

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 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. 23rd, 2019.**

FEES

There is a **\$60** fee for this class. This fee pays for software and school supplies. Please give the money to Mr. Esparza by **Friday August 23rd, 2019.** 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 should 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 LATE WORK

Excused Absence: The student will be allowed one day for each day absent, plus one extra day to make up work and tests missed.

Unexcused Absence: The student receives a grade of no more than %50 of any work missed as a result of an unexcused absence.

Late Work: I realize there will be times when unforeseen circumstances (particularly with computers) make it difficult for work to be completed on time. Students need to work out a plan with the teacher if such situations occur. After the due date, grades points will decrease daily by 5% up to 50% of possible points. Please plan for the unexpected when completing assignments so that there is ample time to complete all work on time.

Open Lab: The Lab will be only open most morning by 7:00am to work on make-up work and on **office hours days.** The lab is only open during lunch on Monday and Wednesday.

GRADING and POSTING of GRADES

Grading will be based upon assignments, reflection writing projects, and participation. 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. Students with a grade less than a C need to come during

Office Hours to get caught up with missing work. 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.

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

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

B. 3D modeling

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

C. Texturing

- a. Creating basic textures
- b. Create your own texture- Use of Graphic software
- c. Utilizing textures found online
- d. Advance features for texturing
- e. Applying texture to model

D. Lighting

- a. Adding light to model
- b. Create realistic shadows

E. Animation

- a. Principles of Animation
- b. Using the timeline to animation
- c. Using a spline to create a path animation
- d. Particle, emitter and other animation behaviors
- e. MoGraph Animation
- d. Creating variety of cameras
- e. 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: (Traits of Young Professional)

ASSIGNMENTS:

Blogging-Reflection: 1-3 entries a week- due within the 1st 15 minutes of class

Participation: Being in class on time, staying on assigned task (no internet surfing), bring your headphones

Personal Management: Setting goals, responsibilities and timelines, organized folders, back up working files

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

Project: There will be two RFP assignment projects per semester (These are 2-3 week modeling & animation projects)

SkillsUSA: Participate in in-house competition in collaborative teams is mandatory. Five additional meetings or program involvement will be required as homework.

Final: There will be a 6 week project final at the end of each semester. Weight grade is about 30% for semester grade.