

Course Syllabus

Advanced Stagecraft

Course Credit:	3 Units
Course Meeting:	M-W-F 9:00-10:50, (TAPS)
Office Hours:	T,Th 11-1 or by appointment
Contact Information:	Office: EHFA 133 Phone: O: 843-349-2555 C: 917-913-4032 Email: twren@coastal.edu

Course Description

Students will build on the skills learned in Stagecraft I and apply new techniques to solve specific tasks in technical theatre. Lectures in conjunction with realized projects provide students with a thorough understanding of tools and techniques available to contemporary theatre craftsman and designers. Students learn to evaluate potential failure points and hazards, and present corrective solutions.

Overview/Objectives

1. In depth study of the construction, capacities, and application of stage rigging hardware.
2. Overview of structural loads and dynamic forces as they apply to beams and trusses.
3. In depth study of PPE and job site safety procedures, with an emphasis on accident prevention.
4. In depth study of electrical theory as it applies to simple circuits, phase balancing, and motor positioning logic.
5. Overview of analogue and digital communication protocols to synchronize sound, lighting, and scenery automation.
6. Overview of methods to create and replicate complex shapes including Bead Foam Cutting, 3-D Printing, Latex Mold Making, and Computer Controlled Routing.

Learning Outcomes: Upon successful completion of this course students will be able to:

1. Apply vector physics formulas to evaluate, operate, and install theatrical rigging systems.
2. Evaluate potential hazards tasks and present corrective actions.
3. Evaluate simple electrical circuits and perform basic wiring terminations including common theatrical connectors, crimp connections, and soldering.
4. Develop show control interface across multiple control platforms to achieve accurate show automation.
5. Design, create, and replicate complex shapes using the available technologies including Bead Foam Cutting, 3-D Printing, Latex Mold Making, and Computer Controlled Routing.

Recommended Reading

The Backstage Handbook: An Illustrated Almanac of Technical Information, 3rd Edition by Carter, Paul and Chiang, George

Stage Rigging Handbook, 2nd Edition by Glerum, Jay O.

Entertainment Rigging: A Practical Guide for Riggers, Designers, and Managers
by Donovan, Harry

The Sound Reinforcement Handbook by Davis, Gary and Jones, Ralph

Show Networks and Control Systems: Formerly "Control Systems for Live Entertainment" by Huntington, John

Electricity for the Entertainment Electrician & Technician, 2nd Edition
by Candena, Richard

CNC Programming Handbook, 3rd Edition by Smid, Peter

The Prop Building Guidebook: For Theatre, Film, and TV by Hart, Eric

Organization

Class will be divided into four parts.

- 1) Readings: Readings will be posted on the class Moodle site and organized by topic. The readings listed in the syllabus are to be completed before the class meeting. Information from the reading assignments may appear as questions on quizzes and test throughout the course.
- 2) Lectures: Classroom lectures and discussions of theatrical equipment and application support the reading assignments. Respectful class discussion is essential. Participation in this class offers a safe and stimulating environment for students to hone their spoken communication skills, and students will be evaluated on both the quality and quantity of their participation. At times, information shared in the class may be of a confidential nature. Students are expected to respect this confidence as needed.
- 3) Tours: The class will occasionally meet at different campus workshops and production facilities. Information will be provided in class and posted on Moodle site. Students are responsible for a timely arrival.
- 4) Lab Assignments: Students will apply the skills and technology from lectures and readings to complete projects. Completing projects may require meeting outside of scheduled class times. Occasionally, students may undertake production related assignments for extra credit.

Required Materials

Tools:

Sturdy Closed Toes Shoes
Pair of form fitting work gloves

Dress Code:

This class will have active daily work component and as such requires attention to shop attire. **Adherence to the following class dress code is required.** Failure to comply will result in the student's inability to participate in class exercises and will count as an unexcused absence.

Dress Code: (Continued)

- Shoes must be non slip sole, sturdy construction, and closed toe. Good quality sneakers are acceptable.
- All clothing shall be form-fitting and free from anything which could become entangled in moving machinery.
- Sleeves cuffs must be either buttoned at the cuff or securely rolled up above the elbow.
- Belts, sashes, ties, and wraps extending more than 6" from the tie or buckle must be removed or secured.
- Sturdy trousers with belt loops are suggested as tools and materials will often require safety attachment to trouser belt loops.
- Hair longer than shoulder length must be secured or tied such that no hair can touch the crown of the shoulder.
- Shop temperatures vary widely and students are expected to dress appropriately.
- Our work will often require handling dirty machinery and hardware. Expect that your clothing will become soiled.

Class Schedule

Wk	Dates	Topic	Readings Due	Assignment Due
1	1/12-M	Class Overview Rigging Introduction	-Liability and Competence -Rope Terms -Knots	Practice simple knots
1	1/14-W	Rope and Loads	-Types of Rope, construction and materials -Using Ropes -More Knots -Loads	-Reading Quiz #1 Rope Terms, Size, construction, and materials.
1	1/16-F	Force and Breaking Strength	-Loads -SWL vs Breaking strength -Safety Margins	-Quiz #2 Rope Load Reading Quiz
2	1/19-M	Simple Machines	-Mechanical Advantage - Simple Machines	-Quiz #3-Simple Machines
2	1/21-W	Structures and Dynamics	-Structures and Dynamics	Quiz #4- Structures
2	1/23-F	Rigging Hardware	-Rigging Hardware	Quiz #5-Rigging Hardware
3	1/26-M	Rigging Hardware (Continued)		
3	1/28-W	Rigging Systems	Rigging Systems	Quiz #6-Rigging Systems
3	1/30-F	Rigging Systems(Continued)		
4	2/2-M	Building Tour-Tension Grid-Edwards	Tension Grid	

