THEATRE 3146

Computer Aided Drafting and Design

Tuesday/Thursday 2:00 –4:20
RTFP Design Studio Room 137

Instructor Contact

Name: Matthew McKinney
Pronouns: He/His
Office Location: 213
Office Hours: by Appointment
Email: Matthew.McKinney@unt.edu

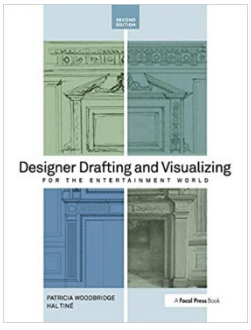
Course Description

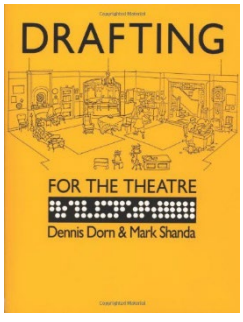
Utilizing computer software to assist theatre designers and technicians in presenting design and schematic drawings. Focusing on the basics of drafting, Orthographic projections, how to create ground plans, centerline sections, elevations & details in layouts for production. As well as 3D drafting in fully realized renderings.

Course Objectives

This course will introduce you to the world of computer drafting. Students will explore the basic and advanced techniques used to create a cohesive and complete drawing in order to convey artistic and schematic information to others. Students will learn the process involved in producing a set of drawings specifically for theater and event management, including ground plans, centerline sections, elevations and details. Students will also learn the basics of 3D rendering in presenting their designs. The course will cover:

- Principals of drafting
- Types of drawings
- Orthographic projections
- Image Tracing
- 3D drafting techniques
- 3D texture and lighting application
- 3D Rendering and Environments





Materials

Recommended Reading:

- *Backstage Handbook 4th Edition* by Paul Carter
- *Designer Drafting for the Entertainment World 2nd Edition* by Patricia Woodbridge
- *Drafting for the Theatre 2nd Edition* by Dennis Dorn & Mark Shanda.

Required Materials:

- Architects Scale Rule
- A cloud server or USB flash drive - to save all of your work
- A computer mouse - with a wheel button

Recommended Materials:

- Vector Works (Student License) for your personal computer. Student licenses are free with a student ID.

Class Format

- Tuesday & Thursday class meetings are combination lecture/lab which take place in the department computer lab
    - DFP 127
    - The Lab is open to students outside of class on Monday to Friday from 8:00am – 5:00pm
    - You must have your UNT ID login to access the computers.

- **Lecture**: Student participation in lecture, when asked, is encourage. Attending the lecture is expected. However, things do come up that may take priority, see the class participation section.

- **Lab**: Lab is very participatory. You will be working in the lab practicing the techniques learned in the lecture. Lab should be fun. Please keep a positive attitude and you will be surprised what you can learn. Do not be afraid to ask questions.

Class Participation

- Attendance and participation counts 150 Points towards your final grade
- After 2 unexcused absences 50 points will be removed for each subsequent absence
- 3 tardies (1-15 minutes late) will count as an absence
- If you are more than 15 minutes late you are considered absent

Course Requirements

- Attendance and Participation 150 Points
- Assignments
    - Drafting objects and tools 50 Points
    - Baseball Field Project 50 Points
    - Orthographic projections 50 Points
    - Ground plan 50 Points
    - Elevations 50 Points
    - Details and Section 50 Points
    - Sheets & Viewports 50 Points
    - Image tracing 50 Points
    - 3D Objects 50 Points
    - 3D Elevations 50 Points
    - 3D Furniture 50 Points
    - 3D textures and images 50 Points
- Midterm Project 100 Points
- Final Project 150 Points
- TOTAL 1000 Points

Grading

- A = 900-1000
- B = 800-899
- C = 700-799
- D = 600-699
- F = 500-599

Your assignments must be on time. If you are unable to have your work at the start of the class it is due, the grade will drop 50% if turned in within 24 hours. After 24 hours it will not be accepted. This of coarse will be amended for excused absences.

Course Calendar

Week # DATE	TUESDAY	THURSDAY
1 1/15	**CLASS**: Syllabus & Objectives, Computer peripherals, Intro to drawings, Basic Drafting techniques.	**CLASS**: Introduction to Vectorworks, Moving around the drawing, Basic object creation and editing **LAB**: Drafting basics
2 1/22	**CLASS**: Basic object creation and editing, Attributes, OIP **LAB**: Drafting basics continued **DUE**: Drafting Objects and Tools File (End of Class)	**CLASS**: Orthographic projections, Basic Viewports, Basic Dimensions, Basic Title block **LAB**: Orthographic projections **DUE**: Orthographic projections Project (End of Class)
3 1/29	**CLASS**: Your first drawing – The baseball field **LAB**: Baseball field	**CLASS**: Advanced Title blocks, intermediate Viewports, sheet layers **LAB**: Baseball field project
4 2/5	**CLASS**: Advanced Dimensions, Section drawings Types of drawings: Ground plan, centerline section. **LAB**: Room plan **DUE**: Baseball field Project	**CLASS**: Types of drawings: Ground plan, centerline section. **LAB**: Ground plan
5 2/12	**CLASS**: Organizing your drawing: Classes, Symbols, Groups, Resources Pallett **LAB**: Project Work	**CLASS**: Types of drawings: Elevations **LAB**: Project work **DUE**: Ground plan Project
6 2/19	**CLASS**: Viewports advanced, Image Tracing **LAB**: Project Work **DUE**: Image Tracing Project (in class project)	**CLASS**: Details and sections **LAB**: Project work
7 2/26	**CLASS**: **LAB**: Project Work **DUE**: Elevations	**CLASS**: General Review for Midterm project **LAB**: Project work **DUE**: Detail & Sections Project
8 3/4	**LAB**: MIDTERM **DUE**: Midterm project (End of Class)	**CLASS**: 3D modeling and editing **LAB**: Project Work
9 3/11	SPRING BREAK	SPRING BREAK
10 3/18	**CLASS**: An introduction to 3D Modeling, Multi view panes, **LAB**: Project Work **DUE**: 3D Dome Project	**CLASS**: USITT (Lecture Cancelled) **LAB**: Free Lab **DUE**: Advanced Sheets & Viewports Project
11 3/25	**CLASS**: 3D modeling, Working planes **LAB**: Project Work	**CLASS**: Classes and symbols **LAB**: Project Work **DUE**: Classes and symbols
12 4/1	**CLASS**: 3D Textures and Rendering **LAB**: Project Work	**CLASS**: **LAB**: Project Work **DUE**:3D Textures and images Project
13 4/8	**CLASS**: Furniture examples, hybrid symbols, image symbols, symbols library **LAB**: Project Work	**CLASS**: **LAB**: Project Work **DUE**: 3D Furniture Project
14 4/15	**CLASS**: 3D rendering modes, Visualization, camera setup, walk through mode, perspective views, perspective VPs. **LAB**: Project Work	**CLASS**: **LAB**: Project Work
15 4/22	**CLASS**: **LAB**: Final Project Lab	**CLASS**: **LAB**: Final Project Lab
15 4/29	**CLASS**: **LAB**: Final Project Lab	**CLASS**: **LAB**: Final Project Lab
FINAL	FINAL: FINAL PROJECT DUE Thursday 5/9 Noon	