.ly/soundplayback. Be prepared to discuss in class your answers.

* + CD
  + qLab
  + Cassette Tape
  + Mini-Disk
  + Reel to Reel

EXTRA CREDIT (if anyone is caught cheating on hours this opportunity will be stopped for everyone) : 6. Complete hours working electrics for a departmental production. I will give two points per hour worked up to 26 points. The hours must be signed off and reported in the ME report by the ME.

### VI. Grading

Grading is a complex procedure, which gauges the quality of the work you produce, your willingness to contribute the time to prepare our work at hand, and your participation in the class exercises and discussions. Although it is largely subjective, here are some additional guidelines I use for grading.

A: (Outstanding) Student understands the theories and materials of the class and has demonstrated a high level of commitment to the class. Has exhibited outstanding intellectual and creative growth. Has completed all assignments, attends class regularly and works in a consistently focused manner. Demonstrates excellent work ethics, enthusiastically participates in class activities. Exhibits unvaried excellence. Has developed and demonstrated excellent analytical and creative skills.

B: (Excellent) Student understands the theories and materials of the class and has demonstrated a high level of commitment to the class. Has exhibited above average intellectual and creative growth. Has completed all assignments, attends class regularly and works in a focused manner. Shows potential but needs to work harder on assignments or needs to become more expressive with creativity, more skilled in techniques, show more intellectual curiosity and participate more in class.

C: (Average) Student shows some understanding of the basic theories and materials of the class, and had demonstrated some commitment to the class. Has exhibited some intellectual and creative growth. Has met the minimum requirements of class projects. Shows potential, yet has satisfactory completed the course with minimal insight, or with minimal willingness and/or ability to take creative leaps. Quality of work is fair.

D: (Poor) Student shows little or no understanding of basic theories or materials and is unwilling or unable to show creative growth or has failed to complete course assignments satisfactorily. Exhibits little involvement with course activities.

F: (Failing) Student has not met requirements for the course.

I: (Incomplete) Given only in cases of extreme hardship or illness when most of the work has been completed and there is clear exception on the part of the student and the instructor that the remaining work can be successfully completed within a reasonable amount of time. A student must initiate the incomplete with the Registrar’s Office and fill out the paperwork for it.

**Grading scale:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | 100 - 94 |  | C | 76 - 73 |
| A- | 93 - 90 |  | C- | 72 - 70 |
| B+ | 89 - 87 |  | D+ | 69 - 67 |
| B | 86 - 83 |  | D | 66 - 63 |
| B- | 82 - 80 |  | D- | 62 - 60 |
| C+ | 79 - 77 |  | F | Below 60 |

### VII. Instructor’s Policies & Procedures

1. **Attendance**

**ATTENDANCE POLICY DEPARTMENT OF THEATRE AND DANCE** - Attendance is mandatory.

* + Students will be allowed the equivalent of one week of absences without penalty. (Three absences for 3-day per week classes, two absences for 2-day per week classes and one absence for 1-day per week classes.)
  + Each absence in excess of the allowed number will result in a reduction of the final course grade by one letter.
  + Each absence in excess of the allowed number will be counted, no matter what the reason or excuse. The only exceptions are those absences caused by required participation in universitysanctioned activities, or for bona fide religious holy days.
  + Any special medical or personal problems that occur where absenteeism will exceed the number allowed will require verification by the Vice President of Student Affairs and may require course withdrawal.
  + Three late arrivals will equate to one absence.
  + Arrival after 15 minutes will be considered an absence.

1. **Missing/re-scheduling** Make up work is on a case-by-case basis and needs to be discussed with the instructor before the missed class.

1. **Academic Integrity** –

This course strictly adheres to and will follow the Universities Academic Integrity policy located in the University Catalog at http://www.fredonia.edu/catalog/4442.htm.