Wk	Dates	Topic	Readings Due	Assignment Due
4	2/4-W	Building Tour-Fly System-Wheelwright	Fly System	
4	2/6-F	Building Tour-HTC Center-Chain Motors	Concert Rigging	
5	2/9-M	Specialty Rigging	Specialty Rigging	Quiz #7- Specialty Rigging
5	2/11-W	Work Rigging Project		
5	2/13-F	Work Rigging Project		
6	2/16-M	Present Rigging Project		
6	2/18-W	Personal Safety	Personal Safety	Quiz #8-Personal Safety
6	2/20-F	Equipment Operation	Equipment Operation	
7	2/23-M	Electricity	Intro to Electricity	Quiz #9-Electricity
7	2/25-W	Electricity and Work	Electricity and Work	Quiz #10-Electricity Curves
7	2/27-F	Electricity, Sound, and Solder	Electricity and Sound	
8	3/2-M	Solder School	Solder School	Solder Project Due
8	3/4- W	Foam Cutter - SETC		
8	3/6-F	Foam Cutter - SETC		Foam Project Due
9	3/9-3/13	Spring Break-No Class		
10	3/16-M	Building Codes	Building codes	
10	3/18-W	USITT-No Class		
10	3/20-F	USITT-No Class		
11	3/23-M	3D Printing	3-D Printing	Quiz #11 Codes
11	3/25-W	3D Printing		
11	3/27-F	3D Printing Project		3D Printing Project Due
12	3/30-M	Cost and Labor Estimation	Cost and Labor Estimation	Quiz #12 Cost and Labor Estimation

Wk	Dates	Topic	Readings Due	Assignment Due
12	4/1-W	Scenery Automation	Scenery Automation	Quiz #13 Scenery Automation
12	4/3-F	Scenery Automation (Continued)		
13	4/6-M	Show Control	Show Control	
13	4/8-W	Final Project Work Session		
13	4/10-F	Final Project Work Session		
14	4/13-M	Final Project Work Session	Mold Making	
14	4/15-W	Mold Making		
14	4/17-F	Mold Making No Todd	Metal Working	
15	4/20-M	Metal Work No Todd		
15	4/22-W	Metal Work Continued No Todd		
15	4/24-F	Metal Work Project Due No Todd		Metal Work Project Due
16	4/27-M	Final Project Work Session		
16	4/29-W	Final Project Presentation:		Final Project Due
16	5/4-M 11a-1p	Final Exam		

Class schedule and topics are subject to change at the discretion of the instructor

Policies

Attendance

Students are expected to attend class and to be on time. When conflicts are unavoidable, a student must arrange an excused absence with the instructor *in advance*. Students who miss class are responsible for material covered on that day, for turning in any assignments due that day, and for getting any new assignments. *There are no "free" unexcused absences.* Excessive lateness will also result in unexcused absences. Students late to class are not permitted to make up quizzes given at the beginning of class. More than three unexcused absences will result in lowering a student's final grade by one letter grade, and for each additional two unexcused absences will reduce the final grade by another letter grade.

Conduct/Collaboration/Cheating

This class is a skills class. I expect students to help each other to understand the concepts and ideas expressed in class by working with one another. Each student must submit their own work and will be held accountable to explain the tools and possesses utilized to solve specific tasks.

Please review the "2014-2015 Code of Student Conduct" portion of your Student Handbook.

<http://www.coastal.edu/media/studentaffairs/deanofstudents/pdf/CCU%20Code%20of%20Student%20Conduct%20Aug13%20WEB.PDF>

Students are required to silence alerts on all devices and telephones. Any student disrupting class may be required to leave the classroom.

Homework

All written submissions must be grammatically correct, spelling corrected, and clearly formatted. All work must be completed to a presentation standard and include your name, the name of the assignment, the name of the course, and the date it is completed.

Students submitting assignments on multiple pages must include their name on each page, and properly secure the work such that it will not become separated or submit it bound or in a folder. Before turning in any assignment, students should proofread for clarity, grammatical errors, and spelling.

Assignments are due at the start of the class on the due date. *Late assignments will not be accepted.*

Students with special circumstances affecting their ability to complete assignments on time should arrange **in advance** for extensions on a case-by-case basis.

Grading Scheme:

Attendance/Participation:	250 pts
Knot Proficiency	250 pts
Quizzes	250 pts
Project #1-Rigging	250 pts
Project #2-Solder	150 pts
Project #3-3D Printing	150 pts
Project #4-Mold Making	150 pts
Project #5-Metal Working	150 pts
Final Project –Show Control	400 pts
Mid Term Exam:	200 pts
Final Exam:	<u>200 pts</u>
Total:	2400 pts

Grading will be ABCDF scale:

A	100-91	2400-2184	Exceptional work that consistently <u>exceeds</u> the expectations of students in CoFA
B	90-81	2183-1944	Work which exceeds the expectations of students in CoFA
C	80-71	1943-1704	Work at the standards expected in CoFA
D	70-61	1703-1464	Work markedly below the standard of CoFA
F	60-0	1463-0	Failing Grade - any required course must be repeated

NOTE:

A grade of "D" or below may trigger an academic action, including but not limited to a warning letter or imposition of probationary status. Students in the BFA program are expected to maintain a "B" grade in their area of specialization.

Grades in the College of Fine Arts measure a student's progress toward mastery in their field. Expectations of progress are defined within each option and for each level of the curriculum.

Faculty considers specific factors in determining grades. Individual rubrics and requirements are made available on a course specific basis. The following are areas of competency in the College of Fine Arts evaluates on a school-wide basis; artistic and professional aptitude and potential, skills mastery, professional conduct and engagement, innovation and positive collaboration.