

THTR 409 ADVANCED DRAFTING: VECTORWORKS

3.0 Units

FALL 2022 | WEDNESDAY | 2:00 – 4:50PM

Location: BIT Design Lab

Instructor: Nathan W. Scheuer

Office Hours: Available by Appointment

Contact Info: nscheuer@usc.edu | 636.346.0478 (cell)
(please allow 24 hours for a response M-F and 48 hours S-S)

Course Description

Advanced Drafting: Vectorworks employs a combination of lectures, in-class lab time, and take-home assignments to explore 2D and 3D tools in Vectorworks. This class will give an overview of the tools and skills required to start work in technical theatre and design, with an emphasis on the scenic and lighting industries, including Lightwright and Vectorworks integration, to create complete drafting and paperwork packages. These tools will be necessary to communicate and execute design ideas during collaboration with fellow creatives and crew.

Learning Objectives

The goal of this course is for students to be able to use Vectorworks to create and document designs in 2D and 3D. By the end of the semester, students are expected to

- Develop an organized and structured system of work that facilitates collaboration
- Learn and apply graphic and industry standards to all drawings
- Learn skills to generate complete finalized drawings package from rough sketches/plans
- Learn skills to generate a complete lighting plot along with the industry standard accompanying paperwork.

Prerequisite(s): THTR 130, THTR 131

Co-Requisite(s): none

Concurrent Enrollment: none

Recommended Preparation: none

Course Notes

Class lectures will be accompanied by multimedia in-class demonstrations and in-class assignments.

Technological Proficiency and Hardware/Software Required

- Vectorworks 2021 | (installed in design lab or free at <http://student.myvectorworks.net/>)
- Lightwright 6 | (installed in the design lab or \$135 at <http://www.mckernon.com/lightwrightmenu/lw6purchasing.html>)
- Architect's Scale Ruler

Supplementary Materials

The below materials are recommendations only. Vectorworks is a complex and diverse program that will not be fully explored in this course. Please use the below materials for further study.

- Savvy Subscription Series (\$29/year at <http://www.benghiatlighting.com/software/products>)
- Vectorworks training videos from LRADesigns.com (\$75 for student license)
- Vectorworks for Entertainment Design by Kevin Lee Allen

Description and Assessment of Assignments

All projects will be evaluated on a 100-point scale based on technical skill, craftsmanship, completeness, and effort as applicable. Class participation will be graded based on the student's attendance as well as their willingness to ask questions and make progress during in-class work time. All projects will be evaluated via the attached rubrics and returned with feedback.

Grading Breakdown

ASSIGNMENT	POINTS	% OF GRADE
Participation	70	5
Cartoon Cat	100	5
Week 3 Quiz	30	5
Scenic 'Napkin' Sketch pt. 1	100	10
Scenic 'Napkin' Sketch pt. 2	100	5
Theatre Clean Up	100	5
Light Plot Clean Up	100	5
Bedroom Project	100	5
3D Scenic Drafting	100	10
3D Light Plot	100	10
Rigging/Video Plot	100	10
Concert Rendering	100	5
Collaborative Room Project	100	10
Lighting Paperwork pt. 1	100	5
Lighting Paperwork pt. 2	100	5
Final Drafting Package	100	20
TOTAL	1500	100%

Participation will be evaluated on a 5-point scale for each class and includes attendance

Unexcused absences are strongly discouraged. However, I understand, especially now with changing health and safety protocols, that absences may occur. Please follow University Covid-19/illness policies.

Please contact me via email as soon as you know you will be missing class. Although I will not be re-lecturing or re-teaching the lesson, I will be happy to meet to discuss questions about the concepts with anyone who gives prior notice. All work must still be completed and submitted regardless of absences.

Grading Scale

Course final grades will be determined using the following scale

A = 100-94%, **A-** = 93-90% | '**A**' indicates work of excellent quality
B+ = 89-86%, **B** = 85-84%, **B-** = 83-80% | '**B**' indicates work of good quality
C+ = 79-76%, **C** = 75-74%, **C-** = 73-70% | '**C**' indicates work of average quality
D = 69-56% | '**D**' indicates work of below-average quality
F = 55% or below | '**F**' indicates inadequate work

Assignment Rubrics

See attached rubric

Assignment Submission Policy

All assignments (except the final) are expected to be turned in before class (Wednesday by 2:00 pm) on their respective due dates. Absences (excused or unexcused) don't justify late or incomplete assignments.

Late assignments will automatically lose 5% of the project's overall points. Incomplete assignments will not be accepted.

All assignments that are submitted on time may be edited and resubmitted for reevaluation before the end of the semester.

Grading Timeline

All assignments will be graded and returned within one week of the submission date.

Additional Policies

Please turn off cell phones during class, especially during a lecture. Please take advantage of in-class lab time. Students who are not seen making progress during class will have points deducted from their Participation points.

Course Schedule: A Weekly Breakdown

Weekly topics and assignments may change slightly throughout the course of the semester based on class progression and interest.

WEEK 1 | August 24

DUE: none

LECTURE: *Syllabus/File Setup* | After discussing the course syllabus we will begin with file setup and understanding the basic interface of Vectorworks. We will explore workspace organization, settings and system preferences, tool palettes, navigating classes and layers, saved views, and the resource browser.