It should be noted: “Plagiarism: To plagiarize is "to steal and pass off as one's own the ideas or words of another" (Webster's Seventh New Collegiate Dictionary). Examples of plagiarism include presenting the ideas of another in one's own words without crediting the source, copying sentences, paragraphs, or pages from a source without explicit reference to the pages from which the words were taken, and, of course, presenting another's entire work as one's own. If a student is not certain whether a particular practice may be considered plagiaristic, it is his/her responsibility to consult the instructor for whom he/she is writing the paper, exercise, or examination. SUNY Fredonia strongly condemns plagiarism and takes severe action against those who plagiarize.” From the University Catalog http://www.fredonia.edu/catalog/3844.htm

1. **Disabilities/Health Policies –**

**ADA Policy**: Students with disabilities who may need reasonable accommodations to have equal access to this course must contact the Coordinator of Disability Support Services, Reed Library (4th floor), 673-3270. The Coordinator will review your disability documentation and make determinations about what accommodations and/or services you are eligible for. Please feel free to discuss these accommodations with me at that time.

1. **Professionalism –**

**Late work: *Late work will not be accepted***. All assignments are due at the beginning of class period. You must attend the class that day unless otherwise approved by the instructor.

**Cell Phone Policy:** The use of cell phones are strictly prohibited in class, unless approved by the instructor previously. Please set your phone to vibrate. Taking a call or texting in class could result in being asked to leave the class and taking absence for the day.

**Class Breaks:** Once in class you will not be excused to leave class. Doing so could result in absence being given for that class. Leaving the middle class disrupts the instructor and other classmates. So please take care of business before class begins.

1. **Photography Release:**

*During this course, The Department of Theatre and Dance at SUNY-Fredonia may wish to use photographs or videos of Students the in Department Blog, website, in educational publications or in general media releases on a controlled basis. Any such photographs would highlight the student(s) either demonstrating learning techniques or participating in approved school activities. Any student wishing to op out of this must inform the instructor 48 hours after the first class meeting.*

### VIII. Tentative Course Calendar

**(All readings should be completed before the date listed for discussion of said material.**

**G=Chapters in Gillette, Videos can be found on http://bit.ly/tadalstsoundtext )**

**Monday Read Due Wednesday Read Due**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | 18-Jan | *Introductions and syllabus* |  |  |
| 23-Jan | *Job Search, Cover letter, Resume discussion.* | **Resume files on Project** |  | 25-Jan | *Functions, Goals, Qualities,*  *Production Staff and Lighting Terms,* | **G 1-2** |  |
| 30-Jan | *Discuss Resumes in class. Project 1 First Draft Due* | **Proj 1** |  | 1-Feb | *Electricity & Wiring Demo* | **G 3** | **Proj 1**  revised on oncourse |
| 6-Feb | *Lamps, Reflectors, Lenses, & Instruments,* | **G 4** |  | 8-Feb | *Instruments* |  | **Proj 2** |
| 13-Feb | *Instrument, Data sheets and accessories* |  |  | 15-Feb | *Cables & Plugs, Circuiting, Circuit diagrams,* | G 5 |  |
| 20-Feb | *Dimmers, Lighting Control DMX, Networks,* |  | **Exam 1** | 22-Feb | *Consoles, effects* | **G 7** |  |
| 27-Feb | *Reading a Plot and weight calculations* | **G6** |  | 1-Mar | *Lighting Positions Role of the ME* |  |  |
| 6-Mar | ***USITT/TURN*** |  | **Proj 3** | 8-Mar | ***USITT*** |  | **Crit 1** |
| 13-Mar | ***SPRING BREAK*** |  |  | 15-Mar | ***SPRING BREAK*** |  |  |
| 20-Mar | *Color & Color Theory, Gel cuts* | **G8** |  | 22-Mar | *Automated Lighting LEDs,*  *scrollers,* | **G 10** |  |
| 27-Mar | *Light hang, focus, light boards, scavenger hunt, cable coiling cutting gel (in light lab) dmx calc* |  |  | 29-Mar | *Light hang, focus, light boards, scavenger hunt, cable coiling cutting gel (in light lab)* | **Exam 2** |  |
| 3-Apr | *Review Project 3/4* |  | **Proj 4** | 5-Apr | *Controllable*  *Qualities/Functions of Sound, physical properties of sound System overview* |  |  |
| 10-Apr | *Magnetism*  *Microphones/wireless microphones/* | **V1** |  | 12-Apr | *Mixers, playback options/digital interfaces* | **V2** | **Proj 5/Crit 2** |
| 17-Apr | ***Easter Break*** |  |  | 19-Apr | *cables and connectors, balanced and*  *unbalanced/effects and eq* | **V3** |  |
| 24-Apr | *Amplifiers, speakers and amplified speakers* | **V4-5** |  | 26-Apr | *sound system diagram/putting the system together* | **V6** |  |
| 1-May | *Hands on Sound system, System diagram* | **USITT Sound Graphics** |  | 3-May | ***Juries*** |  | **Crit 3** |
|  | Friday May 12 8:30AM – 10:30AM |  | **Exam 3 Due/skill s test** |  |  |  |  |

