

# USC School of Dramatic Arts

## Theatre 335 Scenic Construction

2023-3—MW—8:30 am- 9:50 am and 1 weekly 3 hour lab  
as scheduled

Units: 3.0

Location: TTL 101.

Instructor: Duncan Mahoney

Office: TTL 102

Office Hours: M-F 10-1 by appointment

Contact Info: [dmahoney@usc.edu](mailto:dmahoney@usc.edu), 213-743-1968

### Course Description and Overview

Technology, organization, and operation of the theatrical scene shop centered around the proper and safe use of tools, the choosing of materials, and methods of construction.

### Learning Objectives

Through lecture, demonstrations, and hands-on laboratory exercises, students will learn scenic construction techniques, shop math and engineering, rigging math and methods, safe and effective use of advanced power tools including welding and turning, as well as basic budgeting and project management techniques. Students will complete a fully documented final project as a culminating exercise.

**Prerequisite:** It is assumed that students in this class will have basic wood and metal working skills that were learned in Theater 131a or a similar class. If you have not completed tool training for 131a, you will need to do so

### Required Texts

Stock Scenery Construction Handbook, Bill Raoul, Broadway Press; Stage Rigging Handbook, 3rd ed., Jay O. Glerum, Southern Illinois University Press; Welder's Handbook, Richard Finch, HP Books.

**Recommended Reading:** The Backstage Handbook, Paul Carter; The Complete Manual of Woodworking, Jackson, Day, & Jennings; Scenery for the Theatre, Burris-Meyer, & Cole

### Grading Criteria and Assessment of Assignments

- 25% homework assignments, 10% midterm exam, 25% assigned class projects, 10% project proposal, 5% project “post-mortem”, 10% project, 15% final exam. Grading is curved based on the students currently in the class, but historical records are also considered. I expect homework and exams to be complete, with all steps shown in calculations. Just having the right answer is not sufficient. Clearly draw or diagram the information given. Clearly show each step of the math necessary to arrive at your solution. Late homework or exams not accepted.

Homework Grading Rubric (10 points/problem) Exams (varies)

0      0      Copied the problem onto paper

5	10-30%	Copied the problem correctly on to paper, then made an honest attempt that was a train wreck of math and formula errors.
6-7	30-60%	Made errors in application of 1 or more formulas
8-9	60-90%	Made simple math error but used all formulas correctly
10	100%	Arrived at a correct answer using all formulas correctly with no math errors

**Assigned Class Projects:** Successful completion of the weekly lab assignment is graded. Sharpening a tool, turning a cylinder, making a good weld, etc. Students will build several larger assigned projects including variations in style of flats and platforms, etc. In an ideal world, i.e., schedules permitting, students will be able to pair up with a lab partner for these assignments. Grading is based on the quality of the finished item, and proper techniques in use of the tools and materials. Projects should be completed within 2 weeks of being assigned.

**Projects:** Students are expected to propose and complete a substantial individual project involving wood and/or metal fabrication for this class. It is expected that construction of your project should take 10-40 hours of work. If materials are provided and paid for by the student, the project can be almost anything meeting the above criteria. If the materials are paid for by the School, a project must be chosen from the instructor's list. Grading is based on the quality of the finished item, and proper techniques in use of the tools and materials.

**Project proposals:** A substantial percentage of your grade is riding on the project proposal and post-mortem. I am expecting the proposal to include the drawings necessary to build the project, a materials list with costs, a cut list, a description of the activities needed to complete the project broken down by task, and an estimate of the time necessary to complete each task. The document should be neat and complete. If you purchase or download plans, I expect your own commentary on the steps to build the project, or your grade may be affected. **No work may begin on a project before the proposal is approved.** The post-mortem should include an analysis of how your finished project deviated from your proposal and why, along with an account of the process and how long each step actually took. **The project proposal is an important document that allows you to pre-plan each step of your project and find process problems on paper before finding them during assembly of the project. If you have not turned in your project proposal by the 10<sup>th</sup> week of the term, you should probably drop the class, or plan to stay until the last day of finals before you leave for break. Note: sanding always takes longer than you planned.**

**Lab sessions:** Students are expected to sign up for a regularly scheduled 2 to 3 hour lab period, and to show up as scheduled. Lab sessions will involve practice of skills demonstrated in lecture periods and construction of assigned class projects. Once an individual project proposal has been approved, the student may work on the project during the lab period or at any other time the lab is open.

**Conflicts of interest:** If you are an employee of the Scene Shop, it should go without saying that you will not be paid for the time you spend in lab and/or building your project.

**Shop Safety:** Intentionally unsafe work practices and other such "horseplay" can result in serious injury to yourself and others. Such activities will not be tolerated and will be addressed by a penalty ranging from a reduction in the assigned grade to removal from the class. If you cause

injury to another person through an intentional act, you may also be liable for criminal and civil penalties. Proper attire is required for lab sessions. Safety glasses **must** be on at all times, hearing protection should be used for noisy jobs, and dust masks are available for dusty jobs.

**Sturdy closed toe and heel shoes and long pants/skirt must be worn.** Natural fiber clothing should be worn and long hair **must** be pinned or tied back. Lab work may involve paint, grease, and dust. **Welding will involve sparks and hot droplets of molten metal, consider carefully the flammability of your clothes and shoes.** Do not wear clothes you want to keep clean and unstained. You may wish to bring work clothes to change into and consider that we will end up in the lab during a lot of the lecture periods.

