CTAN 577B: Fundamentals of Animation - 3D Character Performance

Instructor of Cinema Practice – Maks Naporowski - maks.naporowski@usc.edu

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Location: SCA 356
Thursday: 1:00 - 3:50 pm
Fridays: 9:00 - 11:50 am - lab time

General Information -

The course is designed to acquaint students with the animation features of Maya for Digital character animation. The class combines lectures with tutorials to teach students how to put 3D characters into motion. After a study of traditional animation principles the students will learn how to apply this knowledge to a 3D characters. The course will cover simple character animations, biped walk and run cycles, lip sync and facial animations. After a technical study of motion, the course will focus on developing performance animation, where students will have the opportunity to act out and capture a short piece of their choice and use it as a reference for their final animation project.

Prerequisites: CTAN 452: Introduction to Computer Animation or Equivalent.


Grading Breakdown: Class Participation @ 10%
Weekly Animation Assignments @ 20%
Final Character/ Video Demo Reel and presentation@ 70%
Weekly Breakdown: Fifteen Weeks Schedule

Week One:  *Intro, Animation Industry, Maya Overview*

Week Two:  *Approaches to Animation, 12 Principles of Animation*

Assignment: Bouncing Ball Exercise

Week Three:  *Arcs, Squash and Stretch, Posing and Staging*

Assignment Due: Bouncing Ball Exercise due
Assignment: Silhouette, arm swing and bouncing ball

Week Four:  *Timing and Spacing, Anticipation and Exaggeration*

Assignment Due: Silhouette, arm swing and bouncing ball due
Assignment: Heavy push/table pound

Week Five:  *Introduction to Walks, Creating Cycles*

Assignment Due: Heavy push/table pound due
Assignment: leg walk cycle

Week Six:  *Importance of Weight*

Assignment Due: leg walk cycle due
Assignment: character picking and dropping a rock

Week Seven:  *Walks, adding upper body and moving character through space.*

Assignment Due: character picking and dropping a rock due
Assignment: walk cycle
Week Eight:  
*Action and Attitudes, Adding personality*

**Assignment Due:** walk cycle due  
**Assignment:** add personality to your walk cycle

Week Nine:  
*Runs, Jumps and Sneaks*

**Assignment Due:** adding personality to your walk cycle due  
**Assignment:** generic run cycle, jump and a sneak

Week Ten:  
*Facial Animation Intro*

**Assignment Due:** run cycle and a jump due  
**Assignment:** continue working on a sneak

Week Eleven:  
*Facial Animation, Dialogue*

**Assignment Due:** sneak animation due  
**Assignment:** lip-sync to a short dialogue of your choice

Week Twelve:  
*Facial Animation, Eyes and Expression*

**Assignment Due:** lip-sync due  
**Assignment:** add expression to your lip-sync

Week Thirteen:  
*Acting and Emotions Intro*

**Staging, Acting and Capturing Reference**

**Assignment Due:** facial animation due  
**Assignment:** create reference material for your animation

Week Fourteen:  
*Acting and Emotions*

**Assignment Due:** reference material due  
**Final Assignment:** performance animation
Week Fifteen:  

**Final evaluation, presentation**

**Final Assignment Due:** The final animation assignment, including all reference drawings, story boards, pre-viz animation must be presented during the final exam. This must be compiled onto a video demo reel, DVD or QuickTime presentable on the computer. The student must present the completed animated character with all references during the final exam which constitutes 70% of the overall grade. Clarity of presentation and execution will be considered as part of the final grade along with the quality of animation and successfully completing the assignment.

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**Students with Disabilities:**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure that the letter is delivered to the Professor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Missing an Exam, Incompletes:**

The only acceptable excuses for missing an exam or taking an incomplete in the course are personal illness or a family emergency. Students must inform the professor before the exam and present verifiable evidence in order for a make-up to be scheduled. Students who wish to take incompletes must also present documentation of the problem to the instructor or teaching assistant before final grades are due.

**Academic Integrity:**

The School of Cinema-Television expects the highest standards of academic excellence and ethical performance from USC students. It is particularly important that you are aware of and avoid plagiarism, cheating on exams, submitting a paper to more than one instructor, or submitting a paper authored by anyone other than yourself. Violations of this policy will result in a failing grade and be reported to the Office of Student Judicial Affairs. If you have any doubts or questions about these policies, consult “SCAMPUS” and/or confer with the professor or S.A.