**For the Registrar’s calendar for midterm, withdrawal and other important dates see http://www.fredonia.edu/registrar/calendar.asp**

### IX. Miscellaneous

**Bibliography (Partial):**

**Lighting:**

**Bellman, Willard F., *Lighting the Stage: Art and Practice***. San Francisco, California: Chandler Publishing Co., 1967.

**Bentham, Frederick, *Stage Lighting***. London: Pitman and Sons, Ltd., 1968.

**Boulanger, Norman C., and Lounsbury, Warren C., *Theatre Lighting from A to Z***. Seattle, Washington:: University of Washington Press, 1992.

**Bowman, Wayne, *Modern Theatre Lighting***. New York: Harper and Brothers, 1957.

**Cunningham, Glen, *Stage Lighting Revealed, A Design and Execution Handbook***. Cincinnati, Ohio: , 1993

**Essig, Linda, *Lighting and the Design Idea***. New York: Harcourt Brace, 1997.

**Gillette, J. Michael, *Designing With Light***. Palo Alto, CA: Mayfield Publishing Company, 1978.

**Hays, David, *Light on the Subject Stage Lighting For Directors and Actors and the Rest of Us***. 2 Ed. New York: Limelight Editions, 1991.

**McCandless, Stanley, *A Method of Lighting the Stage***. 4 Ed. New York: Theatre Arts Books, 1958 **Palmer, Richard, *The Lighting Art: The Aesthetics of Stage Lighting Design***. Englwood Cliffs, New Jersey:

Prentice-Hall, Inc., 1985.

**Reid, Francis, *Lighting the Stage***. New York: Drama Book Publishers, 1992.

**Rosenthal, Jean, and Wertnbaker, Lael, *The Magic of Light***. Boston: Little, Brown, and Co., 1972. **Warfel, Willaim B., *The New Handbook of Stage Lighting Graphics***. New York: Drama Book Specialists, 1990.

**Journals** Live Design, TD&T **Websites:**

Isquint: http://isquint.net

Jim on Light: http://jimonlight.com **Sound:**

Theatrical Design and Production, Gillette, J. Michael

The Backstage Handbook by Paul Carter

Sound and Music for the Theatre by Deena Kaye and James Librecht

Sound Reinforcement Handbook written for Yamaha by Gary Davis and Ralph Jones

Sound Design in the Theatre by John L. Bracewell

AudioCraft An Introduction to the Tools and Techniques of Audio Production by Randy Thom

Digital AudioCraft An Introduction to the Tools and Techniques of Digital Audio Production by Gregg

McVicker and Mike Freitas

**DVDs**

Theatrical Design Interactive with Kade Mendelowitz

Exploring Sound Reinforcement Instructional DVD by Yamaha

Sound Systems: Design and Optimization-Modern Techniques and Tools for Sound System Design and Alignmentby Bob McCarthy

Mixing a Musical-Broadway Theatrical Sound Techniques by Shannon Slaton

**Time Card Lighting Class**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Time in | Time Out | Hrs | Supervisor Signature |
|  |  |  |  |  |
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|  |  |  |  |  |

**The policies in this syllabus are subject to change by written or oral notice at anytime. Any situation, concerning the course, not covered by the syllabus is at the discretion of the instructor.** A copy of this syllabus can be found on Angel under resources