

CENTER COMMUNICATION TECHNOLOGY –3D modeling & Animation 1

COURSE DESCRIPTION AND EXPECTATIONS

Instructor: Mr. Esparza

Credit: 5 Semester Hours (This syllabus covers 2 semesters)

Prerequisite: Intro to Center Communication Technology

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COURSE DESCRIPTION

This course is the foundational level for the 3d class, students will be learning how to use state of the art 3D software to build 3D models and also learn how to animate the models. **Cinema 4D, Photoshop, Illustrator, and Final Cut Pro** will be the software used to create 3D models and animation. Topics include: storytelling, modeling, texturing, lighting, rendering and animation principles. The class is built on learning the necessary skills to create 3D models and apply basic camera animation and use simple linear timeline to create a visual presentation. Basic video editing will be used to create a final project. Students will be given the opportunity often to reflect on their work and demonstrate their understanding of key concepts in 3D. SkillsUSA will be integrated into the lesson plans to facilitate collaboration, career goals, and preparedness for the workplace (soft-skills). All students will participate in inhouse local SkillsUSA competition.

MATERIALS

Many of the classroom lessons are video tutorials. Therefore, students are required to have their own **headphones** everyday in class. Not having headphones will prevent students from doing their reflective responses and having full access to the class tutorials. Coming without headphones will keep students from doing the assignment and will cause them to get behind with their class assignments. (I will have headphones available for sale or daily rent if a student desires to use my headphone)

Headphone must be obtained by **August. 30th, 2021.**

FEES

There is a **\$40** fee for this class. This fee pays for software, and school supplies. Please give the money to Mr. Esparza by **Friday September 3, 2021.** Checks should be made payable to **Thomas Jefferson High School.** Credit card payment can be made at the Treasures office or the TJ website using My Schoolbucks link. This fee may have been paid at the time of registration.

CLASS RULES AND PROCEDURES

Please refer to the attached CCT Magnet class rules for details of the behavior and procedures that will be followed in class. You may also refer to the teacher website for documentation jesparza.tjspartans.org

MAKE-UP and Incomplete WORK

Excused or Unexcused Absence: Student will be allowed to make up work for full credit as long as the work is done within 2 weeks of due date, excluding assessments and reflection assignments.

Incomplete Work: I realize there will be times when unforeseen circumstances (particularly with computers) make it difficult for work to be completed on time. After the due date, work will still be accepted up to 2 weeks for full credit. If more time is needed, Students need to work out a plan with the teacher.

Open Lab: The Lab for 1st semester will only be open during instructional class time. The lab is not available after school.

GRADING and POSTING of GRADES

Grading will be based upon assignments, reflection writing projects, assessments, and participation. More points will be given to assessments and projects that demonstrate skills. There may be a group project where individuals will be responsible for their share of the group project. There will also be a team grade. Your grade is cumulative for one semester. Progress grade is sent home each week, For Athletic eligibility, assignments due by Thursday of each week will be posted for sports eligibility. Grades are pulled from the grade book every Monday to determine eligibility.

DPS HIGH SCHOOL GRADING SCALE

90-92.9%= A-	93-100% = A	
80-82.9%=B-	83-86.9=B	87-89% = B+
70-72.9%=C-	73-76.9%=C	77-79% = C+
60-62.9%=D-	63-66.9=D	67-69% = D+
Below 60% = F		

COURSE CONTENT

Course content will include, but is not limited to:

A. Introduction to Storytelling

- Storytelling elements- Hero's Journey
- Analyzing and critiquing video for story elements
- Reading articles related to story elements
- Creating a story based on Hero's Journey
- Storyboarding- Script and use of composition principles

B. 3D modeling

- Basic intro to user interface using 3D software
- Basic knowledge of 3D tools to create a model
- Primitive shapes
- Vector splines
- Subdivison Surface
- Creating 3D text
- Understanding a mesh and polygons

C. Texturing

- Creating basic textures
- Create your own texture- Use of Graphic software
- Utilizing textures found online
- Advance features for texturing
- Applying texture to model

D. Lighting

- Adding light to model
- Create realistic shadows

E. Animation

- Principles of Animation
- Using the timeline to animation
- Using a spline to create a path animation
- Particle, emitter and other animation behaviors
- MoGraph Animation
- Creating variety of cameras
- Understanding camera angles and composition

F. Rendering

- a. Optimize polygons
- b. Using the Render Settings
- c. Batch Rendering
- d. Exporting options for rendering

G. Planning Project

- a. Writing the story
- b. Storyboard the story
- c. Create models and texture
- d. Create environment for story
- e. Animate the story
- f. Render the scenes

H. Final Production- Video compositing

- a. Basic knowledge of video editing software
- b. Importing 3D render files
- c. Editing files
- I. Add transitions
 - a. Adding title, stock phrases, and credits
 - b. Adding sound effects, music and voice narration
 - c. Export file to required size and format
 - d. Submit for review and revision
 - e. Presentation of project
 - f. Publication of project

F. College and Workplace Readiness

- a. Career Exploration
- b. Workplace Standards
- c. SkillsUSA Framework Essential skills

ASSIGNMENTS:

Participation: Being in class on time, student engagement (no internet surfing), keep class rules

Daily Assignments: Watch or read tutorial, complete skill building assignments, turn in assignment

Project-Assessments: Projects & quizzes will be given to demonstrate skill sets learned in daily assignments.

Reflection: Writing reflections of your work will be given throughout the semester.

Outside Class Time: Three SkillsUSA meetings or program involvement will be required 1st semester.

Semester Project: There will be a 4-6 weeks project at the end of each semester- assessment grade

SkillsUSA: Participate in local competition with collaborative teams is **mandatory**

Students will participate in the SkillsUSA in house competition in Feb 2022 with a team member. Three additional meetings or program involvement will be required outside of class time semester 1. Semester 2 will require 2 meetings. The top 3 team finalist will qualify to attend the Colorado State Competition and Conference in Colorado Springs in April (3 days and 2 nights)