ASSIGNMENT: none /

WEEK 2 | August 31

DUE: none | In-class Quiz on Week 1 Topics

LECTURE: *The Basics* | After a quick quiz reviewing our Week 1 lecture, we will dive into basic drawing in Vectorworks; including tools, selecting, copying, grouping, attributes (line types, fills, patterns, hatches), and drafting aids. We will also begin to discuss drawing and editing in scale.

ASSIGNMENT: Drawing a cartoon cat

WEEK 3 | September 7

DUE: Cartoon Cat / Quiz on File Set Up and Basic Tools

LECTURE: *Import/Export and Publishing Drawings* | Expanding on week 2, we will explore importing/exporting DWG/PDFs/Images. We will also begin dimensioning and using viewports and sheet layers to export and publish our drawings.

ASSIGNMENT: Scenic 'napkin' sketch project pt. 1

WEEK 4 | September 14

DUE: Scenic. 'napkin' sketch project pt. 1

LECTURE: *Symbol Creation, Record Formats* | We will continue the exploration of the resource browser to learn out to create, import, and edit symbols. We will also begin to use record formats and introduce title blocks.

ASSIGNMENT: Scenic 'napkin' sketch project pt. 2

WEEK 5 | September 21

DUE: Scenic 'napkin' sketch project pt. 2

LECTURE: *Plot Basics* | We will continue to explore symbols in the context of the theatrical environment. We will introduce lighting fixtures, positions, accessories, and label legends.

ASSIGNMENT: Theatre Clean Up

WEEK 6 | September 28

DUE: Theatre Clean Up

LECTURE: *Inserting Lights, Positions, Line Set Schedules, etc.* | We will continue our work from Week 5 in exploring the basics of a light plot including adding line set schedules, multi-circuit units, instrumentation keys, and deck plates.

ASSIGNMENT: Light Plot Clean Up

WEEK 7 | October 5

DUE: Light Plot Clean Up

LECTURE: *Basics of 3D Drafting* | We will shift from two-dimensional drafting into 3D. We will learn how to navigate in 3D space as well as the basics of 3D drafting.

ASSIGNMENT: Bedroom Project

WEEK 8 | October 12

DUE: Bedroom Project

LECTURE: *Advanced 3D Drafting* | We will continue to explore drafting through more advanced techniques and complex shapes.

ASSIGNMENT: 3D Scenic Drafting

WEEK 9 | October 19

DUE: 3D Scenic Drafting

LECTURE: *Lighting in 3D* | We will continue to use the tools from the previous weeks to start exploring our light plot in 3D. By sectioning in 3D and using focus points we can better understand our light plot through lighting angles and photometric calculations.

ASSIGNMENT: 3D Light Plot

WEEK 10 | October 26

DUE: 3D Light Plot

LECTURE: *Advanced Drafting Standards* | We will utilize the semester thus far to explore some more advanced drafting standards. We will reference professional draftings to discuss various disciplines including rigging, audio, video, power/data, etc.

ASSIGNMENT: Rigging/Video Plot

WEEK 11 | November 2

DUE: Rigging/Video Plot

LECTURE: *Visualization/Intro to Renderworks* | We will explore visualization in Vectorworks by using cameras and various render styles including Renderworks to create renderings.

ASSIGNMENT: Concert Renderings

WEEK 11 | November 9

DUE: Concert Renderings

LECTURE via ZOOM: *Collaboration in Vectorworks* | We will explore best practices to collaborate and share designs throughout the process in Vectorworks including workgroups and references. The class will be held solely on Zoom.

ASSIGNMENT: Collaborative Room Build

WEEK 13 | November 16

DUE: Collaborative Room Build

LECTURE via ZOOM: *Introduction to Lightwright* | We will begin to explore data exchange and the interface between Vectorworks and Lightwright. The class will be held solely on Zoom.

ASSIGNMENT: Lighting Paperwork pt. 1

WEEK 14 | November 23
NO CLASS: Thanksgiving Break

WEEK 15 | November 30
DUE: Lighting Paperwork pt. 2
LECTURE via ZOOM: *Lighting Paperwork and Assisting* | We will continue to explore standard industry lighting paperwork including color count/schedule, magic sheets, and focus charts. The class will be held solely on Zoom.
ASSIGNMENT: Final Project (Final Light Plot, Section, Paperwork, & Magic Sheet)

FINAL | December 9
DUE: Full Lighting Package to be turned in hard copy and to the cloud by 4:50 pm.
Late Finals will not be accepted.

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 a 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.

Sharing of course materials outside of the learning environment

USC policy prohibits sharing of any synchronous and asynchronous course content outside of the learning environment.

SCampus Section 11.12(B)

Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code. This includes, but is not limited to, providing materials for distribution by services publishing class notes. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).

Course evaluation

Course evaluation occurs at the end of the semester university wide. It is an important review of students' experience in the class. You should expect to receive an email update once the system has launched to provide your feedback on this course. In addition, you are always welcome to connect with me as the instructor to offer any feedback on the course.

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. 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>.

Statement for Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Office of Student Accessibility Services (OSAS) each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. OSAS is located in GFS 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. Website for OSAS and contact information: (213) 740-0776 (Phone), (213) 814-4618 (Video Phone), (213) 740-8216 (FAX) ability@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.

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>

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

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

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

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
usc-advocate.symplicity.com/care_report

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

The Office of Student Accessibility Services - (213) 740-0776
<https://osas.usc.edu>

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu

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

Diversity at USC - (213) 740-2101
diversity.usc.edu

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
dps.usc.edu, emergency.usc.edu

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) 442-120 – 24/7 on call
dps.usc.edu

Non-emergency assistance or information.