**Monkey Pox and Covid:** You are strongly encouraged to wear N95 or similar masks at all times in the TTL. You may wish to purchase a set of welding PPE: gloves (\$10-35), jacket (\$30-40), helmet (\$35)

### **Weekly Schedule:**

Week 1: Intro to class and basic shop safety, PPE, proper attire, sharpening.

Tool safety refresher and shop tour, specialty hand tools

Project: sharpening

Week 2: Wood, lumber, and sheet stock, fasteners, saw blades, read Scenery Handbook to pg.22

Demo: wood lathe Project: cylinder

**Tool training will be Friday 10-1 am and 2-5 pm**

Week 3: Flat types

Read Scenery Handbook through page 118 for Mon. and pages 196-247 for Wed.

Demo: Broadway flats

Week 4: Breaking down a plan, working drawings and cut lists

Project: Hollywood flats

Week 5: Platform types. Shapes without right angles. Finish Scenery Handbook for Mon.

Week 6: Metal, welding, and welding safety. Read chapters 1 thru 9 of the Welder's Handbook.

Demo: Oxy-acetylene torch welding of steel Project: platforms

Week 7: Welding continued, Read chapter 11 of the Welder's Handbook for Monday.

Calculating loads, the steps before the engineering.

Project: MIG welding Handout: **midterm exam**

Week 8: Understanding tributary area, span tables and calculators. (Is your project proposal at least started?)

Demo: Oxy-acetylene cutting torch and plasma torch

Week 9: Plastics, glues, goops, and textures.

Demo & Project: Fun with glop

Week 10: Rope and rigging. Read Stage Rigging Handbook at least through p 113 & 190-196.

Knot-tying and splicing of 3-strand rope, reeving block and tackle  
Project: 3-strand eye splice  
**(You should have given me at least a first draft of your project proposal by Monday!)**

Week 11: More rigging, with cable, and fall protection. Finish Stage rigging Handbook.  
Swaging Nicopress sleeves, installing cable clips, rigging a piece of scenery to fly

Week 12: I lose money on every job, but I make it up in volume; pricing work.  
Workflow scheduling, Trim details.  
Demo & project: Advanced wood lathe use

Week 13: Touring scenery considerations.  
Demo: Glass cutting, connector wiring

Week 14: Guns, bombs and other FX. (Is your project done? Started?)  
Loading blanks, fire, debris cannons, smoke & fog.

Week 15: Portfolio building for the TD. Finish your project!

**Final Exam:**

Due 10:00 am December 11<sup>th</sup> at TTL. Final Projects to be completed by 5:00 pm December 16<sup>th</sup>, Post Mortems due by noon December 18<sup>th</sup>.

**SDA PRODUCTIONS, ISPS, AND EXTRACURRICULAR ACTIVITIES**

**SDA productions, ISPs and Extracurricular Activities\* will not excuse you from any class work. There will be no exceptions made for absences in class, missed or delayed assignments, homework or lack of class participation resulting from your involvement in any of the above. Your grade will reflect your work in this class, independent from work in any other class or activity.**

**\*Activities that have been officially sanctioned by the larger university (such as marching band, song girls, or varsity sports) are exempt. You must submit official documentation to your professor regarding your participation in an event prior to your absence.**

**Statement on Academic Conduct and Support Systems**

**Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

**Academic Integrity**

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university’s mission to educate students through a broad array of first-rank academic, professional,

and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or “recycle” work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

Academic dishonesty has a far-reaching impact and is considered a serious offense against the university. Violations will result in a grade penalty, such as a failing grade on the assignment or in the course, and disciplinary action from the university itself, such as suspension or even expulsion.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity’s website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment or what information requires citation and/or attribution.

#### **Students and Disability Accommodations:**

USC welcomes students with disabilities into all of the University’s educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](http://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

#### **Emergency Preparedness/Course Continuity in a Crisis**

In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard, teleconferencing, and other technologies. See the university’s site on Campus Safety and Emergency Preparedness.

#### **Equity, Diversity & Inclusion + Intimacy in Theater Consent Culture Statement:**

Through our pluralistic approach of diverse pedagogies, methodologies, ideologies, and modalities of artistic expression, we invite(engage) and challenge students to expand their breadth and depth of knowledge, complexity, and range of the human experience. Even though we nurture, guide, and challenge our students to embrace the unknown or unfamiliar and step outside of their comfort zones through storytelling/art, we aim to practice effective strategies and offer tools to students mindful of their physical, psychological, social, and emotional wellbeing. In alignment with professional and industry standards, we will integrate core principles and techniques of Intimacy in Theater and Building Cultures of Affirmative Consent. This will provide agency, offer resources and support to the teachers, students, directors, and staff to establish healthy boundaries of consent when working on material that is physically, intimately, or emotionally charged content in both the classroom and production.

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## **SDA Student Support & Reporting Form:**

To facilitate a supportive environment of accountability, SDA has created an internal system of reporting for students to address issues/concerns and to offer feedback or suggestions for improvement. This mechanism provides a pathway for reporting and offering feedback without fear of retaliation or judgment. Any submission filed through this form will be reviewed and processed accordingly through SDA Office of Equity, Diversity, and Inclusion.

To file a report, please visit: <https://bit.ly/SDAstudentreporting>

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## **Student Financial Aid and Satisfactory Academic Progress:**

To be eligible for certain kinds of financial aid, students are required to maintain Satisfactory Academic Progress (SAP) toward their degree objectives. Visit the [Financial Aid Office webpage](#) for [undergraduate-](#) and [graduate-level](#) SAP eligibility requirements and the appeals process.

## **Support Systems:**

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.